CZECH UNIVERSITY OF LIFE SCIENCE PRAGUE

Faculty of Economics and Management

Department of Economics

Diploma thesis

Development of women's football in the Czech Republic

Author: Nikola Mužíková

Supervisor: Ing. Petr Procházka, MSc, Ph.D.

CZECH UNIVERSITY OF LIFE SCIENCES PRAGUE

Faculty of Economics and Management

DIPLOMA THESIS ASSIGNMENT

Bc. Nikola Mužíková

Economics and Management

Thesis title

Development of women's football in the Czech Republic

Objectives of thesis

The goal of a theoretical part is to determine and explain the main terms related to women´s football and implemented strategy for next few years. The goal of the practical part is to analyse and compare the financial performance of both associations using the internal financial sources and multiple regression analysis and analyze the factors influencing the performance of national teams.

Methodology

Thesis is divided into literature review and theoretical part. The data and information are obtained from books, scientific articles, and internet sources focused on women´s in sport in general. In first part, the literature review is conducted by using methods of synthesis, induction, deduction, and extraction. Second part of the diploma thesis, analytical section, will be done using methods of both qualitative (descriptive) as well as quantitative analysis such as fundamental, psychological, and technical analysis. There is also an implementation of a multiple linear regression analysis and numerical analysis of data.

The proposed extent of the thesis

60 pages

Keywords

football, women´s football, women´s in sport, comparison, strategy

Recommended information sources

Harris, J. (2007). Doing Gender on and off the Pitch: the World of Female Football Players.
Williams, J. (2003). A game for rough girls?. 1st ed. London: Routledge.
Williams, J. (2013). Globalising women's football. 1st ed. Bern: Peter Lang.

Expected date of thesis defence

2016/17 SS – FEM

The Diploma Thesis Supervisor

Ing. Petr Procházka, Ph.D., MSc

Supervising department

Department of Economics

Electronic approval: 3. 3. 2017

prof. Ing. Miroslav Svatoš, CSc.

Head of department

Electronic approval: 3. 3. 2017

Ing. Martin Pelikán, Ph.D.

Dean

Prague on 21. 03. 2017

..

Declaration

I declare that I have worked on my bachelor thesis "Development of women's football in the Czech Republic" by myself and I have used only the sources mentioned at the end of the thesis. As the author of the dissertation, I declare that the thesis does not break copyrights of any third person.

In Prague ....

....

Bc. Nikola Mužíková

Development of women's football in the Czech Republic

Rozvoj ženského fotbalu v České Republice

Abstract

The aim of the diploma thesis is to evaluate and analyze the factors influencing the performance of women's football national teams in the Czech Republic, Germany and in selected countries across Europe as well as a description of general development plan for the Czech Football Association focusing to women's football. In theoretical part there are explained basic terms connected with women's football and football in general. Descriptions of both associations, its integration of women's football and history is being explained in this section. This works also addressed the problem of perception of women's football in society and overall role of the sport in economy. In practical part are analyzed factors influencing the performance of national teams by using the multiple linear regressions, which also demonstrate the relationship between dependent (performance) and independent (annual budget, no. of registered female players, number of women's football clubs, number of UEFA A licensed coaches, number of UEFA Pro licensed coaches and employees dedicated specially on women's football department) variables. Following part focuses on a project for developing women's football in the Czech Republic with focus on Sport's centers, its financial and licensing system and questionnaire made in order to gather feedback about this project from the clubs.

Key words

Football, women's football, Czech Republic, Germany, UEFA, development, Sport's centers, multiple regression analysis

Souhrn

Cílem diplomové práce je zhodnotit a analyzovat faktory, které ovlivňují výkon ženských fotbalových reprezentačních týmů v České republice, Německu a ve vybraných evropských zemích, jakož i popis obecného plánu rozvoje pro Českou fotbalovou asociaci se zaměřením na ženský fotbal. V teoretické části jsou vysvětleny základní pojmy spojené s ženským fotbalem a fotbalem obecně. Popisy obou asociací, jejich začlenění fotbalu žen a historie je vysvětlena v této části. Tato práce se take zabývá vnímáním ženského fotbalu ve společnosti a celkovou úlohou sportu v ekonomice. V praktické části jsou analyzovány faktory, které ovlivňují výkonnost národních týmů pomocí lineární regrese, která také ukazuje vztah mezi závislou (výkon) a nezávislou (roční rozpočet, počet registrovaných hráček, počet ženských fotbalových klubů, počet UEFA trenérů s licencí A, počet UEFA Pro licencovaných trenérů a zaměstnanců určených speciálně na ženský fotbal) proměnnou. Následující část je zaměřena na projekt pro rozvoj ženského fotbalu v České republice se zaměřením na sportovní centra, vytvořený finanční a licenční systém a dotazník vytvořený s cílem získat zpětnou vazbu o tomto projektu z klubů.

Klíčová slova

Fotbal, fotbal žen, ženský fotbal, Česká Republika, Německo, UEFA, rozvoj, sportovní centra, regresní analýza

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

1. INTRODUCTION

Under the theme of my diploma thesis I chose the development of women's football in the Czech Republic with a focus on factors, which are influencing the performance of a national team. I have chosen this topic because of my own interest in this. In my opinion, nowadays, female sports in general become very popular. Women's football belongs between the most developing sports in the world and more and more economic factors are influencing it. The question if women should do a sport or just stay at home, has been discussed last decades and it has been shown that women have the same rights as men. The prehistoric times, women were recognized as the founder and maintainers of the family. They were revered and very appreciated in those times. For next several thousands years, the situation has completely turned around. The men became considered as the head of family, or even of a city or state. In modern times women has started again to louder fight for their rights and equality with men. It did not avoid football either. Nowadays, female football players have to fight for their right to play such a beautiful game. We can see that in some countries, it is more developed than in others. That is the reason I have chose our country, the Czech Republic, which is not very developed and its comparison to Germany, which I take as a developed country for women's football. I will explain those factors, which make the country developed further in my thesis.

My thesis is divided into two parts. First, the literature review, gives us a brief introduction to women's football in general and its history. I am also trying to describe the background of Football Association of the Czech Republic and Germany and explain the integration of women's football department within both associations. Those backgrounds give a whole picture, which reader needs to better understand the point of my thesis. In my second part of my thesis I am focusing on determination of factors influencing the performance of national teams. Through multiple regression analysis, I determine the factors that affect the performance the most. All aspects are processed by statistical software. Likewise the description of performance of national teams and its measurement are shown as well. However, the main topic I am focusing on is to show the new strategy for women's football in the Czech Republic. The strategy is mainly based on financial support, which will be given to clubs who will meet the special requirements. I explain the funds as well as annual financing and our prediction to a future. Following part is focusing on a survey,

which was done regarding our new strategy where we were interested in clubs opinion on the whole project and on current situation of women's football in their clubs.

2. OBJECTIVES AND METHODOLOGY

2.1. RESEARCH QUESTION

The main aim of this dissertation is expressed by following research question:

What factors influence the most the performance of the women's football national senior team?

2.2. OBJECTIVES

The main aim of the diploma thesis is to evaluate and analyze development of women's football in the Czech Republic as well in Germany and describe main factors influencing the performance of national teams and so the whole football associations.

In theoretical part there is focus on background of women's football and both football association. This work also addresses the problem of perception or awareness of women's football and its public opinion. Thus the development projects of the Football Association of the Czech Republic are described with the aim to change the perception and to put the women's football closer to level of men's football. The goal of analytical part is to determine and characterize the factors such as annual budget, number of registered female players, number of qualified coaches in each association, which are influencing the national teams' performance. These variables are indicated by multiple regression analysis and are processed by statistical software. Important is also evaluation of variables, basic statistical factors, economical and statistical influence and resulting evaluation.

2.3. METHODOLOGY

The diploma thesis is divided into literature review and theoretical part. The data and information are obtained from books, scientific articles, and Internet sources focused on mentioned topic. In first part, the literature review is conducted by using methods of synthesis, induction, deduction, and extraction. Second part of the diploma thesis, analytical section, will be done using methods of both qualitative (descriptive) as well as quantitative analysis such as fundamental, psychological, and technical analysis. There is also an implementation of a multiple linear regression analysis and numerical analysis of data. However, other type of methodology has been used as well. To gather all the information from clubs towards our new development strategy, the personalized questionnaires have been created that helps to achieved the opinions of those we are focusing on with project.

3. THEORETICAL PART

3.1. ROLE OF SPORT IN THE ECONOMY

Sport, in general, has become one of the most popular types of cultural practice in the modern world. There has been developed a new field called Sports economics which has developed from set of research questions followed by economists working in labor economics, industrial and urban economics and in many other areas to a clearly knowable field of study in the discipline of economics. (R. Humphreys, 2005) Nowadays, it belongs between an important sector of economic activity as part of increasingly significant leisure industry. It is not the largest sector, however it is one of the fastest growing sectors. As Chris Gratton stated: *"There have been many articles and books written about money in sport and when the phrase "economic of sport" is used, most people think of it as the analysis of the "sport business", or the elite sector of the sports market that attracts massive amounts of money through sponsorship, payments for broadcasting rights, any paying spectators. Although money generated through professional sport, international sports competitions and the televising of major sport events is both substantial and increasing, this is a relatively small part of the total sports market."*

Figure 1 The structure of a national sports market
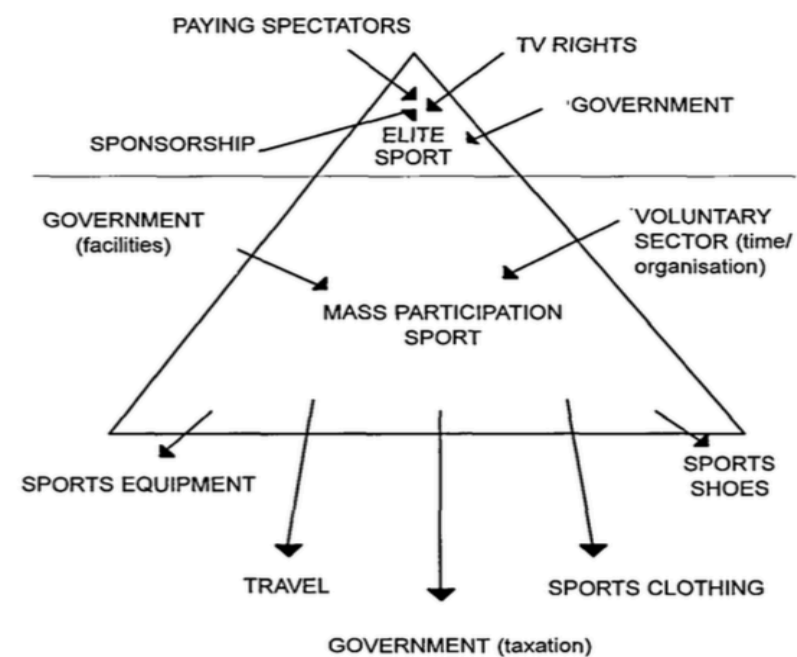
Source: (Gratton, 2010)

15

Figure 1 above explains the hierarchical nature of the sports market with a small group of elite athletes at the top of the hierarchy who are competing in international competitions. In the upper part of this diagram, money flows in from attendance (paying spectators), broadcasting by televisions, sponsorships etc. While this top level seems to be highly commercial, it is also funded by Government. The main reason is that every nation wants to see its own athletes at the top as a champion. There is a huge demand for an international success in sport in every country. The lower part of the pyramid, which is called 'Mass participation sport' belongs to the recreational sport, mainly people doing sport just for fun, passion or to stay fit and healthy. This section is also funded by government, however mainly by local government through subsidies to infrastructure (sport facilities) at schools, communities etc. These subsidies at this bottom part are much higher than those in the top level. One of the main important resources is also voluntary sector. The significant role in the sector is the time, which volunteers devote to sport without any payment. Also a significant flow of money comes directly from sport participants due to their expenses on sport equipment, clothes and shoes. The same participants also subsidize to the government revenue thanks to taxation on sport-related expenditures and incomes. The supply-side of the sport's market is a combination of three kinds of provider: the mentioned voluntary sector, public sector and commercial sector. As I have been already discussing, government support both part, elite to generate results and promote mass participation. Nevertheless, it also imposes taxation on sport. Usually the commercial sponsors support both types of sport, elite level as well as grassroots. For instance famous sponsors are Nike, Adidas or Reebok, which try to promote their products, and on the other side receive a return on this sponsorships due to expenditures by those sport's participants in their products. Significant part of the sponsorship is from non-sport companies as Coca-Cola where there is not a very direct motives to sell their products to participants. On the other side, also the demand-side of sport's market is very complicated. It is composed from the demand for the free time, for equipment, clothing and shoes, for facilities and last, but not least, the demand for travel. All of these services are provided by combination of public, commercial and voluntary organization mentioned above. To sum up, lately sport became a significant sector of economic activity and has developed faster than the economy as a whole. (Gratton, 2010)

3.2. WOMEN'S FOOTBALL

3.2.1. History of women's football

The beginnings of women's football are closely associated with the beginning of men's football. Football in the concept of men and women went together hand in hand. First mentions of female football were already in the 12th century, when football was played in France among women in folk games. Modern football, played by women in a form we are familiar today, was first recorded in Scotland during 90's of the 18th century. In 1863, football clubs and the Bureaus agreed on stricter punishment of brutal fouls during the game, which made football available even for ladies. Scotland was the first country in the world that encourages women to play football. Thus, the first recorded female match was already played in Glasgow in 1892. (www.czmi.cz, 2017) In the background of the early women's football stands one woman – Nettie Honeyball. Nettie founded the first European football club designated for female gender. The club was created in 1894 and its place of origin can not be anywhere else than in the roots of entire football – in England as it is obvious by its name British Ladies Football Club. Nettie stated: *"In 1894, I founded this club to showed the world that women are not just as a decoration of men or their useful thing. I do not understand where the rest of the world took up the belief that there are things women should not talk to because they are responsibilities of men. I can not wait for the day when women sit besides men in Parliament and will be able to freely express their opinions on society, especially on matters that affect themselves directly"*.

Great popularity and increase of awareness of women's football was brought by otherwise very sad the World War One. At this time, women were working in heavy industry as well as men and differences in performance disappeared. (www.czmi.cz, 2017) In those times, the most famous team was Dick, Kerr's Ladies of Preston. It has got its name from the munitions factory in Preston where almost everyone from the team was working during World War One. This team was the first one who played in shorts and went on an overseas tour. The huge growth in women's football became when women were working in factories by themselves and men had to gone to fight. In 1917 on Christmas day, unbelievably 10,000 spectators watched one of the first recorded official women's football match at Preston. The first international women's game was played in 1920 where Dick Kerr's Ladies beat a French XI 2-0 with attendance of 25.000 people. (Association, 2017)

Other well-known match was played on Boxing Day also in 1920, when Dick Kerr's Ladies played against St Helen's Ladies. An enormous crowd of 53,000 spectators were watching ladies at Everton's Goodison Park ground, with even thousands more fans, which were locked outside. This was an incredible attendance as for comparison, Everton men's highest attendance in the season 2014/15 was only 39,000 spectators.

Indeed, after 1921 there was a landmark in England women's football and it suffered its first major blow. As Anna Dobie states in her article: *"On 5 December 1921, the Football Association banned women from playing on FA- affiliated pitches which meant stars like Lily Parr could no longer play at grounds with spectator facilities"*. The FA at that time declared: *"the game of football is quite unsuitable for females and ought not to be encouraged"*. Many people speculated that this decision was due to jealousy because women were becoming increasingly popular. (Bbc.co.uk, 2017)

Figure 2 The Dick Kerr International Ladies AFC. British champions in 1920-1921

Source: (Buckley, 2017)

In 1969, the Women's Football Association was established. Two years later, the ban from year 1921 was abolished and so the women could get back on good fields in the middle of the football stadium and were no longer forced to play on rugby field. Thanks to the Sex Discrimination Act in 1975, women were again taken as football players. (Bbc.co.uk, 2017)

3.2.2. Modern times

As Joseph Blatter, the ex- General Secretary of the Fédération Internationale de Football Association (FIFA), the international governing body of football, in 1995 declared: *"The future is feminine".* This pronouncement in FIFA News, which is the official publication of the association, has effectively included female players in the family of football worldwide. However at the same, Blatter, the most powerful man in the world football at that time, was careful to vary their place within football family. Women's players provided "a different style of play", characterized by a certain elegance which has prevailed over a more robust impersonation of the man's game. The place and time of the announcement were perfect. There had already been two Women's World Cups (China in 1991 and Sweden in 1995) and inaugural Olympic women's competition was prepared for the Atlanta Games in 1996. Blatter's epigram described women's football as successfully established and enormous potential for growth but was otherwise, and perhaps deliberately, vague (Williams, 2003).

As was already mentioned, the first official Women's World Cup (WWC) took place in 1991 in China. However, in 1988 FIFA hosted 'preparative' Women World Cup to test if it was feasible. Twelve national teams were participating in the competition. The "first" European champion was Norway, which defeat Sweden 1-0 in the final, while Brazil took third place by beating China in a penalty shootout. The tournament was deemed as success and FIFA approved the establishment of an official Women's World Cup in 1991 where the first official World Champion was United States. The next WWC was in Sweden in 1995 where Norway finally became an official World Champion by beating Germany in the final. Players from the best twelve teams in the world came to play for two prizes: the World Cup itself and also qualification for the first Women's Olympic Football Tournament the following year played in the United States. As well in 1999, the FIFA WWC was played in the United States. Nevertheless, this tournament launched the beginning of the new era of success for women's football and was a milestone in the history of women's football in general. The United States became for the second time a winner of WWC with the record of highest attendance in all the times, 90.185 spectators. One of the interesting moments was a celebration of American defender Brandi Chastain when she scored the winning penalty kick against China. She took of her sport jersey and

waved it over her head as it is used to on men's football. It has been quiet discussed topic as it was unacceptable for ladies to celebrate like that. The WWC in 2003 supposed to be hosted by China, however it was moved to United States due to unexpected disease SARS (Severe acute respiratory syndrome). For the first time, the winner of the tournament was Germany. As compensation, China could host the following tournament in 2007. The new record was set by Germany, when they were the first team who defend a Women's World Cup title. Germany won against Brazil in the final. As German women's football was rapidly increasing in the number of register players and the awareness was higher, there was no surprise when the next FIFA WWC was realized in Germany in 2011. This tournament showed us such a feminine side of the world's most popular sport and took it to a whole new level. Germany created a tournament that will remain forever and will be a significant part of women's football history with unprecedented enthusiasm of players, packed stadiums, top-quality football and brand new champion, the Japan. The last played FIFA WWC was hosted for the first time in Canada in 2015. During this tournament, there was made a very interesting record of two female players appearing in six World Cups. These records had never been achieved by any female or even male football player before. To the future, FIFA approved France as the host of 2019 FIFA WWC over the other candidacy of South Korea. (FIFA.com, 2017)

3.2.3. Perception of women's football

First of all, the perception of women's football is mainly influenced by prejudices and stereotypes of the overall position of women in sport, influence of sexuality and/or disturbing the gender order in society. Football is considered as a domain of men, however nowadays, popularity of women's football is rapidly increasing as well as the number of player or the media coverage of the sport. (Šusta, 2012)

A nice article written by Czech editor describes the first perception of this sport by men as: *"women's football is something like Yetti. Nobody has ever seen it and one part does not allow its existence and the other part thinks it is pretty ugly. It is just kind of weird thing".* (Honzejk, 2011)

Football, and sport in general, always presented strength or endurance, or signs of masculinity and mainly served to consolidate masculine culture. In ancient Greece, women were not allowed to participate in sport game at all (under the punishment of death). In ancient Rome, they could at least watch sports' events. In the middle Ages, high class' women could be involved in games such as bowling or archery. The improvement of women's approach to sport has begun since the eighteenth century. Since the mid-nineteenth century there was a development of individual gymnastic systems with the stress on the value of health. In Paris 1922 they were organized first Women's World Games. One of the significant affect on development and gender equality had the organization of Sparakiads between years 1955 – 1985. (Sekot, 2003) The key year for women's sport was 1972, when the United States adopted a new law on equal financial support for male and female sports. This has become inspirational for other countries around the world as well.

Sport, in general, is a source of an enormous financial potential. This fact is used by many companies specializing on sport's equipment. Speaking about the US, we can have a closer look at their main sponsor Nike, which is one of the most famous brands. The company, itself, began creating campaigns to promote women's rights both inside and outside the sport. (Heywood and Dworkin, 2003) Few years ago at a special conference of a sport's sociology, Nike came up with the idea of corporate feminism. That stands for improvement of conditions and opportunities in the production of female sporting goods. They are defending the rights of girls/women in their advertisement and showing the benefits of girls participating in sport. This campaign achieved a huge success and has become a worldwide sensation. Campaign slogan: "Just do it", went from mainly masculine tone to express feminine feel. The new main slogan of the campaigns were: "Will you let me play if I will lose 60% chance of getting breast cancer, If I play sports, I suffer less depression or, If you let me play, I will not get pregnant even before I want". The campaign's result is that the company Nike actually sells feminism as a sportswear to young girls or women. Paradoxically, the value of the shares of this company is estimated at $ 18.6 billions, mainly sport clothing and shoes, through which women are being presented, are mostly produced in Indonesia. Eighty percent of Asian workers are women, from age 17 to 22 years, sometimes even younger, that are working ten hours per day. Their salary is

approximately around one dollar per day. Here we can see, that the company Nike is on one hand fighting for women rights but rather in the western countries than in third world countries. (Messner, 2005)

The value of women's football as well as the image are noticed to be rather low in this current modern society considering the low attendance numbers, low exploitation in the media and obstacles with bringing in new sponsorships. One of the main problems with attracting new sponsors into women's football is that women's team sports in general are perceived as having lower commercial value than opposite gender – men's. Authors F. Havik, P. Elardt and L. Hasselgren explains: *"Commercial value refers to the amount of money that the market decides that it is worth, that is to say, what the sponsor is willing to pay in order to be associated with the sponsee. Thus, the more people engaged in the club, the higher commercial value the club has"*. Generally, sponsors want to be associated with a club, athlete or sport that will improve the consumer behavior and perception of the target market which will cause the sale increase of the sponsor's products. The main idea is to provide financial support to the association, thus the association must have high commercial value in order to create a profit for the sponsor to make it reasonable for them to support. Thus, without good commercial value, sponsor will not be willing to pay. Although, the awareness of women's football has been increasing, the attendance is still flat and could be much better. That is why sponsors do not take chances because it is not considered profitable for them. Thus, there is no need to be visible on the advertising boards or team jerseys during the matches as only few people are watching. An impressive questionnaire with 184 respondents has ben done by Barbora Lišková. I have chosen two graphs, which I found very interesting and suitable to use in this chapter. As I have been speaking a lot about perception of women' football, the graphs (figure 2 and 3) demonstrate the interest of respondents into women's or men's football. Although some of the respondents could be friends of an author, however still a curious fact has been shown. (webface.cz/, webface.cz/ and webky.cz/, 2012)

Figure 3 Interest in women's football match in TV
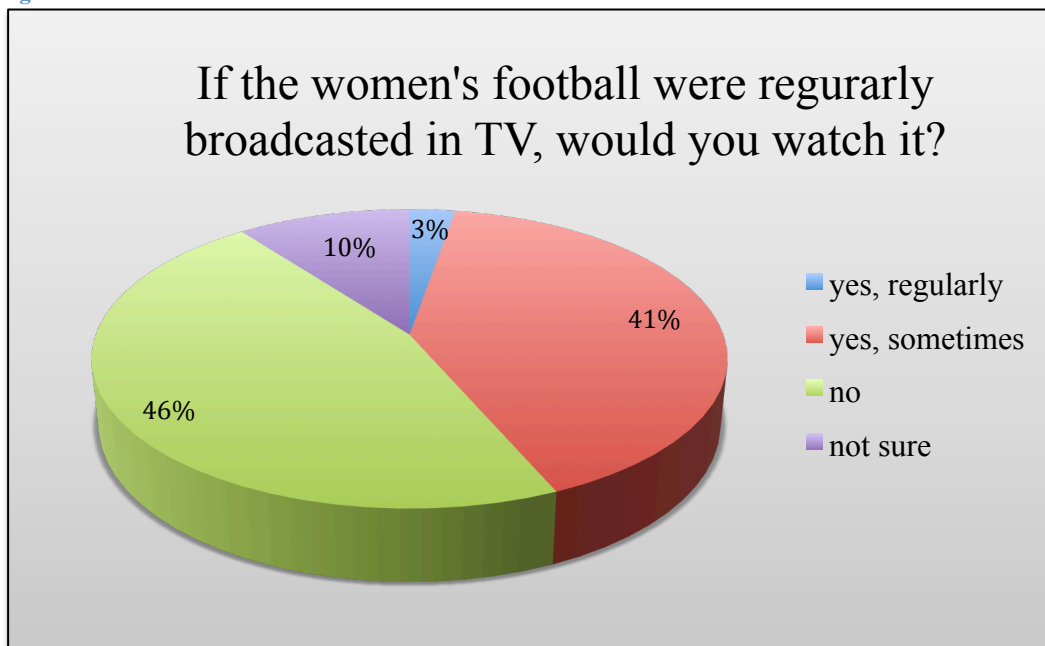
Source: (Lišková, 2012)

Figure 3 shows us that almost half of the respondents would not watch women's football in TV if it were regularly broadcasted. This example describes the interest that women's football has. However, this survey was done 4 year ago. Nowadays, the result might be different as the awareness is rapidly increasing.

Figure 4 Dominance of men's football

Source: (Lišková, 2012)

23

Figure 4 displays the comparison between female and male gender in football. We can still the public is used to watch the men's football instead of women's football.

3.3. FOOTBALL IN THE CZECH REPUBLIC

3.3.1. Beginnings of football in our country

Horák claims that the first occurrence of football in our country was not in Prague as many would have thought, but in other Czech city Roudnice nad Labem. In 1886, professor Jan Sommer came to the local high school. As a new PE teacher tries to familiarize students with an entirely new game that he had an opportunity to learn while he was living abroad. Football immediately, got attention not only of youth but also of local people of Sokol and rowers. After becoming familiar with the game, the first match was played between ČAC Roudnice and Sokol Roudnice on 15th September 1892. (Horák and Král, 1997) The first international match was in year 1899 when team from Prague was playing against team from Vienna. The following international club's matches were played by Slavia with teams from Berlin and Oxford. In the nineties of the 19th century the SK Slavia Prague (that was the first one that played abroad) and AC Sparta Prague were founded. From 1897, clubs were organized by the Czech Amateur Athletic Union, however gradual expansion of football enforced the establishment of the Czech football union in 1901.

According to Šálek, the one of the first "pathfinder" of Czech football was Josef Rössler Ořovský. He was one of our best rowers and skiers in the late 19th century. As an universal sportsman, he was very interested in football and he made a lot for it. For example, he translated the first football rules into Czech language, he belonged between first referees and last but not least, he established the first football competition in the Czech Republic. The dynamic development of football was on one side slowed by rejected attitude of schools towards this game. Yet students, despite the ban, gradually formed membership base of football clubs. (Šálek, 1980)

3.3.2. Football association of the Czech Republic

As I have mentioned above, the Czech Football union was established in 1901. In 1921, the Czechoslovak Football Association was founded and following year even accepted as a member association of FIFA. Into UEFA (Union of European Football Association), our association was officially welcome in year 1954. During years 1945-1957, football was in Czechoslovakia progressively controlled by the few different organs. Czechoslovak Football Association directed until 1948, the football department of the Czech Sokol till 1952 and football sections at the State Committee for Physical Education and Sport (1957). After founding Czechoslovak TV in 1957, it took over the management of football. Since 1969, football was driven by Czechoslovak Football Association ČSTV. After 1989, this role was filled by Czechoslovak Football Association, which was automatically canceled on January 1, 1993 with the separation of Czechoslovakia. The supreme football body in the independent Czech Republic became the Czech-Moravian Football Association. However, in July 2011 the association was renamed. The new name was and still is, the Football Association of the Czech Republic. (Votík, 2001)

Since 1993, after dividing Czech Republic and Slovakian Republic, the first president of the Czech Football Association was František Chvalovský who functioned in this position till June 2001. Mr. F. Chvalovský was in "one" way very successful functionary. In 1992, he became a member of UEFA Executive Committee and under his leadership, the national Czech football team achieved silver medal in the European Championship in 1996 and many more achievements of youth national teams. On the other hand, in 2001 he was arrested and accused of credit fraud. After he was removed from the function, Mr. Jan Obst became a new president. He stayed as a chairman till 2005, and was substituted by Mr. Pavel Mokrý. In 2009, Mr. Ivan Hašek became new president. He is a former football player and used to be coach of national team as well. The last president of the Football Association is Mr. Miroslav Pelta. Former football goalkeeper, currently football functionary, entrepreneur and last but not least, politician.

3.3.3. Women's football within the Czech FA

According to figure 4, women's football department belongs under the umbrella of sport and technical department that is driven by Mr. Michal Prokeš. He also governs many other departments, as department of Elite competitions, Grassroots department and futsal national teams, Coaching education department, Department of Referees, Department of talented youth and youth national teams. Among sport and technical department, the Czech FA includes, Department of Organization and services, Department of Communication and IT, Legislative department, Financial department and Department SAS. All of those mentioned departments are governed by General Secretary Mr. Rudolf Řepka, president of the FA Mr. Miroslav Pelta and the Executive Committee. All of those positions are elected in General Meeting.

Our mentioned department consists of 8 full time employees and 1 part time employee, me. The head of department is Mr. Pavel Ducháček who governs 3 resorts. Resort of Competitions driven by Mr. Zdeněk Mužík where all national women and youth competitions are organized. Then National teams' and Logistic Resort consisting of two employees and the last Sport's Resort consisting of our national team coaches of A team, WU19, WU17 and physiotherapist. I personally am focusing on projects and cooperation with international associations as (UEFA and FIFA).

Figure 5 Simple structure of Czech FA
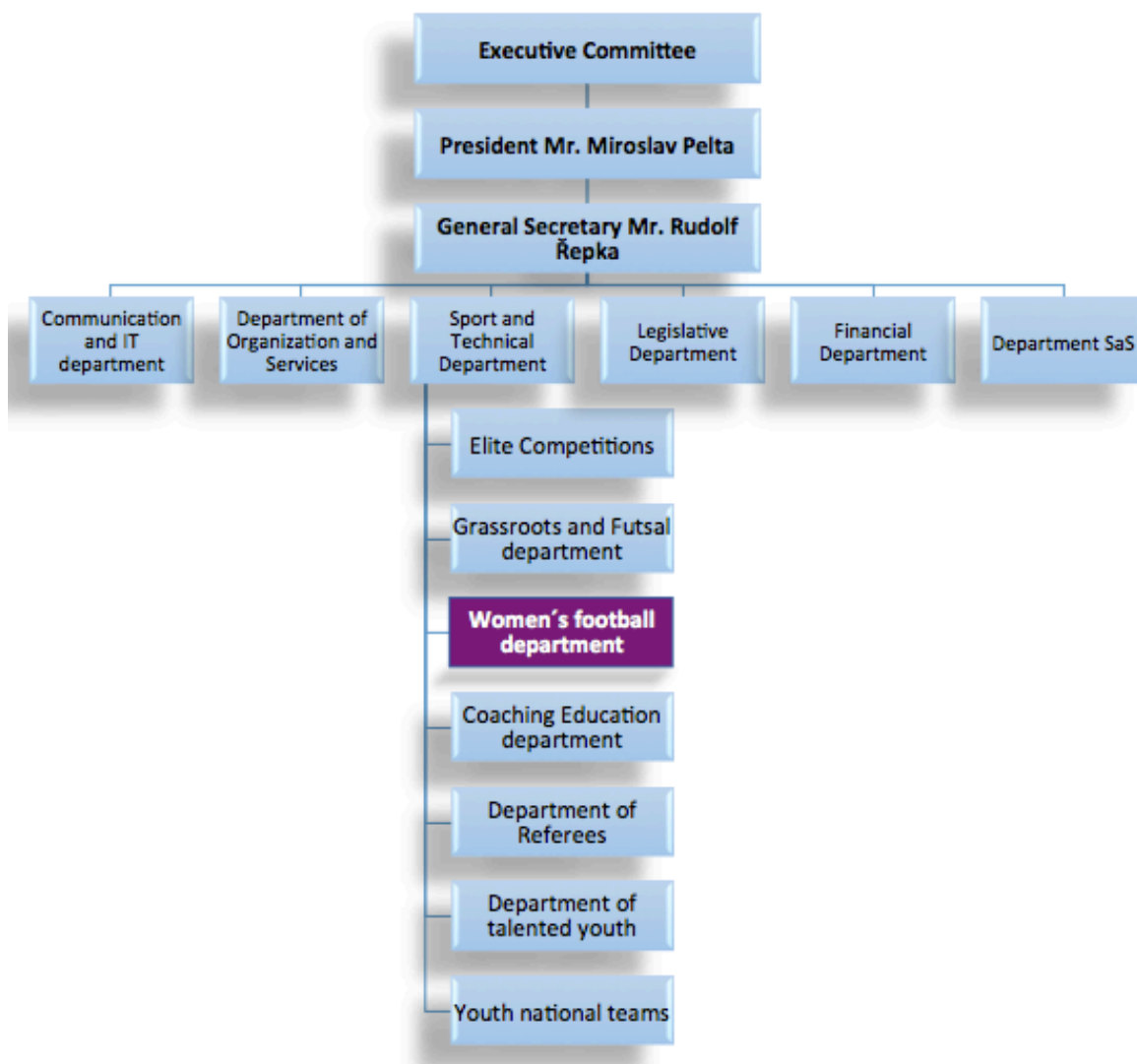
Source: simplification from original structure created by General Secretary R. Řepka (own data processing)

3.4. FOOTBALL IN GERMANY

3.4.1. Beginning of football in Germany

At the beginning, there were many doubts about football in Germany. No one believed it would achieve such an importance as it is today. It was imported from England by young men who wanted to play and enjoy dynamic version of sport instead of "German gymnastic" as they thought it is boring and stereotyped. Until year 1914, football was a really minority sport played by a society. However, football seemed to have a huge

potential to develop. Mainly it was discovered and played by expanding middle class society that had enough money and leisure to play football during weekends. Nevertheless, the First World War brought football into another level. Thanks to German soldiers who arranged matches (mainly on the peaceful area of Western Front) to release the sameness of military life. After the end of the war, in 1918, soldiers came back home with these experiences of football. Therefore, it had been the first wave for creating football clubs with organized competitions of football.

As Alan Tomlinson and Christopher Young mentioned in their book: *"Rapidly growing industrialization and urbanization laid the foundations in Imperial Germany for the propagation of popular culture. Around 1900, popular arts and amusements characterized the everyday life of many Germans in large cities. After the end of the empire, this tend also applied to the growing affection for sports. The increasing number of people interested in sports were recruited not only from active participants bud also from those who did not actively take part in sports themselves but enjoyed matches as spectators. Football in particular profited from this development. During the Weimar Republic, it left all its rivals in the shade and became the people's most popular sport by far"*. Thus, football became class-independent. Not only middle class society was allowed to play football it was rather more popular within working classes. An increasing number of attendance caused that in the 1920s, football became financially lucrative sport. (Tomlinson and Young, 2006)

3.4.2. German Football Association

The official German football association (German: Deutscher Fuβball-Bund / DFB) was established in 1900 in Leipzig by 86 clubs. A large amount of German regional competitions was established where clubs were playing for a one national title for the first time in season 1902/03. In the establishment of FIFA that was founded in May 1904 in Paris by several nations, Germany was not involved at first place however on September they joined the Fédération Internationale de Football Association. The very first international match was played in 1908. Unlike of our associations, DFB mainly consists of its five regional associations, which are divided into 21 state associations. Around 25.5

thousands clubs are participating in the competitions of those state associations with approximately 170 thousands teams, 2,3 million active players and with almost 7 million FA members (see figure 6). The women's football counts approx. half of the active members around 1.000.000 members (see figure 7).

Figure 6 Distribution of regional and sub-regional federations
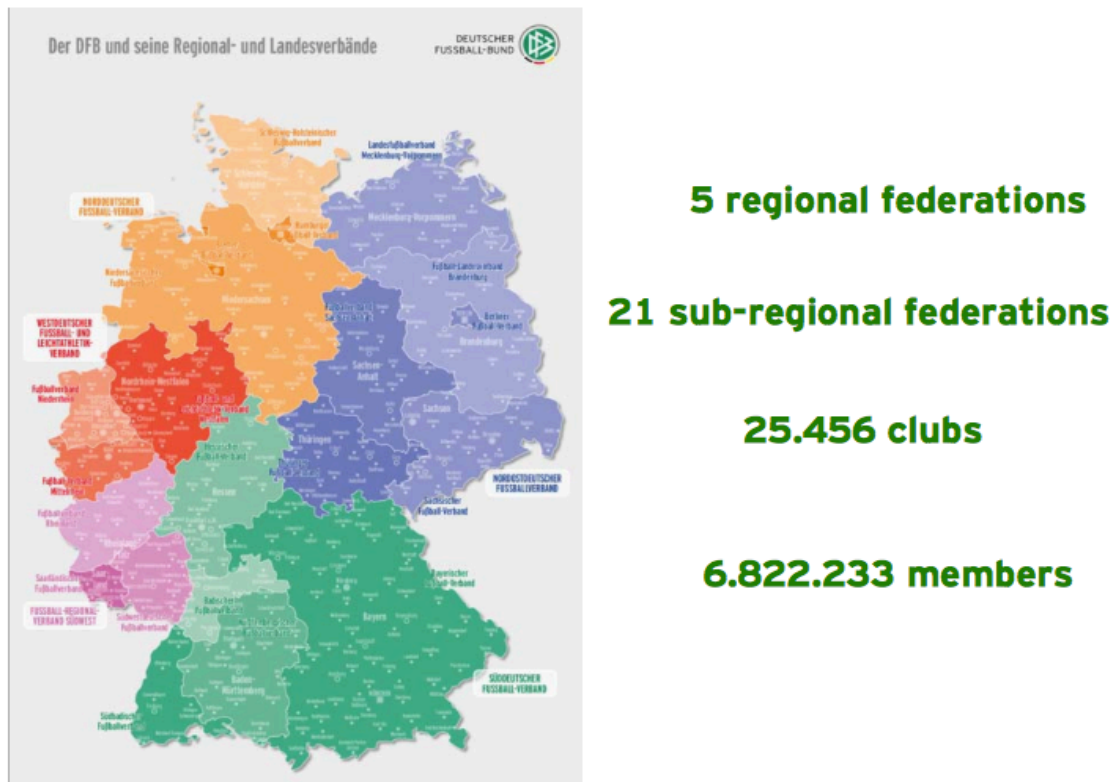
Source: DFB presentation (Ullrich, 2014)

It means that the date I have used, explain the performance on 93,8 % in case we would add one more explanatory variable.

Figure 7 Registered players' development
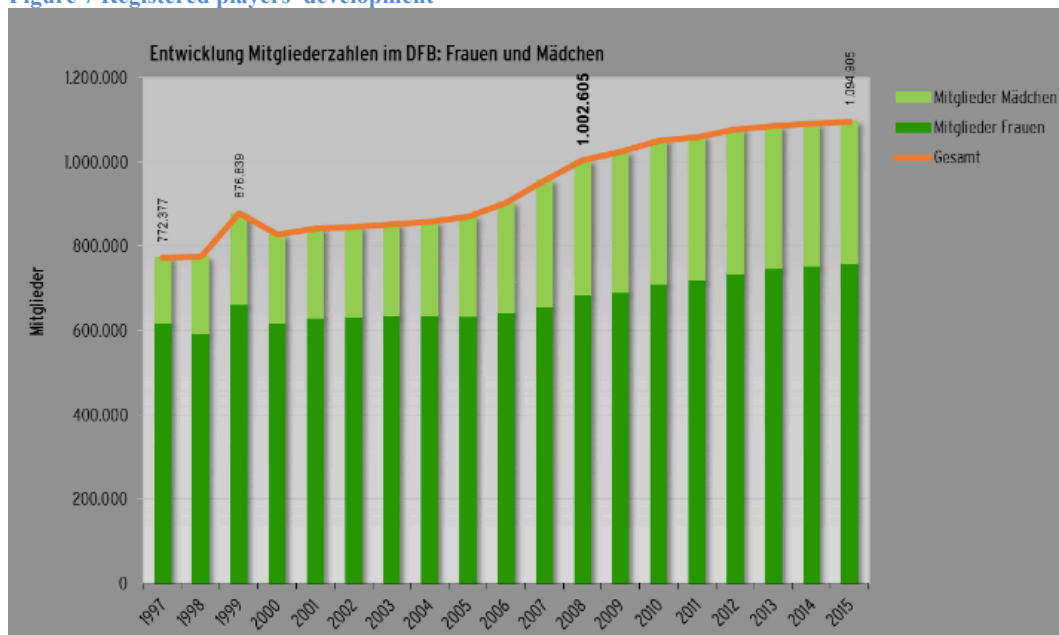
Source: DFB presentation (Ullrich, 2014)

The graph shows an increase in number of registered female players in DFB from year 1997 to 2015. We can se an enormous numbers, which exceeds 1.000.000 players. The graph is divided into two parts, dark green color stands for girls (to the age of 17) and light green color shows how many women play football.

The very first president of the DFB was Ferdinand Hueppe. Nowadays, since year 2016, the new president of the football association is Reinhard Grindel.

3.4.3. Women's football within the FA

The structure of the German Football Association (figure 8) is set the same as in many other associations around the World. However the interesting thing is that women's football department is at the same level as other department like Law, Financial, HR, Marketing, Coaches, International Relations, Amateur, Referees, Communication departments and many others. Women's football department became very important in German FA. It is obvious also out of employees that this department consists. Nowadays, there are 23 employees dedicated specially to women's football from managers of the national teams, managers for grassroots level through media managers to employees working for marketing of women's football.

Figure 8 Organizational structure of the FA
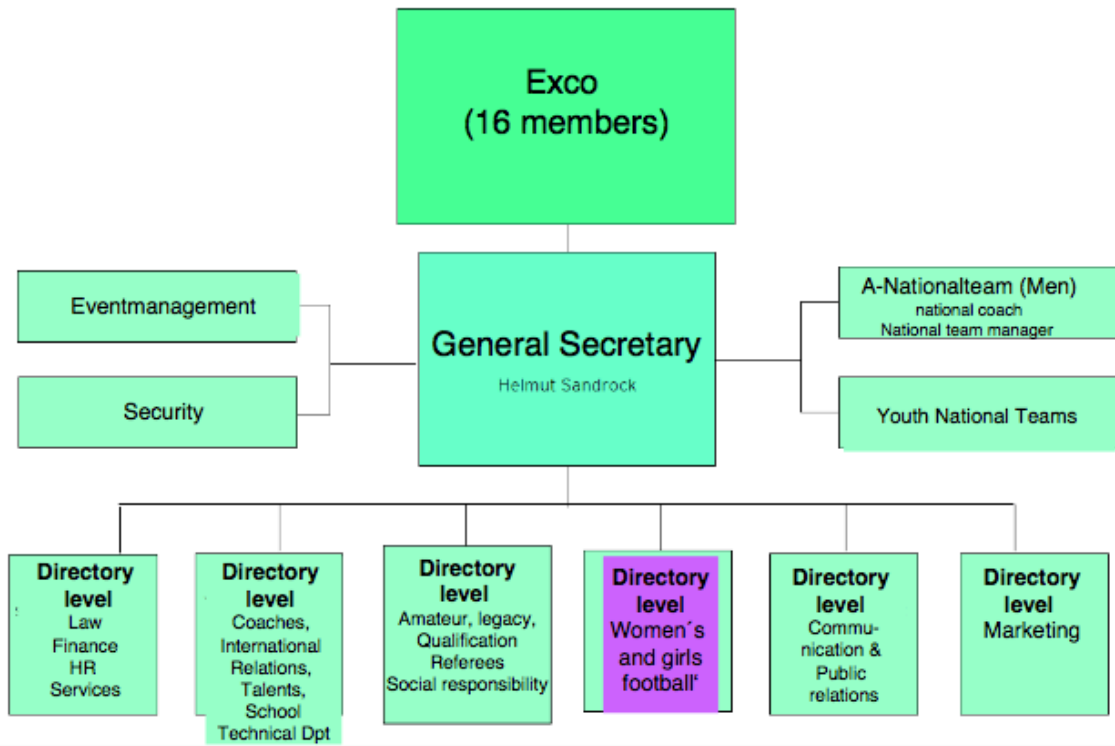
Source: DFB presentation (Ullrich, 2014)

4. ANALYTICAL PART

The aim of this part is to analyze factors such as annual budget, number of registered female players, coaches within women's football, sponsors (only in case of German FA, as in Czech FA there is no special sponsor for women's football), employees within the women's football department and their affect on the total performance of national women's football team of the Czech Republic and its comparison to Germany on the highest level (A-team). Determination of these factors will be developed through the use of regression analysis. Jae-On Kim and Frank J. Kohout describes it as: *"Multiple regression is a general statistical technique through which one can analyze the relationship between a dependent or criterion variable and a set of independent or predictor variables. Multiple regression may be viewed either as a descriptive tool by which the linear dependence of one variable on others is summarized and decomposed, or as an inferential toll by which the relationships in the population are evaluated from the examination of sample data"*. (Kohout and Kim, 1979) Within calculation of multiple regression analysis, a formula evaluating number of registered female players and inhabitants living in the Czech Republic as well as in Germany is being computed into a portion. This needs to be done to ensure correct evaluation of the results. To explain it I will use the example of Germany which has much more inhabitants living in their country than in the Czech Republic, thus their number of registered players reaches heights that we, as the Czech Republic, are not able to achieve.

The variable of interest in this diploma thesis is the performance of national women's football teams, which is explained further in a thesis. This factor is a dependent variable, which is called y_t. The multiple regression analysis includes many independent (exploratory) variables: x_{1t}, which is called annual budget; x_{2t}, which indicated the number of registered female players; x_{3t}, which stands for coaches within women's football; x_{4t}, which is the number of sponsors in women's football; x_{5t}, which shows the number of employees in Women's Football Department (WFD). In this part of my thesis I am also trying to show the development of women's football in our country and mainly our way to increase the number of registered players by a special project of motivating clubs thanks to financial and licensing support.

4.1. REGRESSION MODEL OF THE CZECH FA

4.1.1. Economic model

The performance of women's national team of the Czech Football Association is influenced by annual budget, number of registered female football players, number of women's football clubs, number of UEFA A licensed coaches, number of UEFA Pro licensed coaches and employees dedicated specially on women's football department. Performance as the main indicator in my thesis was taken out of FIFA Women's World Rankings. This ranking compares the strength of internationally active women's football national teams at any given period. FIFA Women's World Rankings are based on ever match a national teams have ever played since 1971. It is published four times a year usually the rankings are released in March, June, September and December.

The ranking procedure is being calculated thanks to following formula:

$$R_{aft} = R_{bef} + K(S_{act} - S_{exp})$$

$$S_{exp} = \frac{1}{1 + 10^{-x/2}}$$

$$x = \frac{R_{bef} - O_{bef} \pm H}{c}$$

Where:

R_{aft} = the team rating after the match

R_{bef} = the team rating before the match

K = the weighted importance of the match

S_{act} = the actual result of the match

S_{exp} = the expected result of the match

x = the scaled difference in rating points between the teams

O_{bef} = the opposing team's rating before the match

H = the "home advantage" correcting

c = a scaling factor

M = the "match importance factor"

In order to simplify the formula, we can describe it also as:

Women's World Ranking - new = Women's World Ranking - old + (Actual - Predicted)

There are few requirements, which need to be met in order to be ranked. A national team must play at least 5 football matches against other officially ranked teams and can not be inactive or not playing for more than eighteen months. (FIFA.com, 2017)

4.1.2. Hypothesis

If H1: an increase in annual budget by 1 euro leads to an increase in performance of women's national team by an upward shift in the ranking table.

Positive sign

Why: if an annual budget increases, also the performance will increase due to higher budget, which can be used for development or improvement of girls or women.

If H2: an increase in number of registered female players leads to an increase in performance of women's national team by an upward shift in the ranking table.

Positive sign

Why: if a number of registered women's footballers increases, logically there is a higher chance to gather talented girls and thus, the performance will increase as well.

If H3: an increase in number of women's football clubs leads to an increase in performance of women's national team by an upward shift in the ranking table.

Positive sign

Why: the higher number of women's clubs, the better performance of national female teams, since clubs will be playing competitions where girls can gather their quality and experiences.

If H4: an increase in number of UEFA A licensed coaches will lead to an increase in performance of women's national team by an upward shift in the ranking table.

Positive sign

Why: if the number of coaches with UEFA A license increases, the performance of our national team will increase as well due to better preparedness of our players.

If H5: an increase in UEFA Pro licensed coaches leads to an increase in performance of women's national team by an upward shift in the ranking table.

Positive sign

Why: as previous hypothesis, the higher number of educated UEFA PRO licensed coaches, the better prepared trainings in clubs, which leads to an improvement of performance of our players in national team.

If H6: an increase in number of employees in the women's football department leads to an increase in performance of women's national team by an upward shift in the ranking table.

Positive sign

Why: the more people dedicated to women's football, the better performance of overall women's football in the country due to more ideas on development and improvements of the game.

4.1.3. Declaration of variables

Dependent (endogenous) variable:

Y_t ……. The performance of women's football national team

Independent (exogenous) variable:

X_1 …… annual budget (euro) of Czech FA

X_2 …… number of registered female players in the Czech Republic

X_3 …… number of women's football clubs in the Czech Republic

X_4 …… number of UEFA A licensed coaches in the Czech Republic

X_5 …… number of UEFA Pro licensed coaches in the Czech Republic

X_6 …… number of employees dedicated to women's football

4.1.4. Formulation of regression model

$$\gamma_t = \beta_0 + \beta_1 x_{1t} + \beta_2 x_{2t} + \beta_3 x_{3t} + \beta_4 x_{4t} + \beta_5 x_{5t} + \beta_6 x_{6t} + \varepsilon_t$$

Table 1 Data input example Czech FA

YEAR	PERFORMANCE	ANNUAL BUDGET (EUR)	NO. OF REGISTERED FEMALE PLAYERS	NO. OF WOMEN´S FOOTBALL CLUBS
2007	19	595000	5849	88
2008	21	620500	6509	99
2009	25	650000	6120	107
2010	25	680200	7085	115
2011	26	685190	7345	138
2012	25	705500	7232	109
2013	26	750000	7457	129
2014	30	778000	7577	144
2015	33	926000	9839	152
2016	33	1128500	15473	157

Source: internal data of Czech Football Association (own data processing)

Table 2 Data input example Czech FA

YEAR	UEFA A LICENSED COACHES	UEFA PRO LICENSED COACHES	EMPLOYEES IN WOMEN´S FOOTBALL DEP.
2007	2	0	1
2008	4	0	1
2009	4	1	1
2010	6	1	2
2011	7	1	2
2012	7	1	3
2013	8	1	3
2014	8	1	4
2015	9	1	5
2016	10	1	8

Source: internal data of Czech Football Association (own data processing)

4.1.5. Regression analysis result

Table 3 Data output

Regression statistics	Results
Multiple R	0,989733685
R Square	0,979572767
Adjusted R Square	0,938718302
Standard Error	1,137719496
Observations	10

Source: internal data of Czech Football Association (own data processing)

4.1.6. Goodness of fit

Goodness of fit usually describes how successfully this data fits into the model. Mainly if the sample data I have used, fits a distribution from a certain population.

$R^2 = 0,979572767$

97,9 % of variability of performance was explained with this model using mentioned variables above. The coefficient is very high, which means that there is very good fit of the chosen data into the model. (Variation of performance was explained by 97,9% with this model.)

Adjusted R^2 … adjusted coefficient of determination = 0,938718302

It means that the date I have used, explain the performance on 93,8 % in case we would add one more explanatory variable.

Table 4 Output of the performance of the Czech FA regression analysis

Indicators	Coefficients	Standard Error	t Stat	P-value
Constant	-2,444001112	8,071336344	-0,302800058	0,78182417
Annual budget (€)	3,84098E-05	2,00879E-05	1,912084665	0,15181431
No. Of registered players	-0,001296916	0,000646786	-2,005171039	0,138629837
No. Of women´s football clubs	0,087280182	0,049998269	1,745664076	0,179207878
No. of UEFA A licensed coaches	-0,335929848	0,593476797	-0,566037037	0,61094393
No. of UEFA PRO licensed coaches	2,246485742	1,536593314	1,461991095	0,239908105
No. Of employees dedicated to WF	-0,038831324	1,167199311	-0,033268803	0,975549943

Source: internal data of Czech Football Association (own data processing)

Table 5 Output of the performance of the Czech FA regression analysis

Indicators	Lower 95%	Upper 95%	Lower 95,0%	Upper 95,0%
Constant	-28,13059564	23,24259341	-28,13059564	23,24259341
Annual budget (€)	-2,55189E-05	0,000102339	-2,55189E-05	0,000102339
No. Of registered players	-0,003355277	0,000761445	-0,003355277	0,000761445
No. Of women´s football clubs	-0,071836624	0,246396988	-0,071836624	0,246396988
No. of UEFA A licensed coaches	-2,224637889	1,552778193	-2,224637889	1,552778193
No. of UEFA PRO licensed coaches	-2,643639972	7,136611456	-2,643639972	7,136611456
No. Of employees dedicated to WF	-3,75338046	3,675717811	-3,75338046	3,675717811

Source: internal data of Czech Football Association (own data processing)

4.1.7. Statistical significance of parameters

Table 6 Statistical significance of women's football in the Czech Republic

Parameters	P-value	Statistical significance (5%)
Constant	0,78182417	> 0.05 not significant
Annual budget (€)	0,15181431	> 0.05 not significant
No. Of registered players	0,138629837	> 0.05 not significant
No. Of women´s football clubs	0,179207878	> 0.05 not significant
No. of UEFA A licensed coaches	0,61094393	> 0.05 not significant
No. of UEFA PRO licensed coaches	0,239908105	> 0.05 not significant
No. Of employees dedicated to WF	0,975549943	> 0.05 not significant

Source: internal data of Czech Football Association (own data processing)

*Note: **Reject H₀** – parameter is significant with 5% level of significance. Valid for sample, not for population*

***Not reject H₀** – parameter is not significant with 5% level of significance. Valid for whole population*

Unfortunately, this model does not include statistically significant variables.

4.1.8. Final estimated regression model

$$\gamma_t = \beta_0 + \beta_1 x_{1t} + \beta_2 x_{2t} + \beta_3 x_{3t} + \beta_4 x_{4t} + \beta_5 x_{5t} + \beta_6 x_{6t} + \beta_7 x_{7t} + \varepsilon_t$$

γ_t = -2,444001112+ 0,0000384098 x_{1t} + (-0,001296916) x_{2t} + 0,087280182 x_{3t} + (-0,335929848) x_{4t} + 2,246485742 x_{5t} + (-0,038831324) x_{6t} + ε_t

$\hat{Y}$ = 2,444001112 + 0,000038409 x_{1t} - 0,001296916 x_{2t} + 0,087280182 x_{3t} -0,335929848 x_{4t} + 2,246485742 x_{5t} -0,038831324 x_{6t} + ε_t

4.1.9. Economic significance of parameters

Estimated parameter β_0

Constant is negative, it means that if all extended variables are zero, then the performance of women's national team shift down by 2,444001112 places in the ranking table.

Estimated parameter β_1

If the annual budget increases by €1, the performance of women's football national team shift up by 0,000038409 place in the ranking table.

=> Economically verified

Estimated parameter β_2

If the number of registered players increases by one player, the performance of women's national team decrease by 0,001296916 in the ranking table.

Estimated parameter β_3

If the number of women's football clubs increases by one club, the performance of women's football national teams increases by 0,087280182 in the ranking table.

=> Economically verified

Estimated parameter β_4

If the number of UEFA A licensed coaches increases by one new coach, the performance of national team will shift down by 0,335929848 place in the ranking table.

Estimated parameter β_5

If the number of UEFA Pro licensed coaches increases by one coach, the performance of women's national team will increase by 2,246485742 in the ranking table.

=> Economically verified

Estimated parameter β_6

If the number of employees dedicated to women's football increases by one employee, the performance of women's national team decreases by 0,038831324 in the ranking table.

4.1.10. Scatter plot

Scatter plot is used to examine the possible relationship between two variables (endogenous and exogenous) that relate to the same event. The graph shows us visual picture between these variable and interprets the correlation coefficient. Also this graph should identify the potential association between chosen variables.

Figure 9 Influence of independent annual budget to dependent performance of women's national team
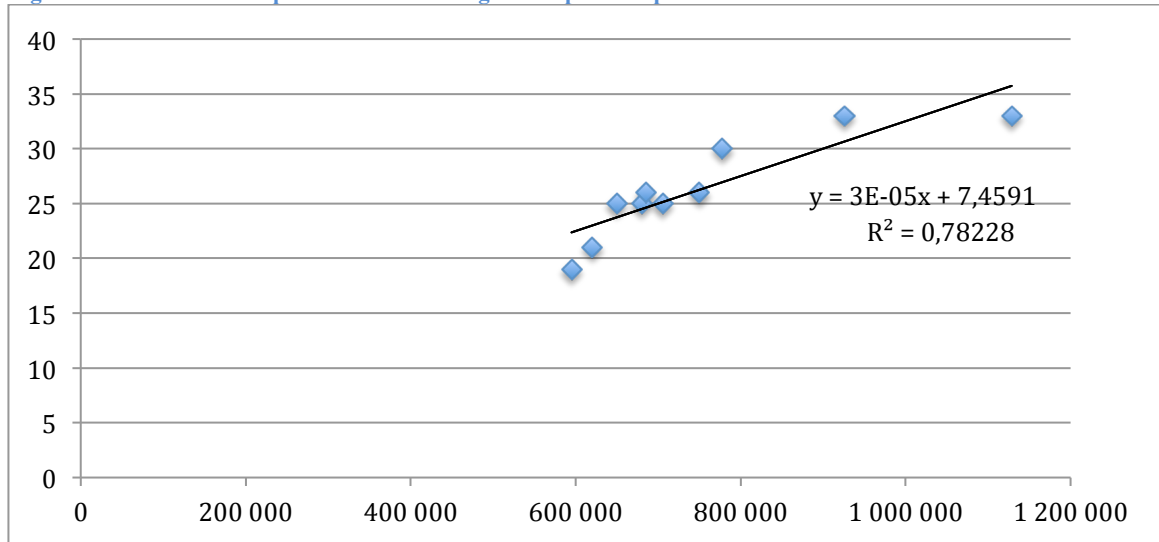
Source: internal data of Czech Football Association (own data processing)

This figure 9 shows us the relationship between dependent variable, which is the performance of national team and also independent variable, which is in this case the annual budget. According to this graph, we can clearly see that there is a positive association, it means upward trend (positive slope), where an increase in annual budget correspond to an increase of the performance.

4.2. REGRESSION MODEL OF THE GERMAN FA

4.2.1. Economic model

The performance of women's national team of the German Football Association (DFB) is influenced by annual budget, number of registered female football players, number of women's football clubs, number of UEFA A licensed coaches, number of UEFA Pro licensed coaches, presence of special sponsors for WF and employees dedicated specially on women's football department.

4.2.2. Hypothesis

If H1: an increase in annual budget by 1 euro leads to an increase in performance of women's national team by an upward shift in the ranking table.

Positive sign

Why: if an annual budget increases, also the performance will increase due to higher budget, which can be used for development or improvement of girls or women.

If H2: an increase in number of registered female players leads to an increase in performance of women's national team by an upward shift in the ranking table.

Positive sign

Why: if a number of registered women's footballers increases, logically there is a higher chance to gather talented girls and thus, the performance will increase as well.

If H3: an increase in number of women's football clubs leads to an increase in performance of women's national team by an upward shift in the ranking table.

Positive sign

Why: the higher number of women's clubs, the better performance of national female teams, since clubs will be playing competitions where girls can gather their quality and experiences.

If H4: an increase in number of UEFA A licensed coaches will lead to an increase in performance of women's national team by an upward shift in the ranking table.

Positive sign

Why: if the number of coaches with UEFA A license increases, the performance of our national team will increase as well due to better preparedness of our players.

If H5: an increase in UEFA Pro licensed coaches leads to an increase in performance of women's national team by an upward shift in the ranking table.

Positive sign

Why: as previous hypothesis, the higher number of educated UEFA PRO licensed coaches, the better prepared trainings in clubs, which leads to an improvement of performance of our players in national team.

If H6: an increase in number of employees in the women's football department leads to an increase in performance of women's national team by an upward shift in the ranking table.

Positive sign

Why: the more people dedicated to women's football, the better performance of overall women's football in the country due to more ideas on development and improvements of the game.

4.2.3. Declaration of variables

Dependent (endogenous) variable:

Y_t ……. The performance of women's football national team

Independent (exogenous) variable:

X_1 …… annual budget (euro) of German FA

X_2 …… number of registered female players in the Germany

X_3 …… number of women's football clubs in the Germany

X_4 …… number of UEFA A licensed coaches in the Germany

X_5 …… number of UEFA Pro licensed coaches in the Germany

X_6 ……number of employees dedicated to women's football

4.2.4. Formulation of regression model

$\gamma_t = \beta_0 + \beta_{1x1t} + \beta_{2x2t} + \beta_{3x3t} + \beta_{4x4t} + \beta_{5x5t} + \beta_{6x6t} + \beta_{7x7t} + \varepsilon_t$

Table 7 Data input German FA

YEAR	PERFORMANCE	ANNUAL BUDGET (EUR)	NO. OF REGISTERED FEMALE PLAYERS	NO. OF FOOTBALL CLUBS	WOMEN´S SENIOR
2007	1	8 600 000	232 479	4560	
2008	2	7 200 000	205 000	4850	
2009	2	6 000 000	234905	5004	
2010	2	6 000 000	260 300	5225	
2011	2	10 000 000	287 350	5350	
2012	2	6 300 000	250 000	5784	
2013	2	9 000 000	262 220	5820	
2014	1	7 000 000	258 380	5875	
2015	2	10 000 000	197 577	5904	
2016	2	10 000 000	209 713	6002	

Source: internal data of DFB (own data processing)

Table 8 Data input German FA

YEAR	UEFA A LICENSED COACHES	UEFA PRO LICENSED COACHES	EMPLOYEES IN WOMEN´S FOOTBALL DEP.
2007	59	18	19
2008	66	18	21
2009	71	20	22
2010	60	21	22
2011	64	22	18
2012	69	22	20
2013	73	25	19
2014	70	25	21
2015	62	25	23
2016	57	27	23

Source: internal data of DFB (own data processing)

4.2.5. Regression analysis result

Table 9 Data output

Regression statistics	Results
Multiple R	0,678425869
R Square	0,46026166
Adjusted R Square	-0,619215019
Standard Error	0,536526279
Observations	10

Source: internal data DFB (own data processing)

4.2.6. Goodness of fit

R² = 0,685862341

68,6 % of variability of performance was explained with this model using mentioned variables above. The coefficient is neither high nor low, which means that not all of data fit well the chosen data into the model. (Variation of performance was explained by 68,6% with this model.)

Adjusted R² … adjusted coefficient of determination = -0,413619466

Table 10 Output of the performance of the German FA regression analysis

Variables	Coefficients	Standard Error	t Stat	P-value
Constant	-14,87397698	11,6333844	-1,278559744	0,290993408
Annual budget (€)	3,4514E-07	2,68951E-07	1,283281382	0,289542943
No. Of registered players	1,42279E-05	1,36958E-05	1,038844622	0,375249984
No. Of women´s football clubs	0,00167954	0,001381506	1,215730757	0,311027527
No. of UEFA A licensed coaches	0,036232551	0,0485892	0,74569146	0,509964667
No. of UEFA PRO licensed coaches	-0,399895003	0,291830979	-1,370296614	0,264130508
No. Of employees dedicated to WF	0,380974479	0,290606116	1,310965112	0,281189425

Source: internal data of DFB (own data processing)

Table 11 Output of the performance of the German FA regression analysis

Variables	Lower 95%	Upper 95%	Lower 95,0%	Upper 95,0%
Constant	-51,89659817	22,14864421	-51,89659817	22,14864421
Annual budget (€)	-5,10782E-07	1,20106E-06	-5,10782E-07	1,20106E-06
No. Of registered players	-2,93584E-05	5,78141E-05	-2,93584E-05	5,78141E-05
No. Of women´s football clubs	-0,00271703	0,006076109	-0,00271703	0,006076109
No. of UEFA A licensed coaches	-0,118399968	0,190865071	-0,118399968	0,190865071
No. of UEFA PRO licensed coaches	-1,328631423	0,528841418	-1,328631423	0,528841418
No. Of employees dedicated to WF	-0,54386388	1,305812837	-0,54386388	1,305812837

Source: internal data of DFB (own data processing)

4.2.7. Statistical significance of parameters

Table 12 Statistical significance of women's football performance

Indicators	P-value	Statistical significance (5%)
Constant	0,290993408	> 0.05 not significant
Annual budget (€)	0,289542943	> 0.05 not significant
No. Of registered players	0,375249984	> 0.05 not significant
No. Of women´s football clubs	0,311027527	> 0.05 not significant
No. of UEFA A licensed coaches	0,509964667	> 0.05 not significant
No. of UEFA PRO licensed coaches	0,264130508	> 0.05 not significant
No. Of employees dedicated to WF	0,281189425	> 0.05 not significant

Source: internal data of DFB (own data processing)

Note*:* **Reject H$_0$** *– parameter is significant with 5% level of significance. Valid for sample, not for population*

Not reject H$_0$ *– parameter is not significant with 5% level of significance. Valid for whole population*

Unfortunately, this model does not include statistically significant variables.

4.2.8. Final estimated regression model

$$\gamma_t = \beta_0 + \beta_1 x_{1t} + \beta_2 x_{2t} + \beta_3 x_{3t} + \beta_4 x_{4t} + \beta_5 x_{5t} + \beta_6 x_{6t} + \beta_7 x_{7t} + \varepsilon_t$$

γ_t = -24,19083903 + 0,0000000561705 x_{1t} + 0,0000142279 x_{2t} + 0,00000150671 x_{3t} + 0,041965754 x_{4t} + (-0,552023584) x_{5t} + (-2,242193225) x_{6t} + 0,206146739 x_{7t} + ε_t

$\hat{Y}$ = -24,19083903 + 0,0000000561705 x_{1t} + 0,0000142279 x_{2t} + 0,00000150671 x_{3t} + 0,041965754 x_{4t} - 0,552023584 x_{5t} - 2,242193225 x_{6t} + 0,206146739 x_{7t} + ε_t

4.2.9. Economic significance of parameters

Estimated parameter β$_0$

Constant is negative, it means that if all extended variables are zero, then the performance of women's national team shift down by 24,19083903 places in the ranking table.

Estimated parameter β₁

If the annual budget increases by €1, the performance of women's football national team shift up by 0,0000000561705 place in the ranking table.

=> Economically verified

Estimated parameter β₂

If the number of registered players increases by one player, the performance of women's national team increases by 0,0000142279 in the ranking table.

=> Economically verified

Estimated parameter β₃

If the number of women's football clubs increases by one club, the performance of women's football national teams increases by 0,00000150671 in the ranking table.

=> Economically verified

Estimated parameter β₄

If the number of UEFA A licensed coaches increases by one new coach, the performance of national team will shift up by 0,041965754 place in the ranking table.

=> Economically verified

Estimated parameter β₅

If the number of UEFA Pro licensed coaches increases by one coach, the performance of women's national team will decrease by 0,552023584 in the ranking table.

Estimated parameter β₆

If the presence increases by 1 unit, the performance of women's football national team will decrease by 2,242193225.

Estimated parameter β₇

If the number of employees dedicated to women's football increases by one employee, the performance of women's national team increases by 0,206146739 in the ranking table.

=> Economically verified

4.2.10. Scatter plot

Figure 10 Influence of independent annual budget to dependent performance of women's national team

$$y = 2E\text{-}08x + 1,6701$$
$$R^2 = 0,00426$$
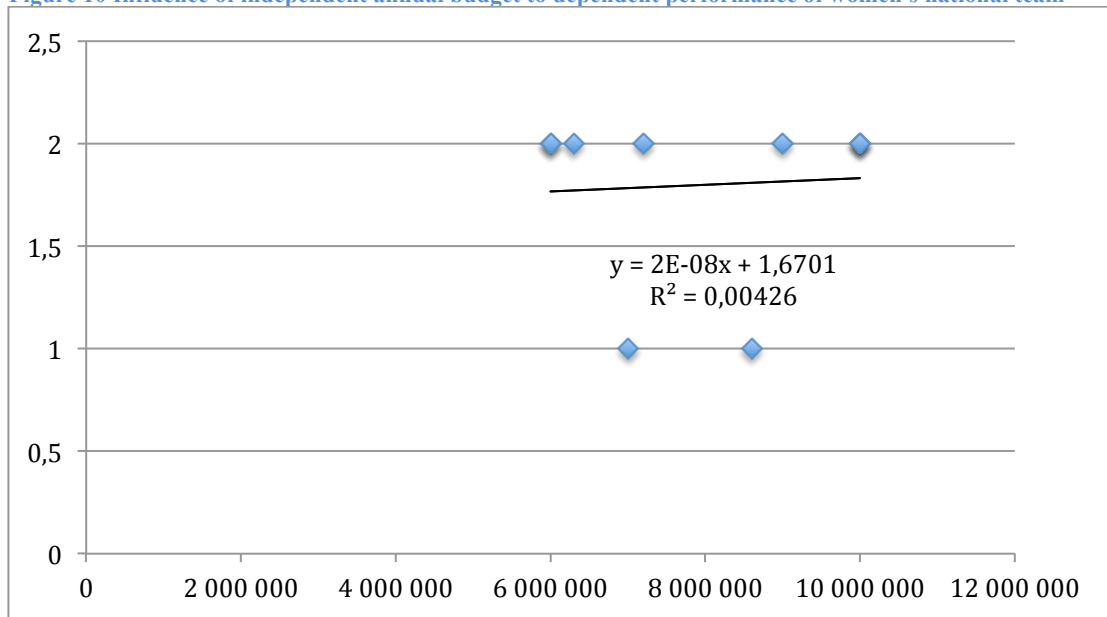
Source: internal data of DFB (own data processing)

In this figure above we can see there is most likely no correlation between independent variable (annual budget) and dependent variable (performance of women's national teams). It might be caused because of German women's football is already in a very good level and the money does not influence the performance that much. The increase of money in DFB usually is caused due to some expected tournament as World Cup, or Olympic games where the football association needs to have prepared money for the initial cost of these big events. It is not influenced with the performance, as they are second at this moment in the FIFA ranking table.

4.3. COMPARISON OF CHOSEN ASSOCIATIONS ACROSS EUROPE

In this part of my diploma thesis, I would like to compare all the variables mentioned above with different football associations across Europe. As both of the regression analysis solved in previous pages have not been consisted of significant variables, thus I have decided to create one more multiple regression analysis with the same variables however with different national associations to see different results.

4.3.1. Economic model

The performance of women's national team from different Football Associations is influenced by annual budget, number of registered female football players, number of women's football clubs, number of UEFA A licensed coaches, number of UEFA Pro licensed coaches and employees dedicated specially on women's football department.

4.3.2. Hypothesis

If H1: an increase in annual budget by 1 euro leads to an increase in performance of women's national team by an upward shift in the ranking table.

Positive sign

Why: if an annual budget increases, also the performance will increase due to higher budget, which can be used for development or improvement of girls or women.

If H2: an increase in number of registered female players leads to an increase in performance of women's national team by an upward shift in the ranking table.

Positive sign

Why: if a number of registered women's footballers increases, logically there is a higher chance to gather talented girls and thus, the performance will increase as well.

If H3: an increase in number of women's football clubs leads to an increase in performance of women's national team by an upward shift in the ranking table.

Positive sign

Why: the higher number of women's clubs, the better performance of national female teams, since clubs will be playing competitions where girls can gather their quality and experiences.

If H4: an increase in number of UEFA A licensed coaches will lead to an increase in performance of women's national team by an upward shift in the ranking table.

Positive sign

Why: if the number of coaches with UEFA A license increases, the performance of our national team will increase as well due to better preparedness of our players.

If H5: an increase in UEFA Pro licensed coaches leads to an increase in performance of women's national team by an upward shift in the ranking table.

Positive sign

Why: as previous hypothesis, the higher number of educated UEFA PRO licensed coaches, the better prepared trainings in clubs, which leads to an improvement of performance of our players in national team.

If H6: there is a relationship between the presence of special sponsor for women's football and the performance of national women's football team.

Positive sign

Why: if there is a presence of sponsor that means more money comes into women's football and logically the more money you have, more means of developing the game and improving the performance.

If H7: an increase in number of employees in the women's football department leads to an increase in performance of women's national team by an upward shift in the ranking table.

Positive sign

Why: the more people dedicated to women's football, the better performance of overall women's football in the country due to more ideas on development and improvements of the game.

4.3.3. Declaration of variables

Dependent (endogenous) variable:

Y_t ……. The performance of women's football national team

Independent (exogenous) variable:

X_1 …… annual budget (euro) of different FAs

X_2 …… number of registered female players in FAs

X_3 …… number of women's football clubs in FAs

X_4 …… number of UEFA A licensed coaches in FAs

X_5 …… number of UEFA Pro licensed coaches in FAs

X_6 …… presence of a special sponsor for women's football in FAs

X_7 …… number of employees dedicated to women's football in each FAs

4.3.4. Formulation of regression model

$$\gamma_t = \beta_0 + \beta_1 x_{1t} + \beta_2 x_{2t} + \beta_3 x_{3t} + \beta_4 x_{4t} + \beta_5 x_{5t} + \beta_6 x_{6t} + \beta_7 x_{7t} + \varepsilon_t$$

Table 13 Data input year 2016/17

FA	PERFORMANCE	ANNUAL BUDGET (EURO €)	NO. OF REGISTERED FEMALE PLAYERS	NO. OF WOMEN´S FOOTBALL CLUBS
Austria	25	2121677	19153	287
Belgium	26	1416857	25887	295
Czech Rep.	33	902208	15473	157
Denmark	20	3034491	63294	1320
England	4	15880128	106910	1560
Finland	28	1628608	29048	301
France	3	9824246	106612	2064
Germany	2	10000000	209713	6002
Italy	17	3500000	23196	705
Netherlands	12	4469581	153001	2458
Poland	31	1730450	11125	250
Russia	22	2298333	23207	129
Slovakia	41	838216	2969	78
Sweden	6	5103200	179050	1360
Ukraine	23	374854	5350	83

Source: (Women's football across the national associations 2016/2017) - own data processing

FA	UEFA A LICENSED COACHES	UEFA PRO LICENSED COACHES	EMPLOYEES IN WOMEN´S FOOTBALL DEP.
Austria	7	0	9
Belgium	6	1	4
Czech Rep.	10	1	8
Denmark	17	2	12
England	29	5	44
Finland	11	1	6
France	82	2	47
Germany	57	27	23
Italy	18	3	23
Netherlands	5	3	24
Poland	16	0	2
Russia	0	0	38
Slovakia	6	0	11
Sweden	33	6	13
Ukraine	2	0	16

Source: (Women's football across the national associations 2016/2017) - own data processing

4.3.5. Regression analysis result

Regression statistics	Results
Multiple R	0,937386436
R Square	0,87869333
Adjusted R Square	0,787713327
Standard Error	5,512102809
Observations	15

Source: (Women's football across the national associations 2016/2017) - own data processing

4.3.6. Goodness of fit

$R^2 = 0,87869333$

87,9 % of variability of performance was explained with this model using mentioned variables above. The coefficient is neither high nor low, which means that not all of data fit well the chosen data into the model. (Variation of performance was explained by 87,9 % with this model.)

Adjusted R^2 … adjusted coefficient of determination = 0,787713327

It means that the data I have used, explain the performance on 75,9 % in case we would add one more explanatory variable.

Table 16 Output of the performance of the FAs multiple regression analysis

Variables	Coefficients	Standard Error	t Stat	P-value
Constant	33,5208405	2,58426729	12,97111976	1,18234E-06
Annual budget (€)	-4,131E-07	6,88385E-07	-0,600100131	0,565046535
No. Of registered players	-0,000114817	4,60428E-05	-2,493708402	0,037306004
No. Of women´s football clubs	0,001413306	0,003771072	0,374775617	0,717567402
No. of UEFA A licensed coaches	-0,067489493	0,099677994	-0,677075148	0,517454427
No. of UEFA PRO licensed coaches	-0,104313187	0,668570361	-0,156024247	0,879879184
No. Of employees dedicated to WF	-0,251792865	0,171868854	-1,465029057	0,181076345

Source: (Women's football across the national associations 2016/2017) - own data processing

Table 17 Output of the performance of the FAs multiple regression analysis

Variables	Lower 95%	Upper 95%	Lower 95,0%	Upper 95,0%
Constant	27,56150945	39,48017156	27,56150945	39,48017156
Annual budget (€)	-2,00052E-06	1,17432E-06	-2,00052E-06	1,17432E-06
No. Of registered players	-0,000220992	-8,64243E-06	-0,000220992	-8,64243E-06
No. Of women´s football clubs	-0,007282802	0,010109414	-0,007282802	0,010109414
No. of UEFA A licensed coaches	-0,29734736	0,162368374	-0,29734736	0,162368374
No. of UEFA PRO licensed coaches	-1,646039203	1,43741283	-1,646039203	1,43741283
No. Of employees dedicated to WF	-0,648123152	0,144537423	-0,648123152	0,144537423

Source: (Women's football across the national associations 2016/2017) - own data processing

4.3.7. Statistical significance of parameters

Table 18 Statistical significance of women's football performance

Indicators	P-value	Statistical significance (5%)
Constant	1,18234E-06	< 0.05 is significant
Annual budget (€)	0,565046535	> 0.05 not significant
No. of registered players	0,037306004	< 0.05 is significant
No. of women´s football clubs	0,717567402	> 0.05 not significant
No. of UEFA A licensed coaches	0,517454427	> 0.05 not significant
No. of UEFA PRO licensed coaches	0,879879184	> 0.05 not significant
No. of employees dedicated to WF	0,181076345	> 0.05 not significant

Source: (Women's football across the national associations 2016/2017) - own data processing

Note: **Reject H0** *– parameter is significant with 2,5% level of significance. Valid for sample, not for population*

Not reject H0 *– parameter is not significant with 2,5% level of significance. Valid for whole population*

According to p-value, only amount of registered female players and constant or intercept are statistically significant. It means that intercept is significantly different from 0.

4.3.8. Final estimated regression model

$$\gamma_t = \beta_0 + \beta_{1x1t} + \beta_{2x2t} + \beta_{3x3t} + \beta_{4x4t} + \beta_{5x5t} + \beta_{6x6t} + \beta_{7x7t} + \varepsilon_t$$

γ_t = 33,5208405033625 + (-0,00000004131) x_{1t} + (-0,000114817) x_{2t} + 0,001413306 x_{3t} + (-0,067489493) x_{4t} + (-0,104313187) x_{5t} + (-1,251792865) x_{6t} + + ε_t

$\hat{Y}$ = 33,5208405033625 - 0,00000004131 x_{1t} - 0,000114817 x_{2t} + 0,001413306 x_{3t} - 0,067489493 x_{4t} - 0,104313187 x_{5t} - 1,251792865 x_{6t} + + ε_t

4.3.9. Economic significance of parameters

Estimated parameter β0

Constant is positive, it means that if all extended variables are zero, then the performance of women's national team increase by 33,55463268 places in the ranking table.

Estimated parameter β_1

If the annual budget increases by €1, the performance of women's football national team shift down by 0,0000000415094 place in the ranking table.

Estimated parameter β_2

If the number of registered players increases by one player, the performance of women's national team decreases by 0,000108179 in the ranking table.

Estimated parameter β_3

If the number of women's football clubs increases by one club, the performance of women's football national teams increases by 0,001480559 in the ranking table.

=> Economically verified

Estimated parameter β_4

If the number of UEFA A licensed coaches increases by one new coach, the performance of national team will shift down by 0,071657126 place in the ranking table.

Estimated parameter β_5

If the number of UEFA Pro licensed coaches increases by one coach, the performance of women's national team will decrease by 0,132667566 in the ranking table.

Estimated parameter β_7

If the number of employees dedicated to women's football increases by one employee, the performance of women's national team decreases by 0,238020603 in the ranking table.

4.3.10. Scatter plot
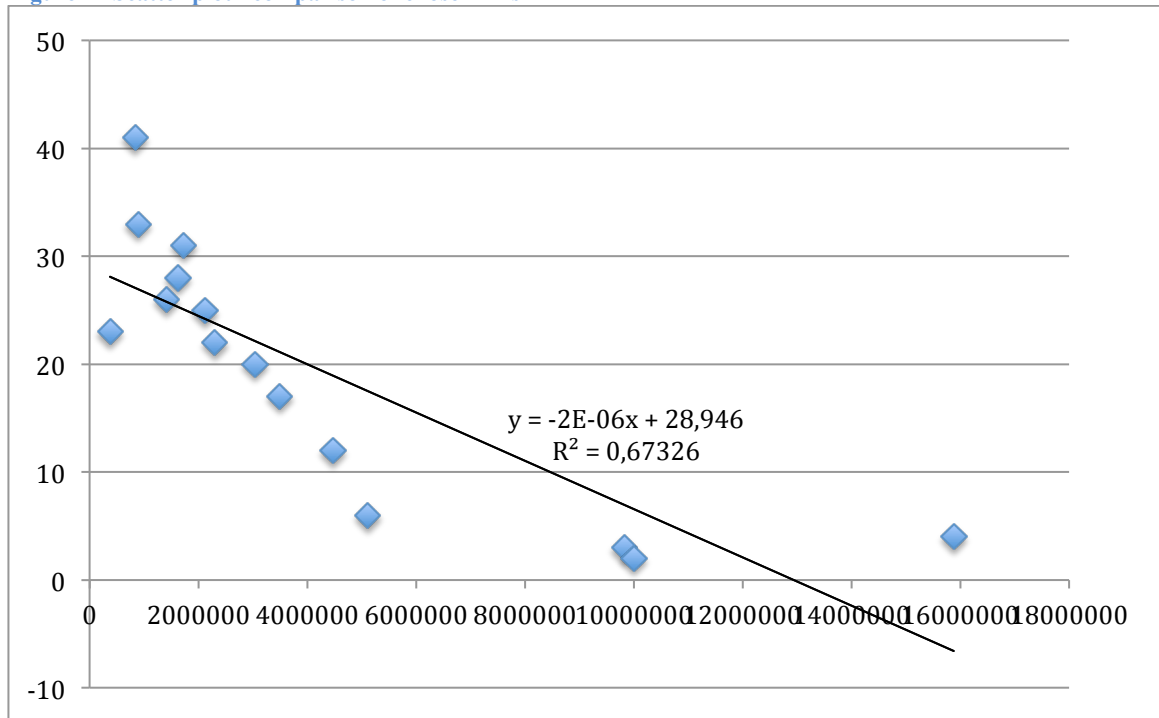
$$y = -2E\text{-}06x + 28{,}946$$
$$R^2 = 0{,}67326$$

Source: (Women's football across the national associations 2016/2017) - own data processing

The figure 11 shows us the relationship between dependent variable, which is the performance of national teams of chosen countries and also independent variable, which is in this case the annual budget. According to this graph, we can clearly see that there is a negative association, it means downward trend (negative slope), where an increase in annual budget correspond to a decrease of the performance. It might be caused by different possibilities of those countries, thus it does not have to be same everywhere. Some countries have higher annual budget but might be in lower position within FIFA Women's Ranking.

4.4. DEVELOPMENT OF WOMEN'S FOOTBALL

4.4.1 Introduction to projects

As a Football Association we see the main issue of women's football in low number of registered female players or in general in the low participation of girls or women in football. Also it has shown us that it is the only statistically significant variable, which influence the performance of women's national team. Football, even the men's football in the Czech Republic, needs to increase the participation in football. Almost every man is already involved in this beautiful game but the potential is on female side. Football needs to involve more girls or women as fans, managers, future mother of football players, female footballers, doctors, coaches etc. In our department, women's football department, we focus especially to attract new potential female footballers. Thus, we are trying to create key projects where we address more girls in a young age to start to play football, to increase the awareness of this sport and to improve the quality of female footballers that are already playing (see below figure 12).

Figure 12 Key projects for development

Source: Department of women's football FAČR (own data processing)

Figure 13 Increase the number of registered players

Key longtime projects	• 1a) **Creation of new girls teams** • 1b) Support for girls playing in boys´ teams
Additional projects	• 2) Live your goals • 3) My first goal (Recruitment months) • 4) FACR Mobil

Source: Department of women's football FAČR (own data processing)

One of the main objectives of these projects is to increase the number of registered female players, which is extremely low nowadays. We want to achieve it by establishing new female youth teams in our Sport's centers around the Czech Republic. Aim is to gather as many girls to play football as possible and also to create healthy grassroots level. Nowadays, there are approximately 60 sport's centers for boys in age of U7 to U15, which gives us a significant opportunity to create a huge base of new registered female players for the future. It will be based mainly upon financial and licensing support. We want to motivate centers to build female component in their clubs by themselves, so the women's football become a part of their every-day life. Also when boys are going to see girls who train on the same pitch just next to them, they will take it as common things and those prejudices will not appear anymore.

4.4.2. Sport's centers

An important thing is to explain those Sport's centers that we based on. The main goals of creation of those centers were to support sport's preparation of talented boys of age 11-15, improve infrastructure, supporting continuous improvement standards in all aspects of football, ensuring quality control and organization of centers and overall support in all criteria (sporting, legal, sport classes, social, infrastructural and financial). To request the certificate, applicant must be a member of FAČR and must have at least 4 categories of U10-U12 and 4 categories of U13-U15. The licensing system of these centers is divided into three criterions (A, B, C). Each category is given upon how many requirements each center fulfill and the financial support is divided differently. Sport's centers in criterion A will receive more money than in criterion B or C.

Figure 14 Current clubs with U9 girls' teams

Source: Department of women's football FAČR (own data processing)

In this graph you can clearly see the lack of clubs having girls team in age of 9. To increase the participation of girls into football, we are focusing on Sport's centers as I have already mentioned earlier. We know that nowadays we have 60 club's centers with only boys. They are financially supported from our Football association as well as from Ministry of Education and Sport. Thus they have already built a good infrastructure, coaches, management etc. This is a perfect potential for women's football to use those current boys clubs and create youth girls' teams (see below figure 15).

Figure 15 Allocation of sport's youth centers in the Czech Republic / our goal of clubs having girl's teams
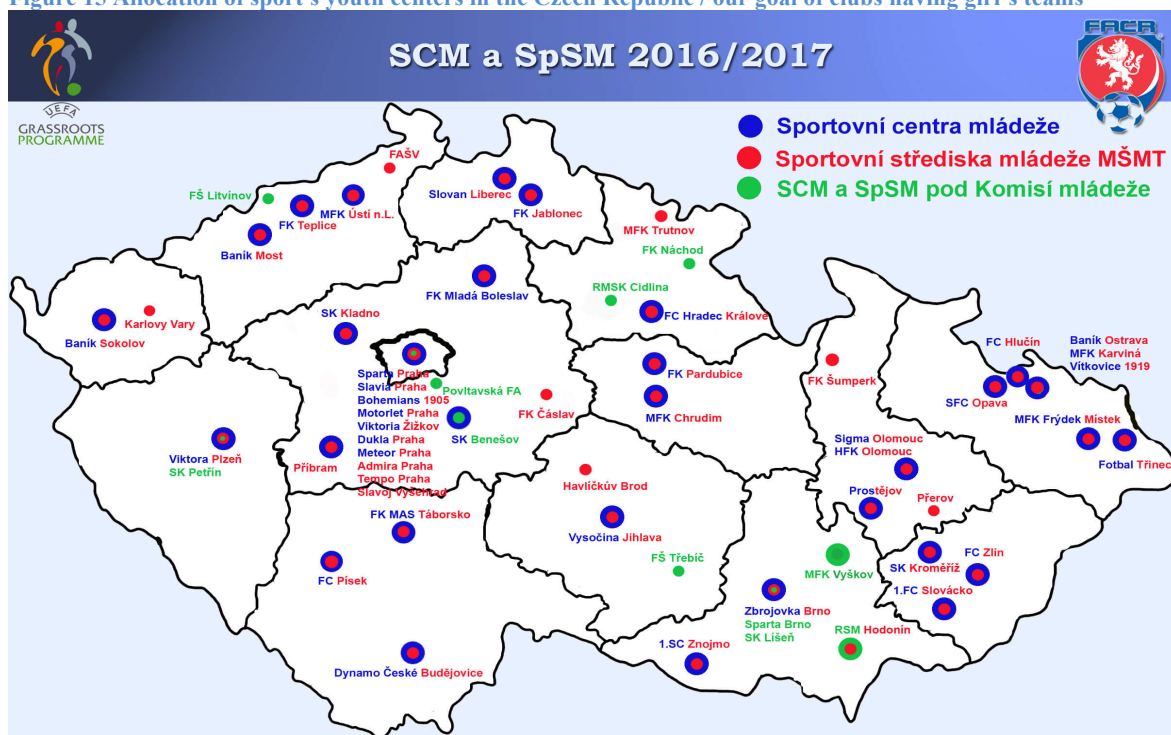
Sources: Internal data of FAČR
Notes: Sport's youth centers
        Sport's youth centers of Ministry of education and sport
        Sport's youth centers under the umbrella of Youth Football Committee

In the picture above, we can see all 60 sport's centers in the Czech Republic. We want to motivate these clubs or sport centers to invest their effort into women's football by supporting them financially or by giving them more points in the licensing system. There should be also an increase in the number of Sport's centers from 60 to 90 in the season 2018/19, which also mean a higher number of clubs interesting in girls. However, we will not make it obligatory, only as a motivational tool. We have been discussing the amount of money and points into a licensing system for a while to be sure it will be motivation for the clubs to start with girls.

4.4.3. Project plan

Figure 16 Project plan

Support to clubs which establish new girls´ teams

Support max. 200 ths. CZK/ year

Teams with license – sport center
Points system
Financial support

In total 60-90 teams

All money goes to clubs

Teams play in boys´ competitions, 1-2x per year FAČR organize girls´ comparative tournaments (qualification, final)

Financial resources FIFA, UEFA, sponsors, FA, Ministry of Education and Sport, regions

Technical support from FA (health, exercise, nutrition, healthy life-style, game in the fresh air)

Obligation to have from WU9 youth team to higher level (WU11, WU13, WU15) in a complete line (condition of having U9 team)

Every year the conditions must be fulfilled

10-years long project with funding, which reflects increase of amount of teams (players)

At least till the category of WU13 -> girls´ team play in boys´ competitions and FAČR only organizes the comparative tournaments each year

Source: Department of women's football (own data processing)

The financial and licensing support will go only to clubs with license -> sport centers. Nowadays, 60 sport centers are already created around the Czech Republic. New established girls teams will be playing in a competitions with boys. We see this as a important thing to do as girls who are playing with boys reach much better quality than girls who are playing only with girls. However, once or twice a year we will create a tournament in the each age category to see all girls at once and be able to compare their qualities. All financial support will be funded from FIFA, UEFA, sponsors, Czech Football Association, Ministry of Education and Sport, regions. Also our FA is ready to support teams on technical point of view, for instance by workshop for nutrition, health, special exercises etc. Given support will be depended on set requirements we have proposed. Every condition must be met as it is written above. The main and very important condition

is that clubs need to establish U9 girls' team (age 7-8) and then create a continuous series with U11, U13 and U15 (figure 17).

| U9 | U11 | U13 | U15 |

Source: Department of women's football (own data processing)

This graph shows us, how the requirement which should be met. We do not want the clubs/ sport centers to create at once all of these categories our department understand it is not possible. However, it is always needed to have U9 girls' team to fulfill the requirements. For instance, the club with U11 and U15 team will not receive any kind of support. Our FA wants to push them in creation of healthy base for girls, so they can start at age 7 and grew up through all the categories. They can start with U9 and in two years those girls will be already playing in U11 and they will search again for young girls in age of 7 years. The only thing they need to do, will be each year or once in two years looking for new girls at this age. In six years, they are able to have all of these four age categories.

Table 19 Points and financial system

CRITERION	CONDITION	ALTERNATIVE				EVALUATION				TOTAL POINTS
		I.	II.	III.	IV.	I.	II.	III.	IV.	
GIRLS FOOTBALL	COACH WU9	UEFA A	UEFA B	C LICENSE	GRASSROOTS	50	30	20	10	max 50
	COACH WU11	UEFA A	UEFA B	C LICENSE	GRASSROOTS	50	30	20	10	max 50
	COACH WU13	UEFA A	UEFA B	C LICENSE	GRASSROOTS	50	30	20	10	max 50
	COACH WU15	UEFA A	UEFA B	C LICENSE	GRASSROOTS	50	30	20	10	max 50
	NO. OF FEMALE PLAYERS WU9	15 and more	QUANTITY (min. of 8)			60	4 points/girl			max 60
	NO. OF FEMALE PLAYERS WU11	15 and more	QUANTITY (min. of 10)			60	4 points/girl			max 60
	NO. OF FEMALE PLAYERS WU13	15 and more	QUANTITY (min. of 12)			60	4 points/girl			max 60
	NO. OF FEMALE PLAYERS WU15	15 and more	QUANTITY (min. of 14)			60	4 points/girl			max 60
										max 440

CRITERION	CONDITION	ALTERNATIVE				EVALUATION				TOTAL FINANCE
		I.	II.	III.	IV.	I.	II.	III.	IV.	
GIRLS FOOTBALL	COACH WU9	UEFA A	UEFA B	C LICENSE	GRASSROOTS	3000/month	2000/month	1500/month	1000/month	max 36.000,-/year
	COACH WU11	UEFA A	UEFA B	C LICENSE	GRASSROOTS	3000/month	2000/month	1500/month	1000/month	max 36.000,-/year
	COACH WU13	UEFA A	UEFA B	C LICENSE	GRASSROOTS	3000/month	2000/month	1500/month	1000/month	max 36.000,-/year
	COACH WU15	UEFA A	UEFA B	C LICENSE	GRASSROOTS	3000/month	2000/month	1500/month	1000/month	max 36.000,-/year
	NO. OF FEMALE PLAYERS WU9	15 and more	QUANTITY (min. of 8)			max 15	1000/girl/year			max 15.000,-/year
	NO. OF FEMALE PLAYERS WU11	15 and more	QUANTITY (min. of 10)			max 15	1000/girl/year			max 15.000,-/year
	NO. OF FEMALE PLAYERS WU13	15 and more	QUANTITY (min. of 12)			max 15	1000/girl/year			max 15.000,-/year
	NO. OF FEMALE PLAYERS WU15	15 and more	QUANTITY (min. of 14)			max 15	1000/girl/year			max 15.000,-/year
										max 204.000,-/year

Source: Department of women's football (own data processing)

Table 19 above is divided into two parts. First part is focusing on points support into licensing system and second part is with focus on financial support. Each part consists of 8

conditions (coach of U9, U11, U13, U15 and number of female players U9, U11, U13, U15). According to coaches, they will be awarded through their achieved license. The best possible achieved license is UEFA A license for which they can receive maximum of 50 points. With lower license, there is also a decrease in points to 30 then 20 and for the lowest Grassroots license club will receive only 10 points. This evaluation is the same for coaches in every age category. The similar system is applied in financial section. Instead of 50 points, clubs will receive 3000 CZK per month for a coach with UEFA A license, 2000 CZK per month for a coach with UEFA B license, 1500 CZK per month for a coach with C license and 1000 CZK per month for a coach with only Grassroots license. In accordance to creation of teams, the most important thing is to have U9 girls' team with minimum of 8 players and maximum of 15 players. That means at this moment we can give the financial support for the club. For each player there will be 4 points into licensing system and 1000 CZK per year. Thus, if the club will have team with 10 players, they will receive 10 000 CZK. As you can see in the table, there can be maximum 440 points and 204.000 CZK per year in case of having 4 girls' teams with 15 players with 4 coaches in each age category with UEFA A license. Also I show you some correct and incorrect examples of reaching the support below in two tables.

Table 20 Correct way of receiving FA's support

CRITERION	CONDITION	ALTERNATIVE				EVALUATION				TOTAL POINTS
		I.	II.	III.	IV.	I.	II.	III.	IV.	
GIRLS' FOOTBALL	COACH WU9	UEFA A	UEFA B	C LICENSE	GRASSROOTS			20		20
	COACH WU11	UEFA A	UEFA B	C LICENSE	GRASSROOTS		30			30
	COACH WU13	UEFA A	UEFA B	C LICENSE	GRASSROOTS					
	COACH WU15	UEFA A	UEFA B	C LICENSE	GRASSROOTS					
	NO. OF FEMALE PLAYERS WU9		15			60	4 points/girl			60
	NO. OF FEMALE PLAYERS WU11		12			48	4 points/girl			48
	NO. OF FEMALE PLAYERS WU13									
	NO. OF FEMALE PLAYERS WU15									
										158

CRITERION	CONDITION	ALTERNATIVE				EVALUATION				TOTAL FINANCE
		I.	II.	III.	IV.	I.	II.	III.	IV.	
GIRLS' FOOTBALL	COACH WU9	UEFA A	UEFA B	C LICENSE	GRASSROOTS			1500/month		18.000 CZK/year
	COACH WU11	UEFA A	UEFA B	C LICENSE	GRASSROOTS		2000/month			24.000 CZK/year
	COACH WU13	UEFA A	UEFA B	C LICENSE	GRASSROOTS					
	COACH WU15	UEFA A	UEFA B	C LICENSE	GRASSROOTS					
	NO. OF FEMALE PLAYERS WU9		15			15	1000/dívka/rok			15.000 CZK/year
	NO. OF FEMALE PLAYERS WU11		12			12	1000/dívka/rok			12.000 CZK/year
	NO. OF FEMALE PLAYERS WU13									
	NO. OF FEMALE PLAYERS WU15									
										69.000 CZK/year

Source: Department of women's football (own data processing)

The table 20 above shows an example that might appear in real life. For instance the club will have girls' team U9 with 15 players and team U11 with 12 players. The coach of U9 has a C license and coach of U11 has a UEFA B license. Overall sport center will receive 158 points into licensing system and 69.000 CZK for a year.

Table 21 Incorrect way of receiving FA's support

CRITERION	CONDITION	ALTERNATIVE				EVALUATION				TOTAL POINTS
		I.	II.	III.	IV.	I.	II.	III.	IV.	
GIRLS' FOOTBALL	COACH WU9	UEFA A	UEFA B	C LICENSE	GRASSROOTS					
	COACH WU11	UEFA A	UEFA B	C LICENSE	GRASSROOTS					
	COACH WU13	UEFA A	UEFA B	C LICENSE	GRASSROOTS	50				50
	COACH WU15	UEFA A	UEFA B	C LICENSE	GRASSROOTS	50				50
	NO. OF FEMALE PLAYERS WU9									
	NO. OF FEMALE PLAYERS WU11									
	NO. OF FEMALE PLAYERS WU13		15			60	4 points/girl			60
	NO. OF FEMALE PLAYERS WU15		15			60	4 points/girl			60
										220

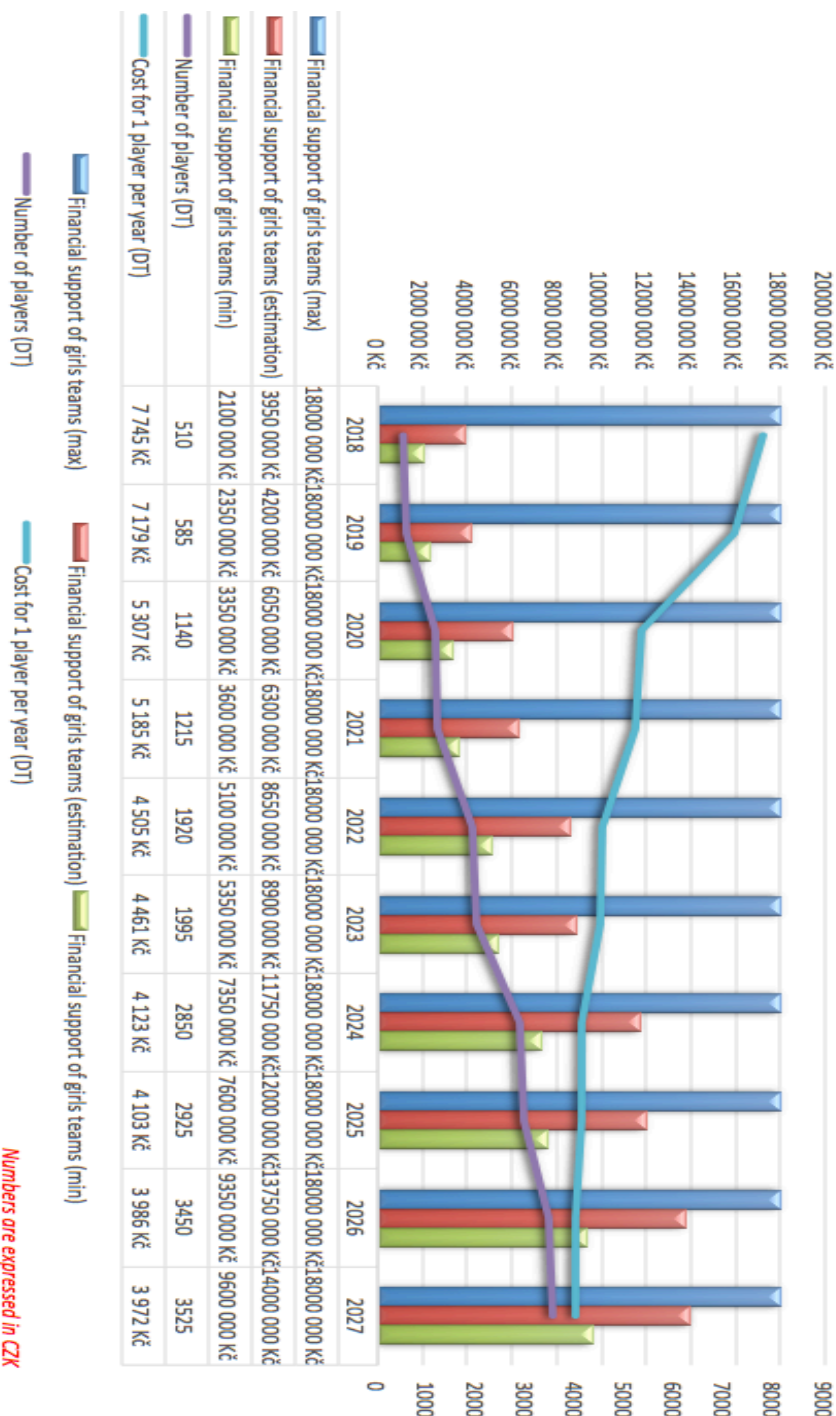| CRITERION	CONDITION	ALTERNATIVE				EVALUATION				TOTAL FINANCE
		I.	II.	III.	IV.	I.	II.	III.	IV.	
GIRLS' FOOTBALL	COACH WU9	UEFA A	UEFA B	C LICENSE	GRASSROOTS					
	COACH WU11	UEFA A	UEFA B	C LICENSE	GRASSROOTS					
	COACH WU13	UEFA A	UEFA B	C LICENSE	GRASSROOTS	3000/month				36.000 CZK/year
	COACH WU15	UEFA A	UEFA B	C LICENSE	GRASSROOTS	3000/month				36.000 CZK/year
	NO. OF FEMALE PLAYERS WU9									
	NO. OF FEMALE PLAYERS WU11									
	NO. OF FEMALE PLAYERS WU13		15			15	1000 CZK/year			15.000 CZK/year
	NO. OF FEMALE PLAYERS WU15		15			15	1000 CZK/year			15.000 CZK/year
										102.000 CZK/YEAR

Source: Department of women's football (own data processing)

However, following table describes an incorrect example where club does not meet the requirements that are given by Football Association. The problem is that they have only team U13 and U15. The main condition, which must be fulfilled, is to have team U9 (age 7 and 8) and then continuous range upward. Thus, in this case no support can be expected.

	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Financial support of girls teams (max)	18000 000 Kč	18000 000 Kč	18000 000 Kč	18000 000 Kč	18000 000 Kč	18000 000 Kč	18000 000 Kč	18000 000 Kč	18000 000 Kč	18000 000 Kč
Financial support of girls teams (estimation)	3950 000 Kč	4200 000 Kč	6050 000 Kč	6300 000 Kč	8650 000 Kč	8900 000 Kč	11750 000 Kč	12000 000 Kč	13750 000 Kč	14000 000 Kč
Financial support of girls teams (min)	2100 000 Kč	2350 000 Kč	3350 000 Kč	3600 000 Kč	5100 000 Kč	5350 000 Kč	7350 000 Kč	7600 000 Kč	9350 000 Kč	9600 000 Kč
Number of players (DT)	510	585	1140	1215	1920	1995	2850	2925	3450	3525
Cost for 1 player per year (DT)	7 745 Kč	7 179 Kč	5 307 Kč	5 185 Kč	4 505 Kč	4 461 Kč	4 123 Kč	4 103 Kč	3 986 Kč	3 972 Kč

Numbers are expressed in CZK

Source: Department of women's football of Czech FA (own data processing)

In this figure there are described the project costs predicted to the future. There is shown maximized costs, which we know that it will not appear, at least for the first years. Also the graph shows the estimated and minimized cost, which we predict that the cost will be fluctuating between.

4.4.4. Surveys to sport's centers

As this is totally new project with establishing female teams within boys' sport centers, we have created an online survey with just a few simple questions and sent it to all 60 sport centers to have some feedback before the launching of this project. We wanted to know how many girls are already playing between those sport centers. Some of the sport centers already might have girls football or just a girl may play with boys for example and what interest they have in women's football and if they plan to built it in their club. The questionnaire was not obligatory, however we have received 48 answers out of 60, which is a great portion for creating an image.

4.4.4.1. Questions

Online survey has included 7 multiple answer questions, which we, as a Department of women's football, created.

1) What girls' teams already exist in your club?
    - o U9
    - o U11
    - o U13
    - o U15
    - o None

2) How many girls are playing at this time in your club till the age of U15?
    - o 1-5
    - o 6-10
    - o 11-15
    - o 16-20
    - o 21-25
    - o 26-30
    - o 30 and more

3) Do you plan to establish girls' team in next year?
   - o Yes, already in the season 2017/18

- o Yes, however first in the season 2018/19

- o We are thinking about it in next few years

- o No, we do not plan (skip the following question)

4) What category do you plan to establish?
- o U9
- o U11
- o U13
- o U15

5) Would you use any organizational and material support from FAČR within the recruitment campaign for girls?
- o Yes
- o No

6) Would you be interesting for an appointment with additional detailed information about this campaign?
- o Yes
- o No

7) Is the financial and points support to the licensing system sufficient for establishing new girls' team in your club?
- o Yes
- o No

8) Suggestions and comments

4.4.4.2. Answers

In this part of diploma thesis I outline the summary graphs of questionnaire. These graphs were really useful for our perception of this campaign and we realize that we are really at the beginning of the women's football.

1) What girls' teams already exist in your club?
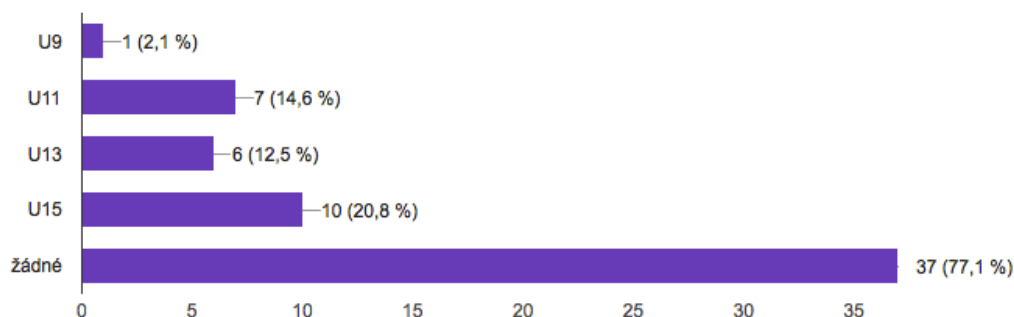
Source: own data processing

This graph shows us how many girls' teams are already appearing within all sport's centers. Majority of clubs (37) answered that they have no women's teams. As you can see the sum of the answers gives us 61, which is more than 48 answers. However, some of the clubs have already more existing girls' teams. Since we have special female competitions for girls U11, U13 and U15 teams. Some of the clubs are already playing it. Nevertheless, we would like to focus on U9 category as we believe, this is the perfect time to recruit girls in your clubs because this age is important for kids as they usually choose their sport's career in that time.

2) How many girls are playing at this time in your club till the age of U15?
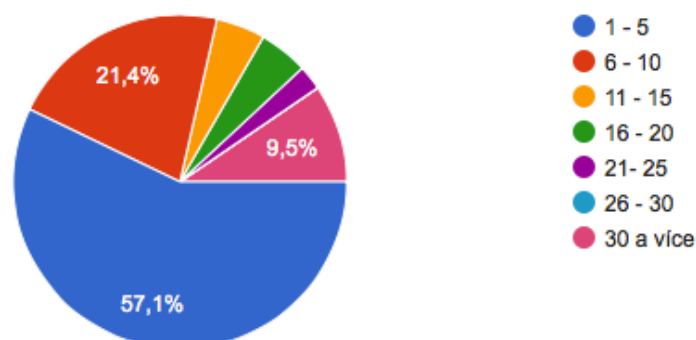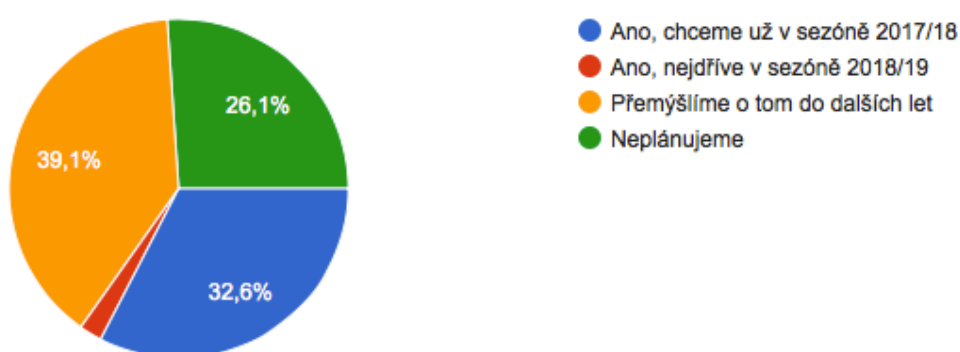
Source: own data processing

This graph shows us just an estimation of number of girls playing in those sport's centers. The majority of clubs does not have or have only few girls not playing in a team with girls but playing within boys' teams. However, almost 10% said that have more than 30 female players in that categories.

3) Do you plan to establish girls' team in next year?

Legend:
- Ano, chceme už v sezóně 2017/18
- Ano, nejdříve v sezóně 2018/19
- Přemýšlíme o tom do dalších let
- Neplánujeme

26,1%
39,1%
32,6%

Source: own data processing
Notes:

- o   *Yes, already in the season 2017/18*
- o   *Yes, however first in the season 2018/19*
- o   *We are thinking about it in next few years*
- o   *No, we do not plan (skip the following question)*

We are happy to see that almost 1/3 of clubs is ready to create new girls' teams already in following season. Honestly, few years ago there would be a very low percentage number for this question. Thus we can see how women's football is rapidly growing. Also almost 40% of asked people answer that they are thinking about it into next years. We know that it might not happen but at least they started to think about women's football as a possibility in their clubs, which is a huge success for us as well. Still we need to count with those clubs who are not interesting in women's football at all. It will take a time to change their mind.

4) What category do you plan to establish?
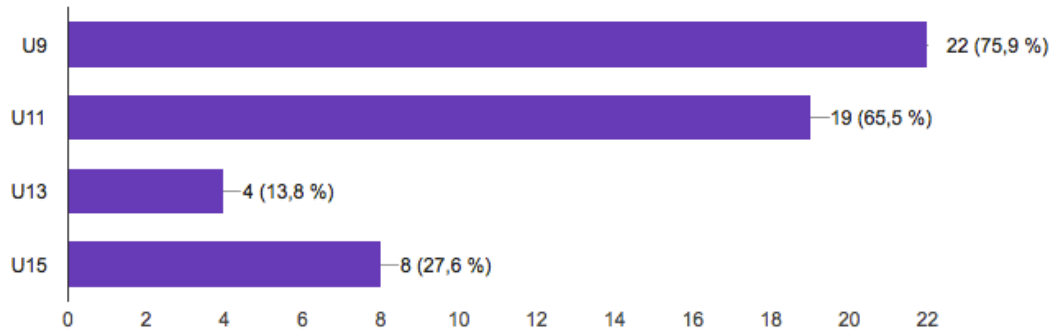
Source: own data processing

This is a great graph for our department as it shows that our financial and points support is interesting for clubs. Since they would like to start from the youngest age U9 and built it upward. However we need to take into consideration that some of the clubs already have got a girls' teams, thus they will establish those age category, they need to fulfill the criterion of continuous range.

5) Would you use any organizational and material support from FAČR within the recruitment campaign for girls?
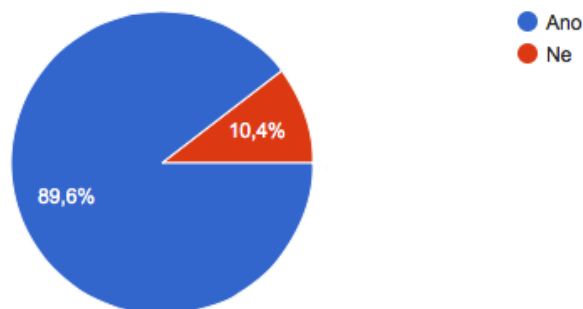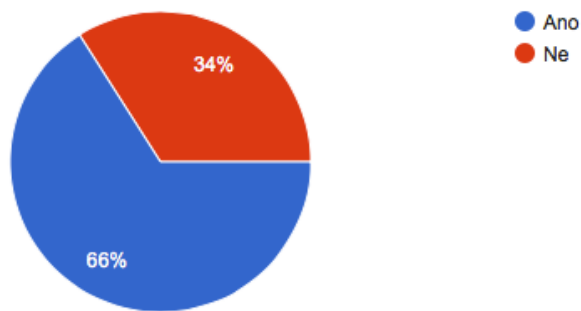
Source: own data processing
Notes: Yes / No

This graph has showed us what we already thought before. Obviously, almost everyone would like to have organizational and material support. We just need to be sure if we help

them that the support goes directly to girls because sometimes the clubs take some financial or other kind of support, which is meant for women's football and give it to boys.

6) Would you be interesting for an appointment with additional detailed information about this campaign?
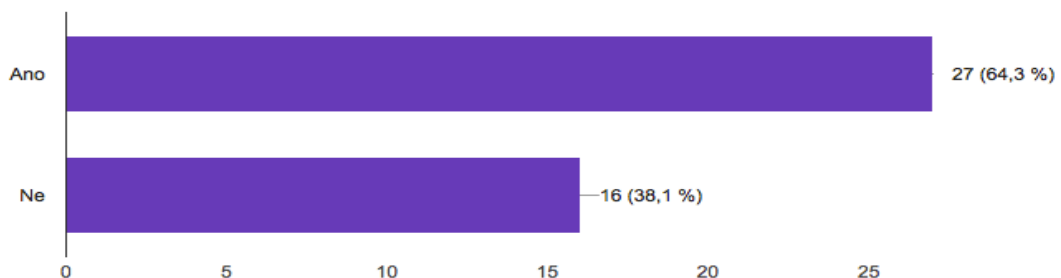
Source: own data processing
Notes: Yes / No

These numbers are quiet surprising for us. We have not expected that high numbers of interest for a meeting about an additional information concerning our new project. We are very pleased to see those numbers. Indeed, we will arrange an appointment with every single club that is interesting.

7) Is the financial and points support to the licensing system sufficient for establishing new girls' team in your club?

Source: own data processing

70

This graph was another surprise for us. As you might know, everyone wants to have as much money as possible and we thought if we put this kind of question, that almost every sport's center will answer that it is not enough. However we can see that more than half of the respondents answered that it is sufficient (the first row). Now we can operate with that. If someone would like to have more money, we can answer that there are almost 30 clubs who say it is enough. Thus, why do you need extra money?

8) Suggestions and comments

This last question was not obligatory. However, it is an important part for us, which might be helpful to see it also from the other side, from the side of club. I chose few comments and I will translate it to English to show you how it looks like.

One sport's center mentioned: *"The project which is established for the support of women's football, we totally approve. For our club and also for other clubs that have no women's football is organizationally very difficult to establish more categories of girls' teams in short time horizon. Also the age is set perfectly as the quality of players in older categories (who do already other sports) would have been very low. Moreover the necessity is to ensure coaching staffs for those teams and we as a club are not able to provide in that short time horizon."*

Another club claimed: *In our view, the establishment of girls' teams is very difficult nowadays, and for many reason – lack of interest on the part of girls, almost no support in education part and disinterest of teachers to bring girls to any kind of sport, financial difficulties and due to the size of our club and background is also problem of ensuring the training and playing football pitches, although we have two match pitches, training area about the size of three pitches and one artificial pitch. Nevertheless we believe that girls' soccer is very important for society. Our club hopes to create a girls' team in a future."*

Also we have noticed a lot of problems with infrastructure in those sport's centers that we should be thinking about in the future. Another club states: *"even in men's football, we have already overloaded playing and training capacity"*. Thus, we have noted this issue and we will have future discussion about it.

5. CONCLUSION

In the first part of my dissertation defined as a literature review I focused mainly on general information about women's football to bring the reader to the topic of a diploma thesis. I explained the early beginnings of this sport as well as the current times, the major issues considering the prejudices and its growth in last decade. Also I implemented the description of both football associations, their structures and positions of women's football department within. Other important aspect of my theoretical part is focusing on the role of sport in the economy.

Second part, more important analytical part, I have focused on several important points of interest. The first one stress an analysis of factors influencing the women' s football national senior team in Germany as well as in the Czech Republic and comparison between chosen Football Associations across Europe in order to gather more specific results. I was trying to determine those influencing factors with help of multiple regression analysis. Thus, three regression models appears within the this work. I have used ten sample years in calculation of one national association and fifteen sample countries in comparison across Europe. There were six variables, which I determine as possible indicators for changing of the performance in the ranking table. The dependent variable is the performance of national teams, expressed by the FIFA ranking table, which is based upon the success of national teams around the world. Formula of performance is explained in the thesis. The independent or exogenous variables used for this thesis are the amount of registered female players, amount of female football clubs, number of UEFA A licensed coaches, number of UEFA Pro licensed coaches and the last but not least, employees dedicated especially on women's football department. At the beginning I have created an economic regression model, declare all variables and set the hypothesis. Due to regression analysis, the result of goodness of fit of the Czech Republic were very high, up to 98%, which means that there is almost perfect fit of the data to model. According to German analysis, the goodness of fit was much lower, in this case only 69%. As well in case of the last regression model where there is a comparison across FAs, the goodness of fit was 87,9%, which belongs also to a very high coefficient and we can see that the data fit well into a model. According to multiple regression analysis it has been found out that statistically significant are only intercept and amount of registered female players from the last analysis focused on

comparison of FAs across Europe. However, economically verified variables appeared many times and it might be caused by football in general. As I have monitored in my thesis, those independent variables do not influence performance in statistical significance level, nevertheless logically it can be verified. The main variable was not expressed in this thesis, which in my opinion, influence the dependent variable a lot and it is the probability of luck that can not be defined by number. Three scatter plots were created in order to see the relationship between dependent variable 'performance' and independent variable 'annual budget'. I have created it in all of those three multiple regression analysis, in case of Czech Republic's analysis, German analysis and in comparison of selected football association' s analysis.

In the end of second part, I have described the project for developing the women's football in the Czech Republic with focus on increasing number of registered players as it belonged between the only significant variable in case of previous regression analysis which showed us that it might influence the performance of national women's football team. From my opinion, it has much higher significance even in real life. Logically, the more female football players to choose from, the better quality of the national team. Thus, we have decided to create special project for our Sport's centers to motivate them to create female component in their clubs. As I have explained we will motivate them by financial and licensing evaluation, which is high enough to at least start to think about it. In my dissertation I am explaining the whole licensing and financial system as well as some prediction of cost in future. A special brief questionnaire took also an important part of this project. Only 8 multiple answer questions were created in order to gather some feedback information about this project from the important aspect – the Sport's centers. The feedback was very surprising, almost 2/3 of all respondents wrote that they want to create women's football or at least are thinking about it in next few years and mainly with focus on the youngest category of WU9. Also almost 66% of all respondents are interesting in special meeting to gather more additional information and 64% of all respondents mentioned that the financial support is sufficient which we did not expect at all. This was a very nice surprise in these times when everyone needs more and more money.

Overall, the women's football is on the rise. Today, it is played by more than 30 millions of women or girls around the World. Thanks to very successful FIFA Women's World Cup in Canada 2015 or the Rio 2016 Olympic games, women's football still expands its awareness. There was also a huge increase of resources in all National Associations across Europe, which were putted into development of this sport and we might see the increasing trend of quality of the games across those association. I believe nowadays everyone can see the huge potential of women or girls playing the beautiful game of football. It can be from the sport's side as the quality is better, but also for instance from the marketing side that more companies try to involve the women's component to expand the awareness of the brand to more customers. It is becoming in many countries number one sport for female with huge attendance base, which is great for economic market in order of increasing revenues.

6. BIBLIOGRAPHY

6.1. LITERATURE / JOURNAL

Fleišingerová, S. (2014). Historie ženského fotbalu. Master degree. Univerzita Palackého v Olomouci.

Gratton, C. (2010). *The economic importance of modern sport*. 1st ed. Routledge, pp.101-117.

Harris, J. (2007). Doing Gender on and off the Pitch: the World of Female Football Players. 1st ed. [ebook] Ohio: Kent state university. Available at: http://www.socresonline.org.uk/12/1/harris.html

Heywood, L. and Dworkin, S. (2003). *Built to win: The female athlete as cultural icon*. 1st ed. Minneapolis: University of Minnesota Press. ISBN: 0816636230

Horák, J. and Král, L. (1997). *Encyklopedie našeho fotbalu*. 1st ed. Praha: Nakl. Libri. ISBN: *8085983222*

Kohout, F. and Kim, J. (1979). Statistics for social scientists. 1st ed. Malabar, Fla.: R.E. Krieger Pub. Co. ISBN: 0898747597

Messner, M. (2005). *Taking the field: Women, men, and sports*. 1st ed. Minneapolis [u.a.]: Univ. of Minnesota Press. ISBN: 1452904480

R. Humphreys, B. (2005). The Role of Sports Economics in the Sport Managemen. University of Illinois at Urbana-Champaign.

Šálek, Z. (1980). Slavné nohy. 1st ed. Praha: Práce. ISBN: 8023898396

Sekot, A. (2003). *Sociology of sport*. 1st ed. Brno: Paido.

Šusta, D. (2012). *Women's football and gender relation in society*. Západočeská univerzita v Plzni. Fakulta filozofická.

Tomlinson, A. and Young, C. (2006). German football: History, Culture, Society. 1st ed. London: Routledge. ISBN: 978-0-415-35195-9

Votík, J. (2001). Trenér fotbalu "B" licence. 1st ed. Praha: Olympia. ISBN: 80-7033-598-X

Williams, J. (2003). *A game for rough girls?*. 1st ed. London: Routledge. ISBN: 0-415-26337-9

6.2. INTERNET SOURCES

Association, T. (2017). *The website for the English football association, the Emirates FA Cup and the England football team*. [online] www.thefa.com. Available at: http://www.thefa.com/womens-girls-football/history

Bbc.co.uk. (2017). *The secret history of women's football*. [online] Available at: http://www.bbc.co.uk/newsbeat/article/33064421/the-secret-history-of-womens-football
Buckley, W. (2017). *The forgotten story of ... the Dick, Kerr's Ladies football team | Will Buckley*. [online] the Guardian. Available at: https://www.theguardian.com/football/blog/2009/sep/09/england-women-football

FIFA.com. (2017). *FIFA Women's World Cup™ archive - FIFA.com*. [online] Available at: http://www.fifa.com/fifa-tournaments/archive/womensworldcup/

FIFA.com. (2017). *The FIFA/Coca-Cola World Ranking - Ranking Procedures - FIFA.com*. [online] Available at: http://www.fifa.com/fifa-world-ranking/procedure/index.html

Havik, F., Elardt, P. and Hasselgren, L. (2015). Increasing the Commercial Value of Women's Football Through a Holistic View on Sponsorship. 1st ed. [ebook] Jönköping. Available at: http://www.diva-portal.org/smash/get/diva2:814220/FULLTEXT02

Honzejk, P. (2011). Ženský fotbal je jiná hra!. *Hospodářské Noviny*. [online] Available at: http://archiv.ihned.cz/c1-52306750-zensky-fotbal-je-jina-hra

Ullrich, H. (2014). Women's football in Germany. [online] Play.uefa.com. Available at: http://play.uefa.com/resource/5714

webface.cz/, D., webface.cz/, C. and webky.cz/, B. (2012). *Názory na ženský fotbal (výsledky průzkumu) | Vyplňto.cz - řešení pro online průzkumy*. [online] Vyplnto.cz. Available at: https://www.vyplnto.cz/realizovane-pruzkumy/nazory-na-zensky-fotbal/

Women's football across the national associations 2016/2017. (2017). 1st ed. [ebook] Nyon: UEFA.org. Available at: https://www.uefa.org/MultimediaFiles/Download/OfficialDocument/uefaorg/Women'sfootball/02/43/13/56/2431356_DOWNLOAD.pdf

Women's football across the national associations. (2016). 1st ed. [ebook] Nyon: UEFA. Available at: https://www.uefa.org/MultimediaFiles/Download/uefaorg/WFprogramme/02/20/39/67/2203967_DOWNLOAD.pdf

www.czmi.cz, A. (2017). *Historie ženského fotbalu aneb boj o rovnoprávnost i ve sportu - Premier League - nejserióznější zpravodajství z fotbalové Anglie*. [online] Premierleague.cz. Available at: http://www.premierleague.cz/aktualne/?aktualitaId=3058#diskuseAdd