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스포츠 매니지먼트 석사 학위논문

An Investigation into Talent Development  
Environment Systems in Poland and Ukraine:  
A Case Study of Track and Field

2020년 7월

서울대학교 대학원

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# An Investigation into Talent Development Environment Systems in Poland and Ukraine: A Case Study of Track and Field

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# **Abstract**

## **AN INVESTIGATION INTO TALENT DEVELOPMENT ENVIRONMENT SYSTEMS IN POLAND AND UKRAINE: A CASE STUDY OF TRACK AND FIELD**

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The identification and development of talents in sports are one of the essential stages in the process of achieving success internationally. When talent identified, it should be supported from all sides and made a comfortable environment for its development and transition to a senior elite level. Without this component, there will be no elite sport. This is a significant and crucial moment, which must carefully be considered at the governmental level.

This research based on scrutinized analysis of talent development environment systems in Poland and Ukraine within the national athletics team of both countries. The study made it clear why one country is more successful in athletics and why another is less.

Qualitative research was employed to produce data through document analysis and interviews. The interviews completed during the Doha IAAF World Championship with representatives of national teams of Poland and Ukraine.

For analysis applied the holistic ecological approach, which includes two models: the athletic talent development environment and the environment success factors models.

The first model analyzed the role and functions of the main components of talent identification and development environment systems in Poland and Ukraine. The second one analyzed environmental influences on the talent development systems in both countries. Based on these analyses, the comparison table developed, and the main differences revealed considering the opinions of each nation's coaches, sports managers, and athletes.

Finally, the recommendations for the Ukrainian government were providing towards improving its talent development environment system to increase future success at the highest levels of international competitions.

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**Keywords:** talent, talent identification, talent development, talent development environment, sporting success.

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# **Chapter 1. Introduction**

## **1.1. Background**

Sport is an integral part of society in every country around the globe, a symbol of national pride and unity at the Olympic Games and in major international competitions. The success of a country's athletes always exists due to economic, political, social, and cultural excellence (Saayaman, 2014).

It is impossible to achieve high-level performances by accident, to one day to wake up and become an Olympic champion. It takes years, hour upon hour of practice, all of it a long and complicated process, to become a champion. Logic dictates that preparation for any individual for the Olympic Games must thus start at an early age. How to distinguish future champions from other children? Who among today's children will be able to become the pride of a nation? How can these individuals be identified and developed to help them on the pathway to the top level? This is a, if not the, vital question (Elferink-Gemser, 2013).

The early identification of talented individuals has become more and more critical across many fields of life (Abbott A., 2005), and indeed many children can show distinct promise in athletic potential. But only some will achieve international sporting excellence. This necessarily dictates distinct, and obvious, decision trees. First, when talented children are detected, crucial support resources optimally should be deployed to further refine and develop these talents; the clear corollary is that without such support, the needs of talented children may not be met, and their gifts remain latent. All the same, an effective talent identification system and an efficient environment of talent development

will help those individuals who have the highest potential to achieve success in sport to make a transition to the senior elite level (Abbot, 2002).

Talent identification protocols are designed to first identify young athletes who possess the extraordinary potential for success in senior elite sport and then select and recruit them into talent development programs. The purpose of talent promotion is to increase an athlete's potential by means of a variety of institutional measures designed to accelerate, as efficiently as possible, talent development (additional competition and training opportunities, effective time management, high-profile coaching, scientific and medical intervention, individual funding, counseling and welfare and more) (Vaeyens R. G., 2009).

Statistics have shown that in any country of 50 million people, 3.5 million will be highly predisposed to motor activity while only 65,000 may be talented in sports (Green, 2001). It is straightforward math, a linear proposition, to say that the bigger a country's population, the more significant will be the number of talented athletes. However, there are examples when countries, such as the former German Democratic Republic (GDR), Cuba, or Uruguay outperformed countries "giants" such as China, the USA, Russia (Vaeyens R. G., 2009), and Brazil, Mexico, Argentina (Reiche, 2016) and succeed at major sports competitions.

Any country, small or large, economically strong or weak, can achieve Olympic success to a certain extent (Reiche, 2016) if the government makes a high-level investment in overall national sport systems (De Bosscher V. D., 2006). It is vital, if there are excellent talent identification programs (Vaeyens R. G., 2009). Thus the obvious takeaway: it is key to implement a scientifically based system for the selection and

promotion of talented athletes. This imperative holds a further truth: the smaller the country, the better the system of talent identification and development should be (Sergienko, 2013).

The problem urging this study was that small or developing countries could not and should not stress about only reaching the world's top positions, and particularly across the board; there is an evident and massive gap in resources between them and developed nations. However, this does not mean that small countries cannot achieve success in elite sport in a specific event.

Ukraine is a small and not particularly wealthy country, and its talent development policy doesn't get the attention it not only needs but deserves. For the past ten years, Ukrainian track and field athletes have shown little success in international competitions such as the IAAF World Championships and Olympic Games. In the junior ranks, Ukrainian youth are still quite successful. But far from everyone succeeds in making the transition to the elite senior level. Indeed, each year, the number of Ukrainian athletes meeting the standards for international competitions becomes fewer. Compare this situation to Poland, which made a noteworthy jump over the past ten years, not only increasing the number of medals won but firmly establishing itself in the top ten in the world ranking. Positive practices from Poland can offer beneficial examples for Ukraine.

This study intends to examine the current talent identification and development environment systems of Poland and Ukraine in track and field. Making these comparisons will lead to a better understanding of the systems and environment in which they exist, and more effective and efficient policies can be expanded and implemented, all with a keen eye toward future Ukrainian international sporting success.

## **1.2. Research aims and objectives**

This research aims to analyze the talent identification and development systems of elite sport, and in particular track and field, between, on the one hand and Poland and on the other, Ukraine.

Accordingly, it is based on five detailed objectives:

1. Examining and comparing the profiles of existing sport policies, specifically talent identification and development systems and its environment in Poland and Ukraine;
2. Identifying the environment influence of talent identification and development in the array of Poland and Ukraine;
3. Understanding the main direction of talent identification and development systems in the range of Poland and Ukraine;
4. Comparing the means of policy development and policies generated by these processes and analyzing the similarities and differences across Poland and Ukraine;
5. Providing recommendations for the Ukrainian government for the development of talent identification and a development environment system to increase future success at the highest levels of international competition.

## **1.3. Research purpose and questions**

The underlying purpose of the research is to explore and compare those federally directed talent development environment systems of Poland with that in Ukraine and make recommendations for Ukraine to improve its talent development policy and thus its

performance at future international competitions. Moreover, the research findings will be beneficial in general for athletics development.

Three research questions were formulated to meet the study's objectives:

1. What are the roles and functions of the main components of talent identification and development environment systems in Poland and Ukraine?
2. How can environmental influences (economic, social/cultural, educational, technological, personal) affect the development of talent identification and development policies in Poland and Ukraine?
3. What differences can be revealed about the talent development environment systems in Poland and Ukraine by each nation's coaches, sports managers and athletes?

#### **1.4. Rational and significance of this study**

Before starting work on this thesis, I was a professional track and field athlete. For ten years, I was on the Ukrainian national team. Over the last five years of my athletic career, I assisted the coach of that national team. This experience not only helped to enlighten me about the lack of a talent and development system in Ukrainian sport, but it also offered me deep personal insight into the nature of a systemic solution, and I became aware of the importance of government involvement in the development of sport in addition to the range of influences that affect sport. Based on my personal experience, I considered it my responsibility to continue my involvement in the sport. Simply put, these motives drove me to initiate this study.

The information mentioned above and my personal and professional involvement provided the rationale for this study. The significance of this study ranges broadly:

First, this study will provide information to government officials, sport managers, coaches, and athletes about the importance of talent identification and development systems and its environment for the development of the sport.

Second, this study will analyze the current sports systems of talent identification in Poland and Ukraine.

Third, this study will search out those successful systems of talent development in Poland and will make a comparison of them.

Finally, this study will produce a set of recommendations for the government of Ukraine to improve the current situation in Ukrainian sport.

### **1.5. Key terms for this study**

To better understand the context of the research there is a transcription of crucial terminology that frequently used in the following study.

***Sporting success:*** How usually sporting success can be measured or defined? It is the number of athletes entering the podium at major sporting events, with significant financial and human resources invested by the government to achieve these results (Huxley, 2017).

The success of an athlete or team depends increasingly on the performance capacity of the national system and its effectiveness in using all relevant resources for the benefit of elite sport (De Bosscher V. D., 2006).

**Talent:** Everyone has their idea of the concept of ‘talent.’ There is little coherence in the academic literature about the definition of talent (Gagné, 2009). Talent is something you have, something you are, something you can be, or something you can develop. Talent can be seen as a static or dynamic concept. The static definition views talent as something you have inherited, which implies a focus on the performance level at an early age, while the dynamic definition regards talent as something you can develop (Sæther, 2014)

**Talent selection:** Talent selection in sport claims to identify athletes suitable to the characteristics of the sportive branch selected. To reach higher performance in sport, talented athletes should be selected timely and correctly and included in long-term, systematically planned training (Ozveren Yeliz, 2014).

**Talent identification:** Talent identification is the process of identifying the future potential of an individual within sport (Abbot, 2002), and recognizing those who can excel in a particular event (Vaeyens R. L., 2008).

Talent identification and talent development go hand in hand, and one cannot consider without the other, and together play a crucial role in the pursuit of excellence (Vaeyens R. L., 2008).

**Talent development:** Talent development refers to providing athletes the most appropriate conditions to accelerate their learning and performance (Collins, 2004). This may include systematic training, counseling, sport science support, and high-quality training and practice. Typical talent development programs include high-quality and

intensive training programs that and aimed at adapting and preparing the athlete, accelerating their path to becoming an elite adult performer (Vaeyens R. G., 2009).

***Talent development environment:*** talent development environments in sport is defined as teams, clubs or federations that manage to continually produce top-level athletes based on their junior athletes, and provides them with resources for coping with future transitions to elite sport (Alfermann, 2007).

## **Chapter 2. Literature review**

The main point of this study was to examine and compare the talent development environment systems related to track and field in Poland and Ukraine for developing recommendations for Ukraine to improve its performance at the international level. This chapter review relevant information from sources like books, journals, articles, newspapers, websites related to the topic of this thesis. The literature review divides into the fourth section. The first section provides observation of comparative studies in sport. The second section focused on the main factors which lead to international sporting success and the role of talent identification and development to pursue it. The third section presents the framework which was used to analyzing of talent development environment systems in Poland and Ukraine and shows how the study is structured and moved forward to answer three research questions described in the first chapter of the thesis. In final section was described background facts about each country as a context for sport and clarified the development of sport system, particularly talent identification and development.

### **2.1. Comparison studies in sport**

This section depicts importance and actual comparative studies in sport. It also summarizes previous researchers' results in conducting studies in relation to elite sport development systems of different countries.

Making comparisons is the essence of human nature (Landman, 2017). "Social science based on the comparison, whether it is comparisons between different groups, different social phenomena or different processes" (Oyen, 2004).

What can be enlightened from comparisons: learning from others, learning about others, learning about ourselves, learn with others (Baistow, 2000).

Comparative studies may also allow getting understanding through examples of good practice that can be possible to adapt or supply to other countries (Baistow, 2000). Albeit that practice is closely related to the social, historical, political and economic context, and consequently cannot be easily imported apart from them, it is possible to identify general principles and approaches that can be used in developing future strategies and, possibly, even elements that can be conveyed with insignificant changes in context (Hetherington, 2000).

Comparative sports experts' methodology became more sophisticated within a few decades. There is no perfect model for international comparison of sport systems (De Bosscher V. S., 2010). However, researchers have been seeking answers to the following questions: (a) how to measure international sporting success; (b) what makes some countries more successful at international sport events; (c) what nations need to produce a high-performance athletes; and (d) what is the most effective way to develop international level athletes? Trying to answer these questions, sports scientists attempt to create and develop theoretical models that often help to compare nations through empirical analysis in literature on policy/management in the high-performance sport and these studies is presented in Table 1 (e.g., Green and Oakley 2001, Digel 2002, 2005, Green and Houlihan 2005, 2008, Smolianov and Zakus 2008, Platonov 2010, De Bosscher et al. 2006, 2015, Andersen and Ronglan 2012).

**Table 1***Methodological approaches of comparative sport policy studies (Dowling, 2018)*

(Digel, 2002)	Analyzing of elite sport policy change in the UK, Canada, and Australia on meso and macro levels. Research focuses on facility development, coaching and sport science, full-time athlete support, and competition within two years of data collection.
(Bergsgard, 2007)	Identifying characteristics of sport policy in Canada, England, Germany, and Norway on meso and macro levels. Research focuses on analytical dimensions of state systems, structure, executive-legislative relations, and coalitions within one year of data collection.
(Houlihan, 2008)	Examining elite sport policy development in China, Japan, Singapore, Germany, France, Poland, Norway, New Zealand, and the USA on meso and macro levels. Research focuses on facilities, full-time athletes, coaching and sport science, and competition.
(De Bosscher, 2008)	Examining factors leading to international sporting success in six countries on meso level. Were analyzing nine policy areas (pillars) and 105 critical success factors within two years of data collection.
(Andersen, 2012)	Examining the similarities and differences of elite sport development in Norway, Sweden, Finland and Denmark on meso and macro levels. No specific areas were analyzing.
(De Bosscher, 2015)	For better understanding which sport policies lead to international sporting success in 13 nations and 3 regions on meso level. Research focuses on nine policy areas, 96 critical success factors, and 750 sub-factors within three years of data collection.

At the international level, numerous studies are being conducted in the field of sports of the highest achievements. For the present, the macro and meso levels have received most attention. Such studies produce valuable knowledge for policymakers, but will often be perceived as abstract and loosely related to the problems of sports players. There are several detailed studies of how national elite sport systems are organized. Even those who provide insight into how they operate and support elite sports efforts are much fewer (e.g., Digel 2002, 2005). It is difficult to find detailed studies of the process and the importance of the environment; they need to be developed and get an understanding of how elite sports works (Svein S. Andersen, 2012). Also, there is a lack of analysis factors influences athletes' and coaches' success in previous studies, who are the main stakeholders in delivering the nation's success (De Bosscher V. D., 2009), which can be described within micro-level

The next section describes the importance of sporting achievements for every country and, in particular, the theoretical frameworks that measure the factors leading to international success in sport, and the significance of well-structured talent identification and development system.

## **2.2. Sporting factors success**

Achieving international sporting success has become progressively crucial to a increasing number of countries (De Bosscher V. D., 2009). Millions of people around the world attend games, listen to radio broadcasts of sporting events and, with the occurrence of television, start watching live broadcasts of sporting events (Hunt, 2007).

International sporting success elaborated as a vital tool to achieve some common goals (Mazzei, 2015). As a result, high-performance sports systems have become more

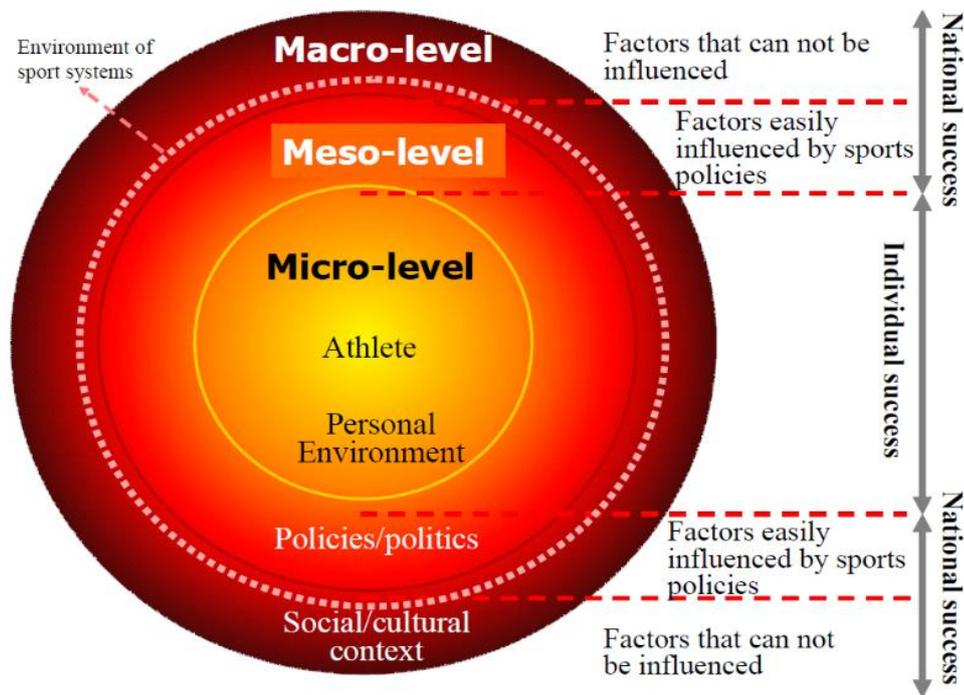
competitive, intricate, it also becomes difficult to control (Houlihan, 2008). In this system, there will always be ups and downs, winners and losers, both from the side of sports and from the side. economic mechanisms (Digel, 2002). The success of an athlete or team is increasingly dependent on the capabilities of the national system and its effectiveness in using all relevant resources for the benefit of top-level sport (De Bosscher V. D., 2006). Consequently, many countries increased the investments in effective high-performance sport policies, which lead to an increase in international prestige, productive internal socio-economic development and national pride (Bergsgard et al. 2007, Houlihan and Green 2008).

The considerable interest in elite sports achievements, combined with a number of social and cultural developments, including commercialism and professionalization of sport, may have prompted governments to invest a significant amount of money into pursuing Olympic glory. The search for an optimal solution for winning medals resulted in increasing homogenization or uniformity of elite sport systems, with countries try to imitate the proven structures and processes of other countries with high rates through a slow but steady process of training and transfer policy (Green, 2001).

There are many factors that lead to sporting success internationally. Classifying these factors is challenging. Sport at the highest level is a combination of genetic qualities and the environmental and physical conditions in which people live. Wherefore, the factors that determine elite success can be examined at three levels: macro-, meso-, and micro-level (De Bosscher V. D., 2006). (see Figure 1):

**Figure 1**

*Model showing the relationship between determining individual and national success*



Macro-level factors are the cultural and social conditions in which people live, including economic well-being, population, geographic and climatic differences, degree of urbanization, political system, and cultural system (De Bosscher V. D., 2006). These factors are relatively stable and cannot be influenced by human impact. Meso-level factors are the sports policies of nations (e.g. policies on coach development, policies on talent identification and development). Micro-level factors relate to the individual athletes (genetic qualities) and their close environment (e.g. parents, friends and coaches). At the micro-level, some factors can be controlled (e.g., training techniques) and others cannot (e.g., genetics) (Veerle De Bosscher P. S., 2015).

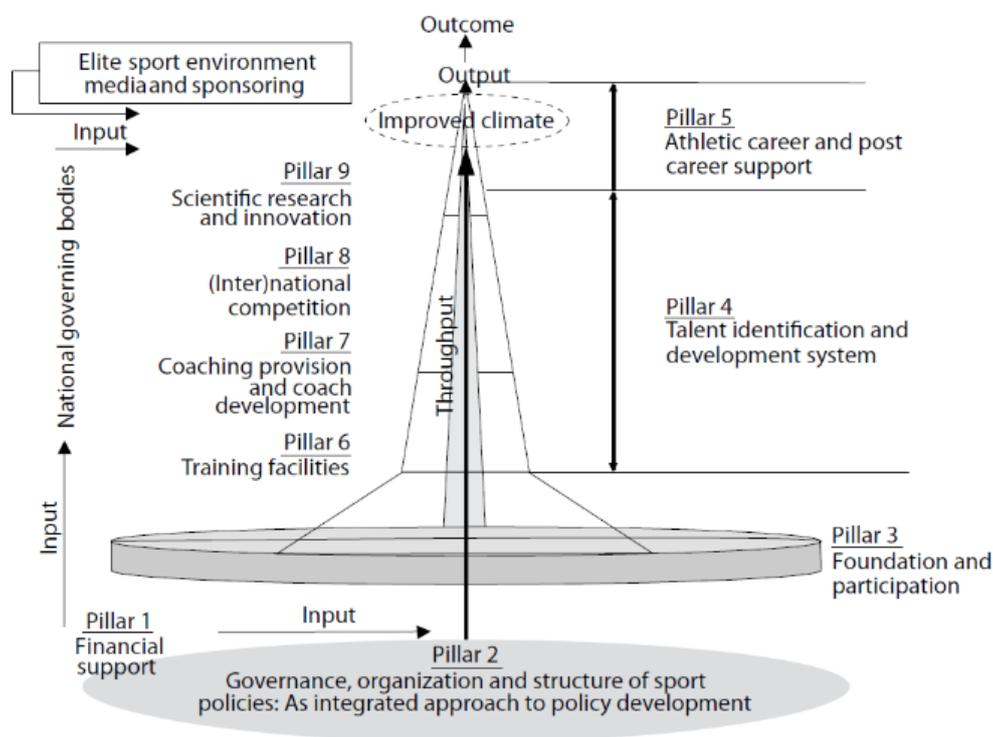
Almost all researchers proceed with an analysis of factors at macro-level and meso-level and, to a lesser extent, factors that can be controlled by sports policies at micro-level.

These these three levels inevitably interact and not a single factor can be totally isolated from the social and cultural contexts of nations (De Bosscher V. D., 2006). Comparative sport researchers should not separate micro, meso and macro levels. Any attempt to do so may result in the risk of ignoring other details that should show a comparative analysis (Mathew Dowling, 2018).

Other researchers (De Bosscher, Bingham, Shibli, Van Bottenburg, and De Knop) developed the SLISS model (Sports Policy Factors Leading to International Sporting success). It is shown in Figure 2:

**Figure 2**

*SLISS Model: nine determinant pillars for achieving international sporting success*



The SPLISS is a model based on nine pillars and allows comparison of high performance sports policies between countries (Mazzei, 2015). In this model: Pillar 1 – is the financial support for the sport and for high sports performances, and it is an input process; Pillar 2 – is the basis of throughput (how country organized and structure, develop policies); Pillar 3 – is the culture and participation in sport; Pillar 4 – selection and promotion of sport talents (which is the focus of this study); Pillar 5 – post-career of athletes, transition between the end of the athlete's career and continue of their personal life; Pillar 6 – the existence of sporting facilities for practice sport; Pillar 7 – developing and support coaches; Pillar 8 – relation to the national and international competitions; Pillar 9 – scientific contribution in sport of high performances.

SPLISS 2.0 (De Bosscher et al., 2015) had 96 critical success factors (variables) and 750 (sub-variables) across nine pillars (Mathew Dowling, 2018).

In the SPLISS model, the overall talent identification and development of elite sport is discussed as forth of nine pillars (De Bosscher and el, 2015). In contrast to such qualitative research, which is built around a system for identifying and developing talents, more detailed government efforts are presented here. Critical factors are legitimacy and the ability to pursue strict priorities in a coordinated way (Svein S. Andersen, 2012).

To conclude here, well-developed talent identification and development system are one of the important elements which lead to international sporting success. SPLISS model stressed the importance for other researchers to contribute into discovering the best ways to improve its elements within the talent identification and development. The next section depicts the theoretical framework which was used for analyzing research findings.

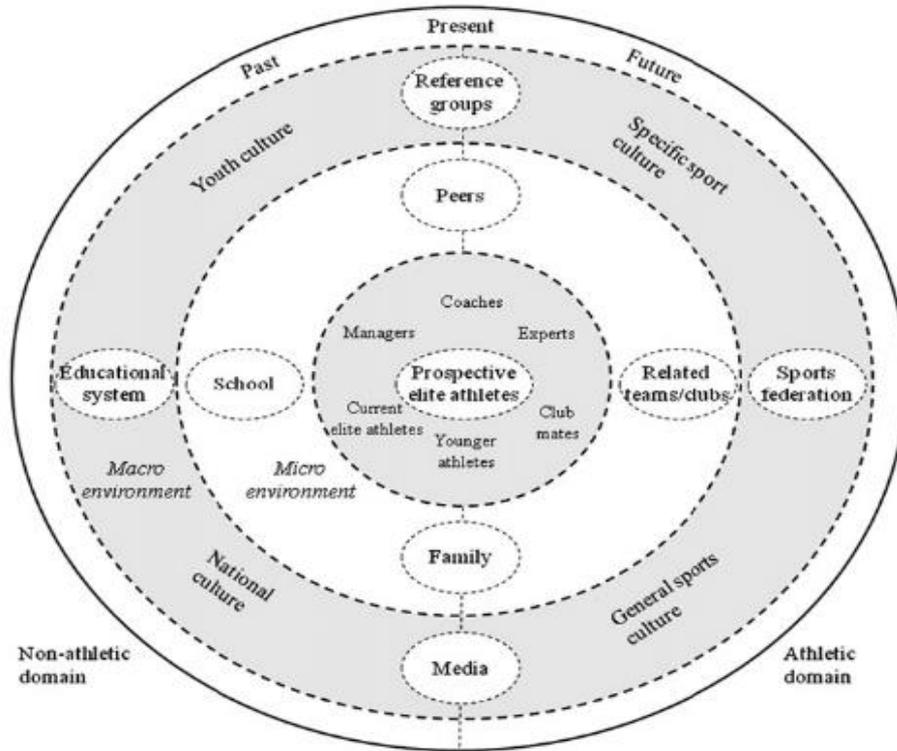
### **2.3. Athletic talent development environment – a holistic ecological approach**

The holistic ecological approach (HEA) was developed slightly to answer the call for theoretically guided research on talent development in sport (Araújo, 2009). The HEA is focused on the whole environment as a series of settled structures ranging from micro to macro level, and suggest that some environment are better than others in their capacity to guide talented junior athletes in their transition to elite senior athletes. This section will describe two working models of talent development systems, and how based on this approach identify criteria for its success (Henriksen K. a., 2017).

#### **2.3.1. Athletic talent development environment (ATDE) model**

The ATDE working model has been adopted as the basis for describing a specific sports environment and for defining the roles and functions of various components in relation to the environment of the talent development process (Henriksen K. a., 2017) (see Figure 3).

**Figure 3**  
*The athletic talent development environment (ATDE) working model*



The main goal of ATDE as a system is to help talented young athletes successfully transition from junior to adult sports. Thus, young promising elite athletes are at the center of the model, while other ATDE components are divided into two levels (micro and macro) and two domains (athletic and non-athletic), which are complemented by past, present and future ATDE. The micro-level includes an environment in which potential elite athletes spend most of their daily life and this is determined by their real communication and relationships with other participants in the system (Henriksen K. , 2015).

The macro-level refers to the social conditions that affect athletes, as well as to the values and customs, the culture to which athletes belong. The athletic sphere is that part of the sports environment that is directly related to sports, while the non-athletic sphere

describes all other spheres of life of athletes. Directly around young athletes (in the center of the model) is the relationship with coaches, managers, elite older and younger athletes and experts. Other components include the school, family, peers and related teams and clubs (at the micro-level), as well as sports federations, the media, and the education system (at the macro-level). The outer layer of the model represents the past, present and future of ATDE, emphasizing that the environment is dynamic, and athletes and their context are constantly changing and mutually affect each other. This model is environmental in the sense that it relates to development (Henriksen K. S., 2011).

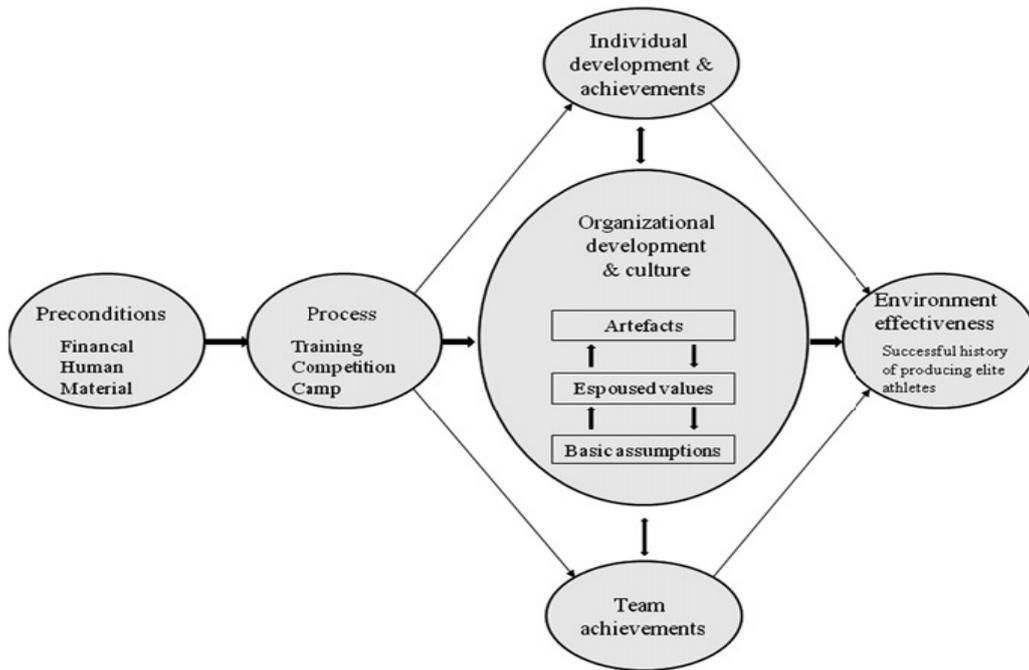
The athlete is influenced by the context in which this development occurs. The model is integrated into three senses: it includes both sports and non-sports areas; includes both micro and macro levels; and includes the development (past, present, and future) of the environment (Henriksen K. S., 2010a).

### 2.3.2. Environment success factors (ESF) working model

The environment success factors (ESF) working model are represented below:

**Figure 4**

*Environment success factors (ESF) working model*



The model starts from the conditions that the environment provides. The model illustrates how the daily routine (process) affect the outcome: individual development of athletes and achievements, team achievements, and organizational development and culture (Henriksen K. a., 2013). All of them are closely interconnected and affect the success of the environment. “Preconditions” include human resources, materials (for example, facilities for training and living), financial factors that are necessary for the development of the talent process. But in general, not one of them guarantees success. “Process” refers to daily activities in a given environment. These events may be different and specific to the environment. It could be training, camps, competitions, and social

events. "Individual development and achievements" refers to athletes and their acquisition of psychosocial competencies and sports skills, as well as how they combined lead to sporting success (Henriksen K. S., 2010a). "Team Achievements" refer to the sporting success of a team and therefore refer to team sports. Individual and team achievements are, of course, the product of the process, primarily the training hours. "Organizational culture" is central to the model and consists of three levels: cultural artifacts, favorite values, and basic assumptions. "Cultural artifacts" include stories and myths told in the environment. "Cultural artifacts" include stories and myths told in the environment (Henriksen K. S., 2011). Artifacts are easy to watch, but hard to decipher. "Favorite values" are the social principles, norms, goals, and standards that the organization shows the world. "Basic Assumptions" main reasons for action. They consist of beliefs and assumptions that are not in doubt. Organizational culture is characterized by the integration of key underlying assumptions in the cultural paradigm. The ESF working model shows that the success of ATDE (that is, efficiency in the production of senior elite athletes) is the result of the interaction between background, process, individual and team development and achievements, with an organizational culture serving to integrate into these different elements (Henriksen K. S., 2011).

The holistic ecological approach was tested through a number of researches, which were done as an example of successful and less successful environments. This includes track and field club in Sweden (Henriksen K. S., 2010), the kayak team in Norway (Henriksen K. S., 2011), the soccer team in Denmark (Henriksen K. a., 2013), and number theses.

In the current study, the holistic ecological approach was applied as the theoretical framework.

## **2.4. Sport development and talent development policies in the context of Poland and Ukraine**

For comparison in this study was picked Poland. Last ten years Polish track and field team has been taking the leading standing at the European Championships, World Championships and Olympic Games. But 15-20 years ago they were behind Ukraine during all international competitions (see Tables 5 and 6). These two countries have a history related to the Soviet Union, which left a trail in the development of their sport. Poland made changes and stood away from that influence and created own history and show remarkable success in sport, particularly in track and field. At the same time, Ukraine still makes out remnants of the past and this affects the inefficiency of the current sports system.

### **2.4.1. Poland**

#### *Geographic and demographic feature*

Poland, located in Central Europe. It is divided into 16 administrative subdivisions and has a total land area of about 312, 685 square kilometers (see Figure 5). Poland is boarded by Belarus and Ukraine to the east, the Baltic Sea, Russia, and Lithuania to the north, Germany to the west, and Slovakia and the Czech Republic to the south (Poland, 2020).

The nature of Poland is stressed by forest and rivers, broad plains, and tall mountains with its capital in Warsaw (Dawson, 2020).

In 2018, the total population of Poland was approximately 38.4 million (see Figure 5) and it made it the eighth-largest populous country in Europe (The World Factbook - Europe, Poland, 2019). The official spoken language is Polish. Armenian, Czech, German,

Yiddish, Hebrew, Lithuanian, Russian, Ukrainian and Slovak are the national minority's languages (Dawson, 2020).

**Figure 5**

*Map of Poland (The World Factbook - Europe, Poland, 2019)*



- Total land area: 312,685 sq km
- Coastline: 440 km
- Population: 38,420,687 (July 2018 est.)
- Language: Polish (official)
- Life expectancy: 77,9 years (2018 est.)
- GDP: \$ 524,8 billion (2017 est.)
- GDP per capita: \$ 29,600 (2017 est.)

### *Government structure*

Poland is a parliamentary democratic republic, according to the Constitution adopted and ratified in 1997 (Dawson, 2020). The president as a head of state (currently Andrzej Duda, in his position since 6<sup>th</sup> of August 2015), is directly elected by popular vote for a five-year term. (The World Factbook - Europe, Poland, 2019). The government structure centers are on the Council of Ministers headed by the Prime Minister (currently Mateusz Morawiecki).

### *Education system*

Children started to go to schools at the age of five or six. When students are 13, after taking a compulsory exam they make a transition into a specific lower secondary school. After they will attend the school for three years, and take another compulsory exam to

attend the upper secondary school. Following-up three-years lyceum or four years technical degree may be as preparation before higher education. There are around 500 university-level institutions to get higher education in Poland (Dawson, 2020).

#### *Economic development*

Poland is developed country, with a high-income economy along with very high life quality, at standards of living, education, and economic freedom. It has one of the most dynamic economies in the world, with the sixth largest GDP, 29,600 per capita (see Figure 5). Poland has 16 UNESCO World Heritage sites. Poland is the member of the Schengen area, the United Nations, NATO, the OECD (Dawson, 2020).

#### *The development of sport and sports systems in Poland*

Poland was part of the Soviet orbit during the years of the Cold War.

In the years after the Cold War, Poland was aligned with the Soviet Union. For instance, it was part of the Warsaw Pact – so named because the treaty was signed in Warsaw. Members included the Soviet Union, Albania, Poland, Romania, Hungary, East Germany, Czechoslovakia and Bulgaria.

When it came to sports, Poland proved unequivocally that it was part of the Soviet orbit at the 1980 Moscow Summer Games. President Jimmy Carter led a United States-orchestrated boycott of those Olympics that saw 65 nations, most of them from the West, stay away in response to the 1979 Soviet invasion of Afghanistan; Poland sent a team of 306, 232 men and 74 women, that took part in 162 events in 21 sports (Poland, 2018).

These days, the most popular sport in Poland is volleyball and football. Also, other sports have been gaining popularity, such as track and field, basketball, boxing, MMA, handball, ski jumping, ice hockey, tennis, swimming, and weightlifting (Dawson, 2020).

### *Polish Athletic Association*

In official documents, Polish track and field federation named as the Polish Athletic Association (Association, 2019). It was founded on October 11, 1919, in Kraków, southern Poland. Representatives of track and field won the most gold medals in the history of Poland's appearances at the Summer Olympic Games – 25 (Poland In, 2019).

The sports system in Poland is based on sports clubs and is subordinate to the Polish Sports Association. Clubs are required to comply with the provisions of the World Athletics, the European Athletics Federation (EA), and their own Polish athletic association's regulations (Strategy PZLA , 2017).

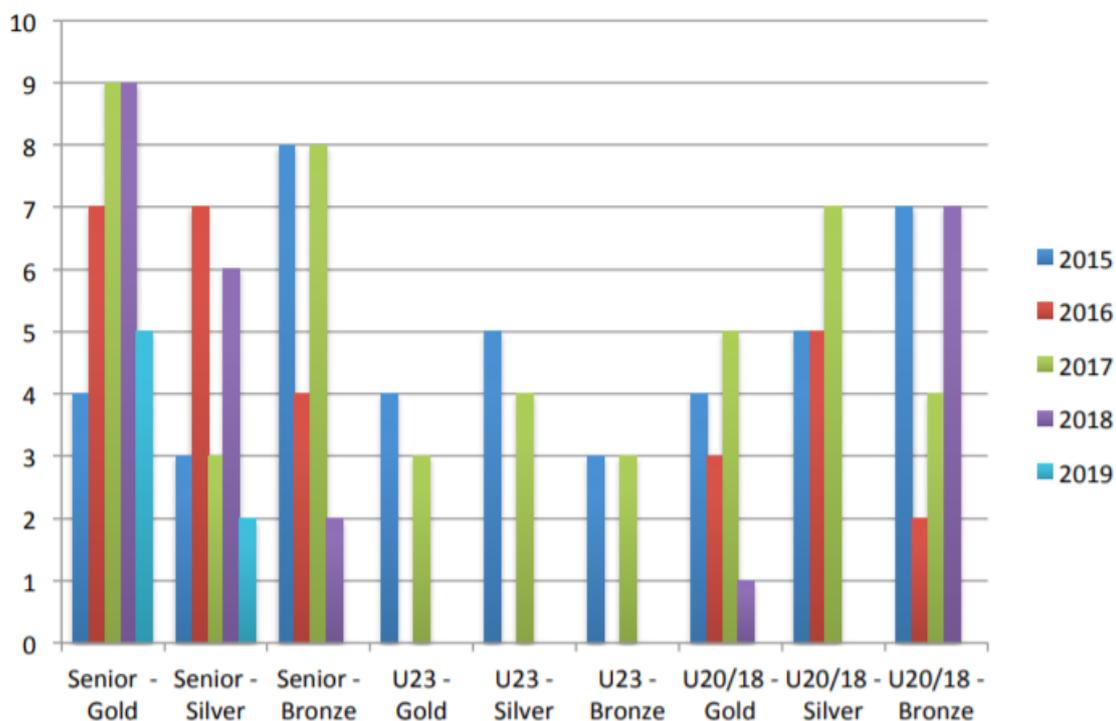
The activity of clubs and other athletics organizations is by definition apolitical.

The Polish Athletics Association is a member of the European Athletics Federation (EA) and the World Athletics. Therefore, the federation participates in the entire competition system: European Championships, European Indoor Championships, European Team Championships, World Championships, World Indoor Championships, European U-18 Championships, World U-18 Championships, World U-20 Championships, U-20 European Championship, European Youth Olympic Festival. In addition, Polish athletes take part in international competitions, such as Diamond League.

Currently, the performance of Polish is athletes is on a high level, with over a dozen world-class stars, medalists at the Olympic Games, world and European championships in various age categories (see Figure 6).

**Figure 6**

*Medal achievements Polish national track and field team at the international competitions (2015-2019) (Haczek, 2019)*



The disciplines which dominate in the national team are throwing (with leaders Anita Włodarczyk, Piotr Małachowski and Paweł Fajdek), pole vault (with Paweł Wojciechowski, Piotr Lisek and Robert Sobera), 4 × 400 m relay women's, and 800 m men (with Adam Kszczot and Marcin Lewandowski).

A whole group of Polish stars are planning to continue their careers at least until the Olympic Games in Tokyo, and some even longer.

The organization of athletics trainings in Poland still requires many changes, especially in the three main phases of a sports career:

- recruitment and selection;

- training athletic talent during high school;
- training youth (20–22 years).

An important element is also the optimization of the training capabilities of the top leaders and increasing financial resources to send Polish athletes to train overseas. All with is together obviously will help the national team to gain medals at the World, European championships and Olympic Games (Strategy PZLA , 2017).

## 2.4.2. Ukraine

### *Geographic and demographic feature*

#### **Figure 7**

*Map of Ukraine (The World Factbook - Europe, Ukraine, 2019)*



- Total land area: 603,550 sq km
- Coastline: 2,782 km
- Population: 43,952,299 (July 2018 est.)
- Language: Ukrainian (official), Russian (regional language)
- Life expectancy: 72,4 years (2018 est.)
- GDP: \$112,1 billion (2017 est.)
- GDP per capita: \$8,800 (2017 est.)

Ukraine is a country in Eastern Europe. It is bordered by Poland, Slovakia and Hungary to the west; Russia by the north-east; Belarus to the north; and Romania, Moldova, and the Black Sea to the south. Ukraine is in territorially dispute over Crimean Peninsula, wich Russia annexed in 2014. Including the Crimean Peninsula, Ukraine has an area of

603,550 square kilometers (see Figure 7), making it the second largest country in Europe (The World Factbook - Europe, Ukraine, 2019).

In 2017, the total population of Ukraine was about 43.9 million (see Figure 7). The official spoken language is Ukrainian, and regional is Russian (Ukraine, 2020).

#### *Government structure*

Ukraine is a semi-presidential republic, according to the Constitution adopted and ratified in 1996. The President (currently Vladimir Zelensky, in office since 20 of June 2019), elected by vote for a five-year term. He is the official head of state and the Supreme Commander-in-Chief of Ukrainian army. The executive branch is the Cabinet of Ministers, headed by the Prime Minister. The legislative power lies with Verkhovna Rada, which consist of 450 members (Ukraine, 2020).

#### *Education system*

All citizens of Ukraine are granted with access to free education, according to the Ukrainian constitution. Completing the secondary education is mandatory in the state schools. Higher education is available for free, but on competitive basis (Ukraine, 2020).

#### *Economic development*

Ukraine is a lower-middle-income country, with GDP per capita \$8,800 (see Figure 7) (Ukraine, 2020). The Ukrainian economy is characterized by regional specializations reflecting differences in the country. Traditionally, eastern regions specialize in heavy industry. By contrast, the central and western regions are rather specialized in agriculture (Stebelsky, 2019). Ukraine has 7 UNESCO World Heritage sites (Ukraine, 2020).

The political and economic situation in the country has a direct relationship and influence on the state of sports in Ukraine.

### *The development of sport and sports systems in Ukraine*

Ukrainian sports history is profound and has a lot of achievements and its legends in different Olympic disciplines. Ukrainian-born gymnast Larisa Latynina was an Olympian record-holder (until 2012) with 18 medals in 3 Olympic Games in a row. In track and field Sergey Bubka – Olympic champion (1998), 35 times world record holder (pole vault). Nowadays he is serving Ukrainian and global sport as a president of the National Olympic Committee, World Athletic's first Vice-President and Honorary member of the International Olympic Committee.

From the modern Olympic history of independent Ukraine, have been much more successful in Summer Olympics than in the Winter Games (Ukraine, 2020).

Unfortunately, from one Olympic Games to another Ukrainian results are decreasing. This happened as a result of the inner crisis, conflicts of oligarchs and geopolitical conflicts of different countries. And ten or more years ago it was easier to handle these problems because Ukrainians could use the USSR legacy. But now Ukraine needs to live on own resources. All the time there is a degradation of the country in all areas. And sport demonstrates it clearly and precisely (About Ukraine, 2019). A feature of the comprehensive system of talent identification and development in Ukraine is its narrow focus on identifying among the young athletes of the most talented, capable of achieving international level success in the future (Platonov, 2010).

Since the 2nd of September 2019, the Ministry of Culture and Sport was reorganized and was created the Ministry of Culture, Youth and Sport. In order to correctly manage three ministries, 7 divisions were launched. To manage, steer, and control sport in Ukraine has created the National Sports Agency of Ukraine, which needs to take care of elite and

sport-for-all. All sports federations and organizations in Ukraine are subordinated by the Sports agency (Ukraine, 2020).

#### *Ukrainian Athletic Association*

In official documents, Ukrainian track and field federation named as the Ukrainian Athletic Association (Statute of UAA, 2018). It was founded in 1991. In 1993 it was affiliated to the International Association of Athletics Federations (IAAF) (Ukraine, 2020).

The structure for all sports based on sports schools, where talented children can train in parallel with their general education. Some of those places emphasis on athletics (Digel, Development Spotlight – Ukraine, A Model of Success, 2011).

The same as Polish Athletic Federation, the Ukraine federation is a member of the European Athletics Federation and the World Athletics. Ukrainian athletes take part in all international competitions. The selection to them based on the system of qualifying standards.

From year to year, the performance of Ukrainian track and field athletes has been decreasing. Since 2005, every Athletics World Championships could bring for Ukrainian athletes just one-two medals for their country (see Table 6). The exception was only 2013 when Ukraine won 4 medals at IAAF World Championship in Moscow. And it became a tendency.

Nowadays, the Ukrainian sports system is in the process of reformation. And, with a lot of global problems, such as the Coronavirus pandemic (recently), which affected the whole world, it is challenging to be 100 percent focused on sport. Only time will tell us how effective the current sports policy in Ukraine.

## **Chapter 3. Methodology**

The second chapter provided a full understanding of the meaning of the comparison of the sports systems, the main factors which can lead to international sporting success, a theoretical framework which applied to this study, the importance of the talent development environment for the transition of young athletes to senior level and the introduction of the sport systems of Poland and Ukraine. This chapter will explain the methodological considerations to be applied for this research.

The main research question of this study is elemental: what differences can be revealed about the talent development environment systems in Poland and Ukraine by each nation's coaches, sports managers and athletes?

The next sections depict the procedures that were implemented during the current study.

### **3.1. Research method**

To analyze the development of talent identification and development environment systems in Poland and Ukraine, the qualitative research method was applied. This research is a case study, and collection data was through in-depth interviews with open-ended questions.

The study was conducted in two steps:

- 1) using document analysis, including relevant literature (including the teams' success statistics), web pages and official papers describing the mission and structure of the Polish and Ukrainian national athletics federations;
- 2) semi-structured in-depth interviews.

Qualitative research is considered to be the most adequate to obtain in-depth, valuable and perhaps unexpected information. In the case of applying quantitative methods, it could be limited to collect the same quality data (Creswell J. , 2003).

The idea of using an in-depth technique is to conduct intensive individual interviews to explore the attitude of respondents on the exact situation, program or idea, and show their thoughts about the process (Boyce, 2006).

The interview is semi-structured and allows respondents to express their thoughts in a free way (Farrell, 2018).

The purpose of the interview is to reveal all the elements that will help answer the research question about the perception of coaches, sports managers and athletes' national talent development systems in their countries.

Following the guidelines of many researchers about conducting studies using their in-depth interview method, the procedure of collecting data was divided into stages: identifying stakeholders; developing instruments, identifying interview questions; training of collecting data (pilot interview); collecting data, conducting interviews and summarizing key data; analyzing data and looking for patterns among participants' responses; distribution of findings and writing a report (Boyce, 2006).

### **3.1.1. Participants**

For a cross-nation comparison in this study, the Polish athletics national team was chosen because of a record of producing elite senior athletes and their stable and successful performances during major competitions within the relevant years.

This research focused on three categories of participants. The criteria for selecting interviewees for current research are presented below:

- sports managers – managers/administrators and main coaches of the national athletics federation of Poland and Ukraine;
- coaches – who specialized at athletes running 400 m and 800 m and are part of the Polish and Ukrainian national team;
- athletes – representatives of the national team of Poland and Ukraine, who specialized in running at 400m/800m.

In order to keep the ethics of research and guarantee anonymity, and to encourage free discussion, all participants have been identified in this study by a coding letter/number sequence. Coaches of Ukraine are “Cu,” sports managers “Mu” and athletes “Au.” For Polish representatives: coaches “Cp,” sports managers “Mp” and athletes “Ap.” The numbers which follow after letters means the index number of participants. It is shown below:

**Table 2**  
*Participants of the study*

#	Category	Polish participants codes	Ukrainian participants codes
1.	Coach	Cp1	Cu1
2.	Coach	Cp2	Cu2
3.	Coach	Cp3	Cu3
4.	Sport manager	Mp1	Mu1
5.	Sport manager	Mp2	Mu2
6.	Sport manager	Mp3	Mu3
7.	Athlete	Ap	Au

### **3.1.2. Instrumentation: Interview guide**

A semi-structured interview was created based on a literature review related to the research topic (Henriksen K. S., 2010).

Separate interview guides were made for the coaches, sports managers and athletes to allow different perspectives. Each interview guide was divided into four parts (see Table 3). In the introductory part each participant was asked demographic and background questions, then about his or her initial stages in sport, about his or her knowledge about the system in general and personal experiences, and then for suggestions for improvement of the current talent identification system and its environment. In the descriptive part, the interviewees were asked about the condition and popularity of track and field in their countries, about the role of media and sponsors in the development of talent and about the social environment influence on the talent development system in general and individually. The explanatory part examined the factors affecting the development of the talent development environment systems of the countries, the governmental support of the system, those conditions which governments provide for creating and sustaining comfortable conditions for the preparation of athletes. In the concluding part, the interviewees were asked about their perception of the current talent development environment systems of their countries and their opinion about the future.

Interview questions were developed in English, Russian, and Ukrainian.

**Table 3**  
*Interview guide*

<i>Introductory part</i>	
1	Demographical questions
2	Talent identification on governmental level
3	Talent identification on federation level
4	Talent identification on personal level
5	Suggestions for improvement
<i>Descriptive part</i>	
6	Cultural paradigms
7	Social environment
8	Education and self-education
<i>Explanatory part</i>	
9	Financing and conditions
10	School/university education
11	Support programs
<i>Conclusive part</i>	
12	Current situation and perception
13	Hypothetical assumption
14	Insights in the future

Qualitative research considers obtaining deep, valuable and sometimes unpredictable information which is more informative than quantitative analysis.

### **3.1.3. Pilot interviews**

In order to practice and develop interview questions several training interviews were conducted.

The first was with the coach of the national team of Ukraine, who used to work with a different range of athletes and specialized in events such as the 400 m, 800 m and triple jump. The interview was conducted via Skype and lasted over two hours.

The second interview was with coach of the national team of Ukraine, who specialized in middle disciplines. The interview was conducted via Skype and lasted 45 minutes.

The third interview was with national team athletes whose specialization is 800m/1500m. The interview was conducted via Skype and lasted two hours.

The final interview was with a classmate who is a former swimmer and knows about the sport from inside, and who has her own sports club now. The interview was face-to-face and lasted 90 minutes.

All of these sessions helped to develop questionnaires and refined communicate skills. Plus, they afforded opportunities to practice interviews in various languages: Russian, Ukrainian and English.

### **3.1.4. Data collection**

After observation of the literature, making the interview questions and practicing pilot interviews, the research was conducted. The data for this research was collected during the 17th edition of the IAAF World Championships, from 28 September to 6 October 2019.

Before coming to Doha, arrangements were made for interviews with some of the participants of the Ukrainian national athletics team. With the Polish team and with some other representatives of the Ukrainian team, all connections set up during the World Championships.

Interviews were typically conducted in settings that proved comfortable for interviewees, usually in the lobby of their hotels. The interviews were in Russian, Ukrainian and English. Some of the representatives of the Polish team could speak in Russian, as well.

The interviews were recorded and saved. Interviews with some of the members of the Ukrainian national team lasted about two hours. Interviews with the Polish team lasted from 25-45 minutes. Then interviews were transcribed and coded in the same language which was used during the procedure. The transcriptions resulted in more than 300 pages.

### **3.1.5. Data analysis**

The interviews were transcribed and printed out. Transcripts were analyzed through the content analysis technique (Creswell J. W., 2009). The material was coded thematically according to the theoretical framework which was used for analyzing talent development systems in Poland and Ukraine.

## **Chapter 4. Results**

This chapter presents answers to the study's three research questions. The first sections will describe the two working models of talent development systems in Poland and then in Ukraine, and identify criteria for success, or lack thereof. The two empirical models depict a highly integrated environment in which athletes have the right to expect that the requirements for them from different agents (schools, universities, clubs, sport schools, federations and the national team) will be coordinated, amid a consistent and entrenched organizational culture that encourages these athletes to develop a high work ethic and an ability to effectively use the environment's resources (Henriksen K. a., 2017). Applying of athletic talent development environment model in these sections thus answers the first research question: What are the roles and functions of the main components of talent identification and development environment systems in Poland and Ukraine? At the same time, the environment success factors empirical model answers the second research question: How can environmental influences (economic, social/cultural, educational, technological, personal) affect the development of talent identification and development policies in Poland and Ukraine? The fourth section answers the third research question and details the similarities and differences between talent development environment systems in the two countries.

### **4.1. Ecological approach to talent development of Polish national athletics team**

Fifteen years ago, almost no one considered the Poles a serious factor in international track and field. But the authorities there made a conscious and deliberate decision to effect change. Now the athletics national team is notably successful internationally, a top-10 medals winner. Also, Poland has emerged as a major player globally on the athletics world

stage: it played host to the 2014 world indoor championships and is now preparing to stage the 2021 World Relays, the first European host of this event.

The following section presents two empirical models summarizing the results of the data analysis: the talent development environment system and the environment success factors of the Polish track and field national team.

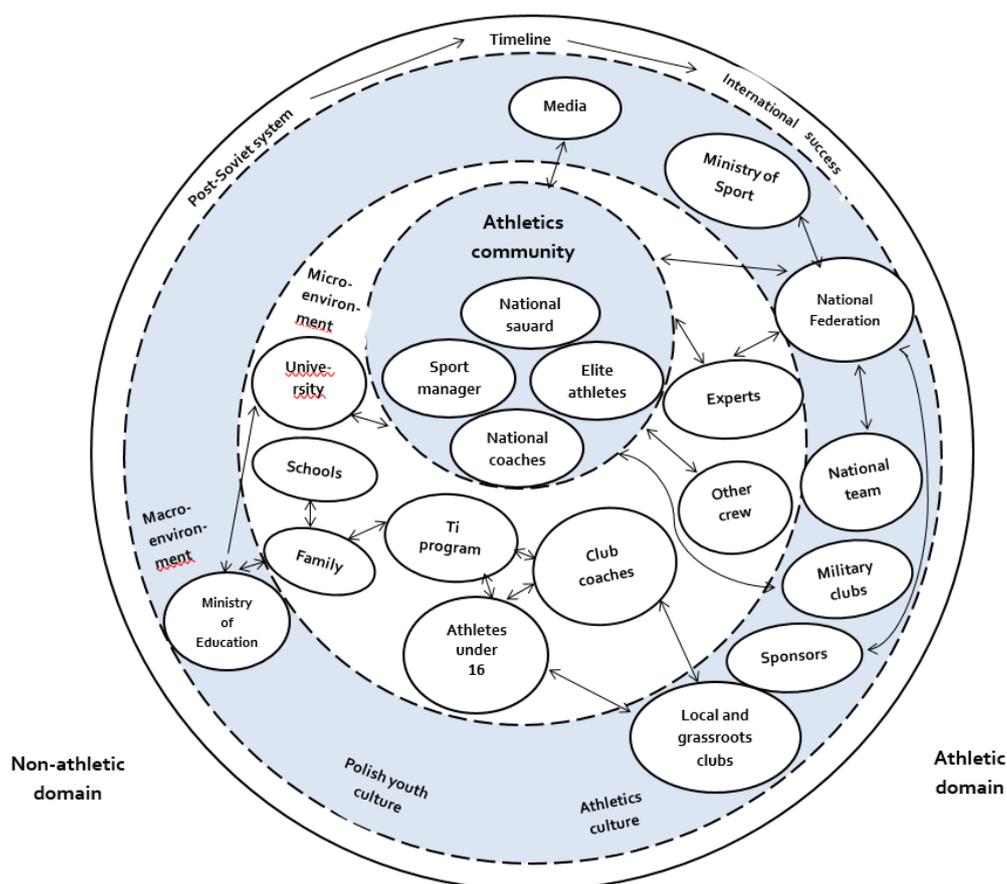
#### **4.1.1. Descriptive working model: the talent development environment model**

##### ***Micro-environment: athletics domain***

At the center of the descriptive model is a relationship, a genuine and profound relationship, between elite athletes, the national squad, national team coaches and administrators of the national team and, finally, the national athletic federation, all of which combine in coordination to become the orchestrated work of a true athletics community. It is shown below:

**Figure 8**

*The athletic talent development environment empirical model of Polish national track and field team*



The target group of this study is professional athletes and coaches and sports managers – that is, their combined opinions about the nation’s talent identification and development environment system, specifically toward the creation of comfortable conditions for athletes to make those necessary transitions in elite sport and success internationally.

Nowadays the national team can count more than 440 athletes of all ages. It is, even so, the opinion of Mp1: *“It would be enough to have 150 athletes. But we keep others who even don’t show great results for the European Championships because we need to cover every event during those competitions.”*

To get to the national team, every athlete not only should but must – this is obvious – meet standards. In Poland, officials now conduct special tests for children and check their health conditions and motility. One time per year, representatives of the national team come to every region and check about 100 children; afterward, five or six are selected to the main team while others stay in the regional team. Also, the Poles offer national championships for every age. A result can catapult an athlete to the national team, starting from age 16, if he or she lands in the top 12; afterwards, he or she is then involved in the system of preparation, which includes training camps and training with the groups (sprint, endurance, jump, throwing) under control of the national coaches.

#### Athletes under 16 years

This is the initial stage when a child starts doing sport. It is his or her interaction with parents, other members of the family, physical education teachers, colleagues in the sports group and other friends that not only affects but can direct the pathway of young athletes into big-time sport, as Cp2 stated:

*PE teachers find talent in the schools and show up with them at local level competitions, and after higher and higher. After, if kids show nice results, big clubs are interested to invite him/her to them. And then the child can get the national squad and be a part of a system of preparation. He or she will go to the national camps and have an opportunity to train with elite athletes and their coaches. Because if you are in the national squad system you must be trained by a national-level coach.*

### National squad

Poland has two national-squad teams made up of athletes ages 18-23: the national squad (around 350 athletes) and the national development squad (around 950 athletes). They also have a great supply of coaching experts (around 50 people) who train, guide and oversee conditions. To get the national squad team, athletes need to compete at the national level competition and match the exact standards. And Cp1 added:

*When you are there, you will get everything from the national team. And children can train with elite athletes and copy their behavior and try to be like them. Usually, more experienced athletes help youngsters during the training and outside the track. And children can be affected by them. Well, sometimes it can be a bad influence. But mostly, it is beneficial.*

### Elite athletes

Elite athletes are those 23 and older who, after leaving the national squad team, proceed to the main national team and represent it at the major competitions. Their overarching drive must be to win, to stand on the podium internationally, to glorify the country. The success of the national team depends on how well-organized their relationship is with all the stakeholders of the talent development environment. Ap said:

*“Our system is based on the best performances – better result, better benefits. It is very nice when you get money based on your achievements. I think it is good, and you strive to do better all the time and keep a high level of results.”*

### National coaches

One of the main stakeholders in the talent development environment is the coach. At all levels, coaches are important. This may seem obvious but in Poland it is the case – at all levels, a coach is important. To educate coaches, the federation provides educational seminars in order to train prospective coaches (instructor, coach of the second class, first and master classes); the system is based on diligent testing. As Mp1 mentioned:

*In Poland, 17-year-old people can work as coaches, but he/she needs to take the education seminars which are provided by federation. They just need to join 2-3 weeks of school and become a coach. They get knowledge there about training processes and regeneration.*

### Sports managers

Sports managers do all the organizational work for national-level athletes and their coaches. They are representative of the national team at the government level and connect the Ministry of Sport and the Ministry of Education with the national team. Also, sports managers can be considered the people who organize competitions for athletes and also can take part in their training and help, too, with certain methodologies.

*In Poland in track and field, in my opinion, children come too late, around at 12 years old. I worked on the program to change it, and start athletics at the age of 6-8 years, just basic, to play with them and teach the techniques. Because until that age children pick up other sport, and they just can come to athletics, if they could not perform there. So, we lose a lot of talents. (Mp3)*

### Club coaches

In Poland, and this is fundamental to everything, the system is based on clubs. As Mp1 explained:

*In sports, it is like in a country - the whole country is a family. And clubs are the strength of sport. Our club system had fallen, it has become poor. And now the main club is the Polish Federation. We have problems with youth because clubs can't support young athletes. And everything depends on the federation. In the past, we did not need the federation to go to training camps. Everything was done by clubs.*

### Experts

The Polish athletics federation provides the national team with a number of experts: physiotherapy, nutrition, biomechanics, biochemistry sports psychology and more. Also, all members of the national team are covered if they get hurt and, for instance, need surgery. All expenses are covered by insurance companies. Further, national team-level athletes get medical support from the federation and all supplements which they might need.

*Now we have a crazy number of doctors and physio in the national team. When I started my sports career, we had only two physios. Nowadays we have about 17 physios, but in the Olympic year we will have 24. The services are amazing – at the top level. Also, we hire nutrition specialists. For example, during the World Championship 2019, we brought two medical doctors, eight physios and one psychologist. And during the camps, we have all this support. (Mp2)*

### ***Micro-environment: non-athletic domain***

#### Family

Parents and family are key to the process of success, even – especially – from an early age.

*Parents motivate kids and they let them go to classes and do sports. Also, mostly at the early stages parents financially support their child to train, until they show the potential for other coaches and can be invited to the club. But there is a problem, if parents don't have money, the child can stop doing track and field, or can switch to another sport, where the system is more developed from the first stages. (Cp3)*

At the same time, parents can also prove perhaps the single-biggest barrier to a child's embrace of track and field.

*Parents motivate kids and they let them go to classes and do sports. Also, mostly at the early stages parents financially support their child to train, until they show the potential for other coaches and can be invited to the club. But there is a problem, if parents don't have money, the child can stop doing track and field, or can switch to another sport, where the system is more developed from the first stages. (Cp2)*

#### Friends

In order to achieve success in sport, an athlete's personal life should be organized accordingly – that is, his or her relationships with friends in school and then university should be constructive. All the same, some significant amount of time will be spent in a

community of athletes and coaches, and here there needs to be an appropriate focus on these relationships, too.

*I have a lot of friends outside sport. But the main time I am in my preparation and focused on my goals. I am all-time at camps and competitions. But I try to maintain a friendship with everyone, talk through social media. They root for me and support as well. After I get some medal and come home, we always gather and celebrate this. (Ap)*

### School/University

Education is an important domain in the lives of every athlete. How he or she will be able to manage studying and sport depends not on their success in sport but also their transition after sport, the ability to find themselves in other fields of life. As Ap said:

*My mother told, 'OK, if you go to train to need to get A or B. If you don't get a good score – you need to stay at home and learn.' And she motivated me to learn more because I wanted to do sport. It depends on parents.*

### **Macro-environment and related context**

The federation is a cohesive force not just in but throughout the Polish athletics environment. It creates an environment for athletes and their coaches to train (facilities) and structures the relationships between national team, media, sponsors, clubs. Also, the federation helps athletes through their careers – helping to educate them, organize their training, selecting them to a particular talent group and the national team. It also provides financial support to athletes to help them be focused on training and to combine education with sport, and also to help them to find themselves beyond the finish line.

### Talent identification programs

To lift itself up, Poland has relied on a variety of measures.

Four years ago, Poland adopted into its talent identification and development system a program called “Kids Athletics.” The IAAF developed the program initially, in 2005, creating the initiative for youth worldwide from 7 to 15 years old, hoping to make track and field the most-practiced sport in schools, and help children effectively prepare for their future in athletics (Gozzoli, 2002). As Mp3 said:

*In 2014, I have told the federation about the IAAF Kids’ Athletics program and suggested to take an example from many countries and use this initiative in Poland. In the Ministry of Sport, this program was accepted and started to finance it – about 1.2 million euros per year. In the beginning, the program should be focused on cities and clubs and start from 6-8 years old children. But later it was changed. They implemented the program in schools and focused on children 11-13 years old. They changed the name to ‘Athletics for Everyone.’*

In Poland, they don’t use this system exactly as the IAAF Kids Athletics program was envisioned. Instead, they have coaches who work with professional athletes. So, children are trained as adults. As Mp3 said: *“I think there should work experts, who know the specifics of kids’ training. This system, in my opinion, is for coaches, but not for children.”*

As it turns out, “Athletics for Everyone” is a good chance to find talented children, and coaches join it in order to find new athletes to their group. Also, it offers an additional financing source for coaches – they get paid for teaching there, with classes 2-3 times per week.

*We have a big problem among coaches who works with youth – they want results immediately and squeeze the children in the first stages. So, as a solution is to let the talented child to be trained in the group with a coach who has had already high-level athletes. So, he will not be in accelerate child’s development. But for the youth, we don’t have money, and this is a problem. No one wants to give money for promising athletes, they want to give money for a medal. (Mp1)*

With this in mind, another program that helps to find talented youth is called “Athletics on Thursdays.” This initiative gets financial support from sponsors, but not the government. Mp1 said:

*Every Thursday, we have track and field competitions for children under 15 years old. They compete by stages: in the villages, regions, towns. We found a lot of today’s leaders of the national team. But from ‘Athletics for Everyone,’ we have not gotten anyone yet. It is too early for it to see the results.*

In Poland, it is common that physical education teachers find talented youth and show them at the local level competitions, and after they show the results move to bigger cities in the clubs.

As Ap said: *“In Poland, we have a lot of PE teachers who are falling in love with athletics. And they will devote themselves to the kids to make them do track and field.”*

### The education system

In Poland, to attract children to do sport there is a formalized system of additional PE classes after school. PE teachers are paid for these extra classes, and children who are interested in physical activities can join that program.

Why this formalized system of extra after-school PE?

First, parents want it. It not only gets children off the couch and into sport but reduces face-to-face time with kids' phones and computers.

Further, there is a problem that requires some nuance to understand. In Poland, PE lessons begin at perhaps age 10 or 11. It's not that children don't have PE beforehand. They do. But those early-years PE classes are not taught by a professional PE teacher. As Cp2 said:

*For example, that can be a teacher who taught all subjects and so on. And you know, how sometimes these teachers look like – they are attractive, wearing high heels. But the problem is they don't know anything about sport – how to show technique, grab the ball. And this is the most important when the child wants to move, wants to be active and stays in sport. We, as coaches of the national team, were involved in discussion with the government about this problem – to let professional teachers be teachers, to make them work in the 1-3 grades. But the government doesn't want to change anything. And this is the time which we lose.*

In Poland, it can still prove quite difficult to combine sport and study. And a widespread stereotype can still remain towards children who show an affinity toward sport. As Ap said: *“When you play sport it is because you are stupid and can't handle sport with the school. But modern athletes have been breaking these stereotypes and proving that it is possible to combine everything.”*

There are special boarding schools in some big cities, but in recent years not one national-team athlete came from these types of schools.

A lot of athletes on the national team manage to get an education in sports universities or academies of physical education, where comfortable conditions – financial support, flexible schedule, individual tutoring and more – are provided for them. As Cp3 said:

*It's not a problem to be a student and finish those studies. They have special programs and they don't need to in each lecture or class. But if you are a student of Medicine or Law universities – it is not easy to combine. The university also gives special scholarships to athletes.*

In order to become a leader in track and field, Polish strategy in sport is focused on the official statement that illicit doping is out of bounds and will not be tolerated. As Mp3 said: *“Together with Polish WADA support, we held a special educational lecture about the consequence of taking prohibited substances conducts during competitions and training camps.”*

#### Military clubs

These days Polish has, for instance, a great military team. That means athletes can get financial support from military clubs. But the progress there also shows how much progress there remains yet to go. As Mp3 said: *Last two years many athletes were accepted to the military and they get a salary there. But the money is not that big.”*

#### Mass media

The significant success of the Polish track and field team in recent years has, predictably, attracted media and sponsors. The Polish federation now has an agreement with Polish TV to broadcast many events on state television. Also, there is a tendency to broadcast major competitions and Diamond League, the global track and field meet series,

on TV. Newspapers – for years more focused on football and football players – have shown a renewed interest in track and field. There are now two big international meetings in Poland every year. A significant number of international athletics stars come to compete and every year more spectators come to watch them. Journalists are interested in those meetings and promote athletes. As Cp3 put it:

*Journalists interview athletes all the time after competitions. Also, we have the studio and broadcast interviews three minutes after the race. Special journalists prepare films with athletes in the hotel straight after the competitions. These approaches attract spectators to track and field.*

#### Context created by Polish athletics national team

There is great energy in and around the Polish athletics program. Its success is real. But none of this comes easily, or free. “*If you want more, you need to do better and better,*” Mp2 said. “*In sports as in business - to stay on the level every year you need to invest a lot of money,*” Mp1 added.

#### *Environment in the time frame*

In each interview, one factor came through clearly, time and again: the post-Soviet influence on today’s position of Polish track and field. In conversation with Mp1: “*When Poland became independent, everything good that we had, we lost. We lost good programs for track and field, which is the main driver for all kind of sport. Athletics can develop children for any sport.*”

The political changes thoroughly changed as well the numbers of those affiliated in Poland with track and field. Before, it was said there were 30,000 registered athletes and

9,000 coaches; those who were non-registered meant 120,000 more. Now the situation is different, Mp1 said: *“Fewer people are attracted to athletics because this is a tough sport, where you need to work hard.”*

The Soviet-style system was comparatively great for athletics. Poland could boast strong clubs with financial support; there, too, were military and policy clubs. When the political situation changed in the 1990s, the transition proved turbulent for athletics. Mp2 said:

*The ‘90s was a terrible time for us because we needed to build a new system. We did not have enough personnel. One person could be a coach, administrator, president of the club. He was looking for money everywhere in local government.*

Looking to the future, the main challenge for the Polish athletics federation is to keep that top-10 world ranking. Here is the key, as explained by Mp3:

*We have a very good situation in the women's relay at 400m. But after Tokyo, there will be no one. Everyone are 23-25 years old. After Tokyo, they will want to give birth or finish a career. And the young girls run for 53 seconds. Something needs to be changed. We have success, but we invest money in the strongest, and forget about the youth. We don't have a system; we have a luck.*

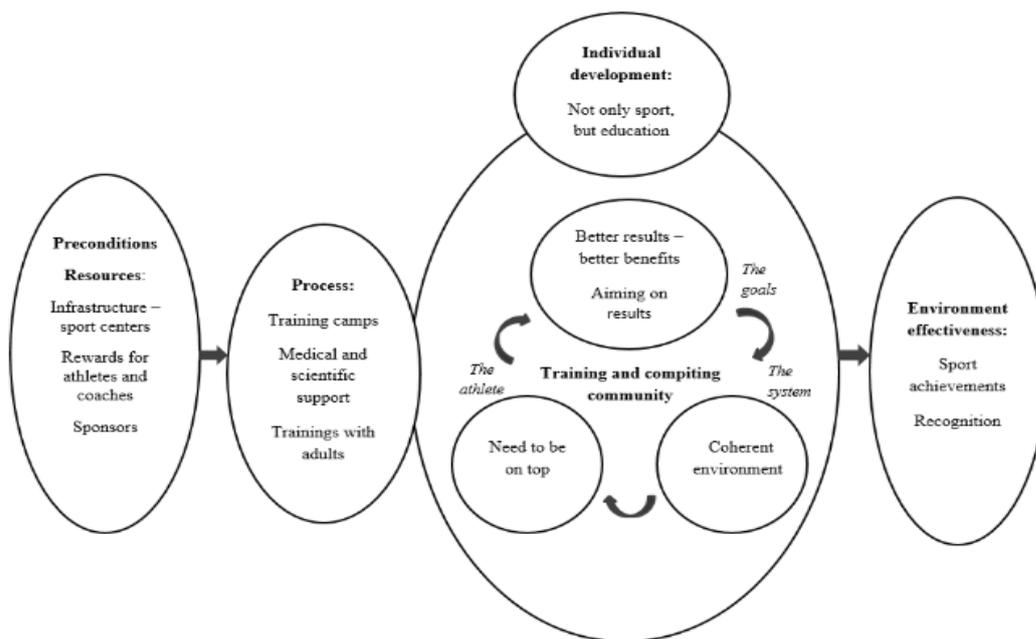
#### **4.1.2. Identification of environment success factors**

The Figure 9 below presents the empirical version of the environment success factor model, summarizing the most important factors influencing the success of Polish athletics national team to help athletes to develop their talent. Given the complexity of the talent

development process, certain key elements in each category were selected for the model, which thus serves as a brief description of the case.

**Figure 9**

*The environment success factors empirical model of Polish national athletics team*



***Preconditions***

**Infrastructure – sports centers**

In order to succeed in athletics, the Polish government started anew – that is, in a post-Soviet world – by developing infrastructure. They realized that no matter how talented coaches and athletes might be, they would not be able to realize themselves without a landscape built around normal sports infrastructure. Therefore, the authorities began to invest very seriously in such projects. Now Poland has more than five sports centers for athletics and other sports. And as Mp3 mentioned: *“But they are too small, in my opinion. They are not only for track and field. Nevertheless, there are excellent facilities,*

*accommodation, stadiums, recovery centers. Everything for athletes to focus only on preparing for the competitions.”*

Ap added:

*In the biggest cities, we have a track stadium. You can go there and train. It is common. Now, the government tries to build indoor stadiums. Poland is separated into 16 regions. And they plan to build an indoor stadium in each region. There are a lot of obstacles, but they want to do this. And with the financial help of the EU, which we got, they will be able to develop this program in the future.*

#### Rewards for athletes and coaches

To get government support, athletes must be in the top eight at international competitions, such as the European Championships, World Championships or Olympic Games. A scholarship is available that depends on achievement; it varies from 2,000-8,000 USD per month. Ap observed: *“It is very nice when you get money based on your achievements.”*

Cp1 added:

*But, if you only one bad day during that competition the federation can decide (because they know about the reason for bad performance) to give some money for one or half-year. They give you a chance to work harder.*

Athletes who don't make the top eight at the key international competitions still can get some support from the federation, but much smaller. Ap said: *“You can't go to the*

*international camp, but you can stay only in Poland. In Poland, you need to be in the 1-8 of strongest and you can be confident in the next year.”*

Children under 16 can't get a government scholarship until they make the national team. They can only be supported through regions or towns. Even then, according to Cp3: *“And this support depends on their age and achievements and can be from 100-300 dollars. And the amount of money is decided by majors of towns/cities.”*

As alluded to before, if a particular athlete is not achieving at an international level of performance there is a crucial problem that is all but sure to confront him or her – and, by extension, systemically in Polish sport. Especially for those athletes who are 16-20 years old, they can't get enough financial aid from the government. In this case, Poland has a program, dubbed “Team 100,” where one hundred athletes (in fact, there are more than 150 people in it) can be selected to take part from different sports (including track and field). According to Cp3:

*When they are a part of this program, they can get 10,000 euros per year. But they need to report every 3 three months about spending this money. Money can go only on sports needs: training camps, physio, sports clothes and shoes and so on.*

For coaches' support, the Polish federation also undertook special measures, one in particular implemented through the federation, giving it authority to allocate extra money based on the achievements of a coach's athletes. As a consequence, not only has the federation retained coaches but those who left have returned and the federation has attracted coaches from abroad.

All coaches have contracts for one year, renewable annually. Cp1 said: *“Normally they have a contract for a year, and it’s between 500-2000 euros. And then, if their athletes get a medal at major competitions, they have extra money, about 1000 euros per month.”*

So, the better the performance, the better salary coaches can get from the government. Mp1 in this sense has stated the following::

*Of course, if a couple of coaches are great for years and one year his athletes don’t perform we will remain the salary for the next year. If the level of results is weaker, there is no problem for us to remain the salary. And we always can send it to the other athlete and it will be a good corporation. So, we have permanent contracts.*

### Sponsors

It should be clear: the main sponsor of track and field in Poland remains, unequivocally, the government. From the words of Mp3:

*The best sponsor for us is the government, and we can get from them approximately 5 million euros per year. And if to add extra money from the local level we will have around 7 million euros. This is a budget for one year.*

In addition to those 12 million euros, the government, based on the success of the athletics national team, has facilitated sponsorships from the petrol company Orlen for 10 years. In addition, the Polish athletics federation has a clothing sponsor company, 4F; they cooperate with Toyota, Okęcie, Nutrend, Nestle, 4 MOVE and Polanik. Such

cooperation gives financial stability regarding promotional activities, support of district associations, support of athletes and coaches with scholarships. As Mp1 said:

*Orlen gives money to the federation and gives scholarships for athletes. We, from our side, give 20 scholarships from this money to young athletes, who are not competing at a high level, but we have hope that they can achieve success in the future. All athletes, who show good results, get sponsors' support.*

### **Process**

#### Training camps

For all members of the national team, the federation provides training camps – national and international. For national camps, as was mentioned before, in Poland there are 5 sports centers where are provided all facilities for training and recovery. If athletes and their coaches plan to go abroad to train, then international camps are available for this purpose.

*We can go to South Africa or the USA. Wherever we want. If we are top athletes and we have this in our plan. But we don't organize international training camps, we don't invite the American team to train together. We just go there and do our preparation for the main event. (Cp1)*

Mp2 added:

*You know that the weather in Poland is not good for athletics. We have indoor stadiums in Poland. But sometimes it is very beneficial to go to a different place, outside of Poland like a switching environment. We have a couple of centers*

*where we used to go. It cost the same as in Poland. Athletes only pay for tickets, and go there.*

#### Medical and scientific support

Poland has significant and impressive medical and scientific support for all members of the national team. If the coach of the leader of the national team needs to take biochemistry tests during training or competition, the federation provides everything. All supplements and vitamins for athletes, who are at the top of the international competitions, are provided in the amount that they need. Everything is underwritten by the federation.

However, Mp3 cautioned:

*I am trying to connect the national team and science. For sprint and middle distance, it is very important to check biomechanics of movements. I have special equipment to check athletes. But it is quite difficult to include my methods in the system. The federation could save money because my methods even can identify talent for exact sport in the child. They have a big number of young athletes who considered talented, and the federation spends money on them. But in some years these athletes might disappear, because, actually they were not talented. And, plus, due to my test, athletes can avoid injuries. But I keep working on this question and hope for cooperation with the federation.*

#### Training with adults

It is important to have a role model, especially for young athletes. Whoever – Usain Bolt, or other international level big stars – can and should be an example for many children. But they are somewhere in their countries. Poland track and field has many stars

who have great success in the major competitions. And having the opportunity to train with those people is a great chance for many young talented athletes believe that one day will be possible for them became a star. They just need to follow their positive behavior and learn from them. As Cp1 said:

*It is a good way to save the talented child – to give him/her to train with the coach who has leaders in the group. He will now force this young athlete to show the result immediately. He can wait and let him/her grow up naturally.*

### ***Organizational culture***

Throughout this study – while performing analysis and reviewing data central, highlighting information related to personal and team values and goals, reviewing those different stories relating to training environments, traditions and habits – the overarching notion of organizational culture remained a key touchstone.

To that end, it was stressed during communication with members of each national teams their understanding of the importance of having a supportive, friendly, comfortable environment inside that team toward the team goals of aiming for, contributing to and, ultimately, reaching success. Ap said, adding:

*When we are at the international competition we try to support each other. Usually, I don't come to the stadium to root for others before my start, because I need to be concentrated on my goals. But when I finish competing, we together with other athletes come to support our teammates. And also, during training camps, we have a great environment inside the team. We always gather after on Sundays, talking, and sharing stories.*

In Poland, all systems based on striving to be on the top.

For elite athletes, being the strongest means get full support from the government – everything needed for successful preparation. For young athletes, who don't get significant support from the government at the initial stages, it means that they should work harder and show the progression of results, and show their attitude both in training and also toward their education (in school and in the process of self-education). For coaches, achieving success means that they have the right to go to any training camps; it also means they can reasonably calculate from success their financial rewards.

The organizational culture of the Polish national athletics team is characterized by a high degree of connection between all stakeholders and national bodies. Such a culture serves as a dynamic and effective stabilizing power in the talent development environment.

### ***Outcomes***

According to the environment success factors working model, to produce outcomes such as international sporting success and individual development, all stages such as preconditions and processes should be organized and structured. It should work as a system.

All factors in this system are important. There is no ideal sport system in the world. But there are systems which can fit the exact country, given economic and political conditions. Poland's system is not ideal, but it works. Of course, there is always room for improvement. Despite some significant deficiencies, in its system the Polish track and

field team has for years recorded successful and stable performances at international competitions.

#### **4.2. Ecological approach to talent development of Ukrainian national athletics team**

For decades, and even to this day, Ukrainian track and field has shown the ability to produce notable individual stars. During the Soviet years, the pole vaulter Sergei Bubka was arguably one of the biggest personalities in the international athletics scene. Now there is the teen high jumper Yaroslava Mahuchikh, silver medalist at the Doha world championships, recently named by World Athletics, formerly the IAAF, the global female rising star of 2019. All the same, over the years Ukraine has not – as a team, as a nation – consistently produced podium results as it could and should.

Why?

There is the obvious issue of the most recent years: the crisis with Russia dating to late 2013.

But it is beyond that.

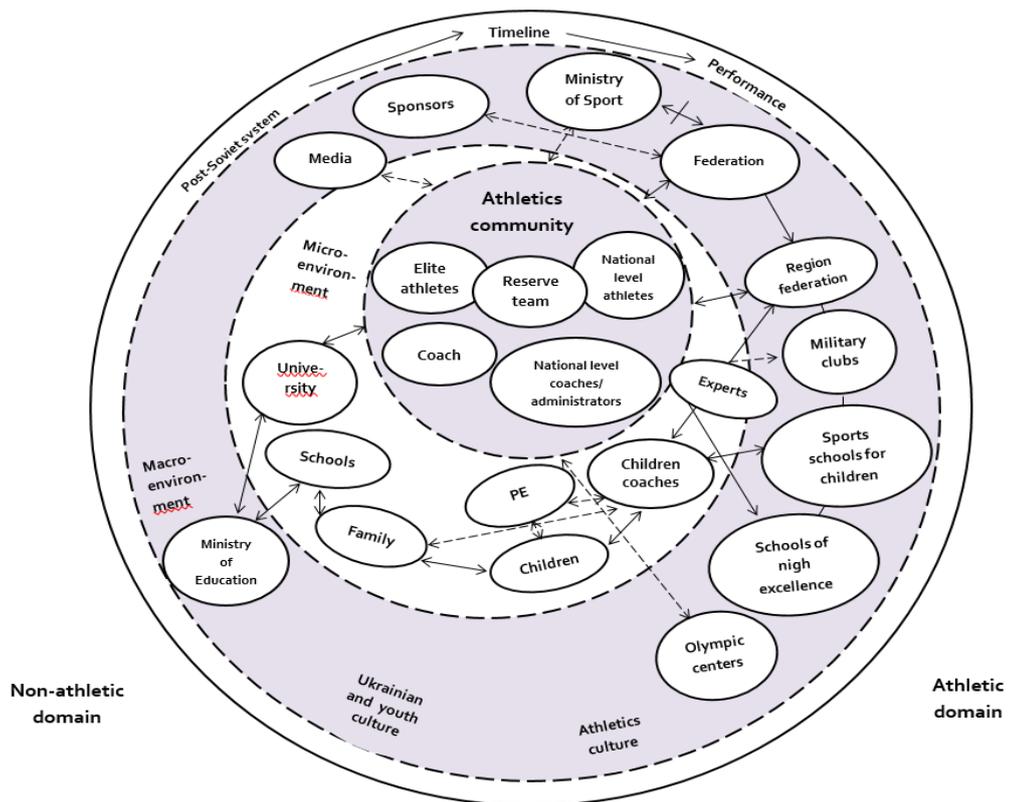
The following section presents two empirical models summarizing results of the data analysis: the talent development environment system and environment success factors empirical models of Ukrainian track and field national team.

#### 4.2.1. Descriptive working model: the talent development environment model

At the center of the descriptive model (see Figure 10) is a complex and intertwined relationship between athletes of the national team, athletes of the candidates and reserve teams, the national team coaches/administrators, personal coaches and the athletics federation of Ukraine.

**Figure 10**

*The athletic talent development environment empirical model of Ukrainian national track and field team*



*According to official statistics, 13% of children do sports in Ukraine. Taking into account the fact that our statistics do not reflect reality, we can say that this process is actually lesser. The norm of the European Union is at least 20% of children should do sports. The average for the European Union today is about 40%. (Mu1)*

The official website of the Ministry of Youth and Sport of Ukraine stated that 350,000 Ukrainians annually take part in different kinds of athletics competitions such as cross countries, marathons, half-marathons, And about 65,000 children are involved in athletics through sports schools (Statistics, 2019).

For today, following the official protocols of Ukrainian athletics federation the composition of the national team is: the main level: 264 athletes; candidates for the national team and a reserve: 230 and 117 athletes, respectively.

### ***Micro-environment: athletic domain***

#### **PE teachers – children – children coaches**

In Ukraine, typically the first steps in any sport start in school, in physical education classes. The selection of children for sports specifically begins with sports schools for children, where coaches cooperate with PE teachers. And in the initial stage, it is important to build a constructive environment between all participants.

Cu2 said, identifying a key and ongoing problem:

*Sports schools usually recruit children from schools. And now there is no recruitment of talented children. The coach will come to school and ask who was the first that can come and train.” Further, he said, “There is even a division of*

*schools between coaches - you don't go there, because that's my school. During Soviet Union time, there was an incentive system for physical education teachers. They got additional monthly payments for identifying and transferring talent child to coach in sports schools for children.*

Nowadays in Ukraine, all PE classes have been significantly reduced, and all classes are based on what's called the module system.

*Now, the plight in our schools – they have canceled athletics, and even don't conduct any running discipline (even 60 m). Before we have a lot of different tests – throwing of the ball, jumping. Now we don't have anything. We have a module system. During PE classes children choose by themselves what to do – someone wants to play basketball, someone volleyball, others want to run. But the problem is there is no condition to play many games. So, children don't do anything. This is the module system. (Cu2)*

Cu1 said:

*First and foremost, there should be a physical education teacher at every school who should instill a child's love for sports. These teachers are characterized by the great desire to help the students open up themselves. They should see a talented child. And afterwards those PE teachers should offer a child to a coach. Next should come coaches at a sports school to which children are directed by PE teachers. They select children for district and city competitions, and after complete a group. Now the problem is that we don't get a high-class specialist from the universities. Universities produce very weak coaches and PE teachers as well.*

### Candidates and reserve team

All athletes' aim should be to get the national team. The initial stage for it is to be a member of the reserve team and, after, if children show good results they can be shifted to the team of the candidate to the main national team. Being on the reserve and candidates team gives opportunities for a young athlete to go to the training camps, which are organized by the federation. Before the crisis in Ukraine and war with Russia in 2013, all national teams used to go to Crimea for most training camps. There are a lot of training facilities with a huge capacity to host athletes and coaches. Now, the federation has to scramble to find places that are suitable.

*Now we change the system of preparation. We used to send all reserve teams to Crimea. Now we can't do it. So, we make training camps for the reserve team and for the main team together, based on coaches' decisions. If the coach of leaders has young athletes as well – we send them to one place together. Plus, young athletes can look at our champions and learn from them. This is a positive effect to foster new elite athletes. But as a lack of it, the coach may force young athletes and apply the same training as with senior athletes. And in the future," he emphasized, because identifying and developing talent is the core of the mission, "we can lose talent. (Mu3)*

### Coaches – national level athletes

Those coaches who are involved with elite athletes can help less experienced coaches. It is normal when a national-level coach can come to sports school for children and give training sessions for children and plus for their coach. As such, Au stated the following:

*We conduct with my coach training session for children because they don't know anything. I show them the technique, some exercises. For them it is newness. When we are at the training camp, other coaches look at us and the next day can do the same. We are totally fine with this. My coach even goes to them and talk, gives some links in YouTube where they can find videos with these drills.*

#### National level coaches/administrators

National level coaches can be considered as administrators/coordinators of national team. During every competition, they monitor talented youth and try to find a place for them to train, live and study.

*We go over the different range of competition and look at children. We ask them who are their coach to understand his/her ability to train those children. We communicate with those coaches and together decide the place where it will be better to move for an exact child. (Mu3)*

#### Coach – athletes – peers

It is important for children to have informal relationships with coaches and with friends. From the words of Mu3:

*The child should love the coach and go to training with great pleasure. These are the pedagogical foundations of sports. What trainers should teach not only how to run or jump, but he/she should teach everything about life, take the child on excursions or to theaters, should develop him comprehensively. A good coach in the sports school is a rarity now.*

Cu2 added:

*Talented children must be trained in a group. When they have individual training – several months, and they get tired of everything. That is why there is a big danger when parents are a coach – they keep their child in a closed environment. There are many such cases when these children finish their careers at the age of 15-17 years old. So, only in groups, children should be trained.*

### Experts

In order to educate athletes and coaches during training camps, people who work in physical education universities go with them and examine them, administer scientific tests, talk to them and give advice. Au stated following: *“But to be honest, they did a lot of different kinds of tests, but the result my coach and I have not seen. I can guess they just needed us for research purposes, to defend their theses.”*

### ***Micro-environment: non athletic domain***

### Family

Backing all this up one very obvious step – initially, of course, parents play the biggest role in talent identification and development. Connecting with parents should be a top priority for every PE teacher and, beyond, each coach. If a coach considers that an athlete has the talent and wants him or her to be in his or her group and continues to train, that mandates a close relationship with parents.

*At the initial stage, parents do not know whether their child is talented in sports or not. The coach should convince them that their child can succeed in sport and also will be able to get an education through sports. Also, there is a period when*

*the child's character begins to form, and he/she stops going to training. In this case, parents should push him/her to continue to train: show how they should behave in a team, take them on a camping trip, etc. (Cul)*

Some of the athlete's parents are related to sport. In that case, it is obvious that child will do sport. And if the parents are former track and field athletes or work in this area – the child, at least, will try to do athletics. In Ukraine, sports schools are for free and track and field as well. It motivates parents to give their child to athletics sections. As Au said:

*For families who don't have enough money, it is a great solution to give their child into athletics. Some people even surprised that in our country they don't need to pay for something. But in fact, in our economic situation in the country, parents should support their child financially. At least until children will get support from the government. But at the beginning parents must support with money and, of course, with encouraging them to do sport continuously. The fact that their children do sport and can be healthy push parents to find sources and help them anyway.*

### Schools

During education in school, it is always a question to combine sport and education. Usually, the age of beginning doing athletics starts from 12-13 years old, and it is 8-9 form at school. And track and field at initial stage don't demand very hard training. And at that level, it is no problem to study and attend sports schools after lessons. If they need to go to some competitions, in these cases the personal relationships with coaches and principals, administrators and teachers of the schools can be beneficial during studying. They have their role to play to develop the talent of children. In their turn, principles

should talk to the teachers in order for them to understand and help them succeed. Cu2 said: *“If athletes go to the competition, or training camp, the principal will give them individual schedule and assignments from the teachers with those they can work on during the trip.”*

Cu2 also said: *“Also, the principle of the sports school should encourage a child who wins the competition – give him/her gifts, uniforms, and so on.”*

When child will perform at international level and will move to sports boarding school.

Cu2 said:

*For example, Donetsk had a great sports boarding school. Children could study at school from 13-16 years old and graduate the college within two years. There was great stuff, a modern dormitory, cafeteria. They could have two training per day and classes in school.*

### University

Based on the official protocol of the Ministry of Sport and the Ministry of Education, each and every member of the national team has the right to get a personalized schedule in the universities.

*In middle schools, usually, only personal contacts between the coach and teachers can help athletes combine their studies with sports. At the sports boarding schools, there is such a thing as an exemption from exams. Also, we are receiving letters from universities with lists of students who need an individual schedule. We are revising them. But if we see the name of an athlete that we have*

*not even heard of, we delete the name from the list. Because let him/her study at least. But for the others, we give a confirmation. (Mu3)*

Student sport is very important in order to help athletes to make a transition into the senior level. Nowadays, however, student sport in Ukraine is in bad condition. Only because the system of the Universiade in Ukraine was changed (previously it was every other year, now every year), the rectors of the universities started to change their attitudes towards sport.

*The program should be like this - the competition among universities through sport. Rectors should be interested in athletes. And talented athletes must get an education. They must get help. For example, when entering a university, they should be exempt from independent external evaluation. (Cu3)*

### **Macro-environment and related contexts**

Macro-level shows how all stakeholders who are involved in the talent development environment and all national governing bodies interrelate with each other. Here is described the role of each.

In general, all systems of identifying and selecting athletes to the national teams in Ukraine have a structure. First, there are age-group school-level competitions, including in cross country, where coaches can identify talented youth at middle distance. Afterward, talented children are sent by PE teachers to the sports schools. In sports schools, the coaches do a number of tests and identify a child's specialization: sprint, middle distances, jumping or throwing. After that, there is a national test, a national-level competition of different ages.

For talent identification, it can be kept in mind the program IAAF Kids Athletics. The IAAF Kids Athletics program is in use in Ukraine, as in Poland. In Ukraine, it was launched – straightforwardly, without the Polish modifications -- about five years ago. As Cu2 stated:

*The idea of this program is very good. Unfortunately, we have it in Ukraine only like showing off. We got a lot of kits from IAAF. But only several times per year we have Olympic lessons, where the federation use this equipment and have small competitions for children. I believe that this equipment should be in every sports school, in every ordinary school. And these lessons should be on a mandatory basis. If the IAAF cannot provide such a quantity, because there are a lot of schools in Ukraine, then special permission must be obtained for the production of these kits. This program should be approved by the Ministry of Education included in the school curriculum, to make it more effective. Because it's a very fun game for children, and even for adults. But it should be formally introduced into the education of children and students.*

#### Sports schools for children vs sports clubs

In Poland, meantime, the system revolves around clubs. In Ukraine, the discussion is first and foremost about schools, especially these days:

*Now everyone talks about changing sports schools into sports clubs and this can bring big problems for athletics. The club system should take root. Does one interfere with the other? You develop clubs, but do not touch sports schools that are huge in Ukraine. I think Ukraine is not ready for this. Here, it seems to me, it is necessary to develop clubs, but sports schools should exist in parallel. (Cu2)*

Mu1 said:

*As a federation, we submit a report to the IAAF every year. We write the number of sports schools and the number of clubs (now around ten). Sports schools in Ukraine that develop track and field athletics - about 1600. They ask, 'Do they study there?' We say 'No, they are training.' They say, 'Then these are not schools, but clubs.' We must speak the same language as the whole world. The concept of sports schools is not clear to many countries. In addition, we introduced such a concept as physical culture. What is physical culture? That's what we call a physical education – the children at school go to a physical education lesson, then after the lesson, sweaty, dirty, without the ability to take a shower, go to the next lesson. And we call this physical culture – the culture of the body. Our model is not effective.*

The question of changing the current system, which is based on sports schools (as opposed to clubs), is open and controversial.

### Sports boarding schools

During the years of the Soviet Union, some schools had special sports classes, where education was focused on sports training. This was a great way to combine education and sport. These classes were financed by the government and supported children with equipment, sports clothes and more. After special sports classes came sports boarding schools, where talented children could stay and be provided with education, accommodation and food. Some 20 years ago, almost every region had sports boarding schools. Upon Ukraine's independence, those special sports classes were liquidated; so, too, the sports boarding schools in many regions as well. Now in Ukraine you can find

but three sports boarding schools – serving the national level, located in big cities. Importantly, they are not regional institutions. Also, financial support comes from those cities; it is not government support.

Opinions towards sports boarding schools are different. For example, Mu1 said:

*If I needed to decide to give my child to sports boarding school and he became an Olympic champion – I would not do it. There is nothing more important for a child as growing up in a family and feeling the love of parents. And any sporting success is worth it. But another question is whether this child is from a dysfunctional family, or the child is an orphan, and how to help him/her? Sports boarding school is an alternative for it. But in my opinion - the solution may be the development of sports clubs that will provide everything for talented children.*

Cu3 added:

*The whole sports boarding system is disastrous. We are losing so many children at this stage. Especially when they are 14-16 years old, and physical development should go the natural way, and they are given a huge physical load, as for adults. Because coaches want to earn more points, as their salary depends on it. Because of this, children show results in youth, and after – regression.*

### Olympic centers

Ukraine counts two Olympic centers for preparation of track and field athletes, West and East centers. They get significant government financial support: 10 million hryvnas, roughly 416,312 USD. Promising children not yet on the national team can be included

in this program. As of today, the West center counts 110 athletes, and East 120. Staffers can include coaches, doctors, physio and others.

People can be confused if they hear the nomenclature “Olympic center.” In their imagination it should be a center with sport facilities and so on. But in fact these establishments exist to give support to children – such as a monthly scholarship, or the opportunity to go to a training camp (every year they take children to national and international camps). The federation is responsible for these Olympic centers; it is a way they help to develop talent. As Mu2 said: *“Children are motivated to show the results, because they know if they do not perform others will take their place there. So, they have an internal rivalry environment, because federation completes these centers based on their achievements.”*

Mu3’s opinion about Olympic centers proves intriguing:

*But it would be better to have these centers in Kyiv and Kharkov and to have a dormitory and place to eat. It would be reasonable to make it in Kyiv because we have great coaches there. The alternative is sports boarding schools. But if the child is older than 18 years – the Olympic center is the best solution. But need to provide a place to stay at least.*

#### Federation and regional federations

At the center of the track and field community is the Ukrainian athletics federation. Ukraine is divided into 27 regions, each of which has its own local track and field federation.

*Every region has many towns where athletics can be developed the most. But there are no district federations, but only in the regions. More effective would be to create federations based on statistics and achievements and create district federations. It would be more effective for the development of track and field.*

(Cu1)

Initially, the regional federations conduct the competitions – the regional championships. Those regional federations send athletes to the national championships; in turn, those national championships determine the members of the national team. That team has three categories: reserve, candidates and, finally, the main team. Members of the national team can get a salary, based on a ranking system (1-3 places per event) and standards. As an exception for talented young athletes, if they are the champion of Ukraine among juniors, and he/she fulfilled the norm of the master of sport, administrators of the federation can also apply for financial support to the full-time team (either juniors or youth) (Ukraine, n.d.). As Cu2 said: *“There are criteria for getting into the national team developed by the federation. This program exists. At least until the 2020 year. Since September of 2019, the Ministry of Culture and Sport was reorganized into the Ministry of Culture, Youth and Sport and no one knows anything.”*

#### Sports schools of high mastery

Each region has a school of high mastery for all sports, including track and field. Athletes can be included in the school of high mastery based on various criteria as sports achievements. Inclusion means financial support: for nutrition, for medicine, for training camps, for sports clothing. Critically, however, the level of support depends on the economic condition of that region and the willingness of its mayors to develop sport.

Each region can provide a governor scholarship for talented athletes, but the size varies by region.

*In the Donetsk region, 40 scholarships per annum are allocated to all sports - 20 high and 20 low, 12 thousand and 7.5 thousand UAH, respectively. And athletes strive to get into the top 20. Those who have fulfilled Olympic standards or close to them are privileged. And another 40 scholarships were allocated for athletes of youth and junior age - in the amount of 4 thousand UAH. This is a program of the Donetsk region and it is a good program. There is an incentive for children to show results. (Cu3)*

The Donetsk region offers perhaps the greatest example. A considerable number of notable former athletes are from there; some now hold positions in sport organizations. There are other examples of regions where help and support for athletes are also on a good level – these include Volyl, Dnepr, Rivne. But some regions can't give anything to athletes and coaches, and athletes from these areas are forced to consider switching to another region, which can support them.

*Many years I was a patriot of my region, and I foster my athletes as patriots. I am from a small town; I have members of the national team for many years who were the main core of the region team. But there is no district federation in our town and I should drive 200 km to the capital of the region and go and beg money to go to the next training camps? But very often they did not have that money and I was told to invest my money because they promised to return them after. I had at some moment bank loans because we did not have money to go to camps, but we must go. So, what I needed to do – just took a debt. I got tired. I switched to*

*another region which gives significant support now, and I am able to develop talented athletes. (Cu1)*

This system can be extraordinarily personality-based. That is, it further depends on how the governor or mayor in a certain region loves sports (or not) and understands its appeal and positive aspects (all the better if they are former athletes). Some have no idea about it; they believe that if an athlete is on the national team, gets a salary and goes to international competitions, then the city in which he or she was born and is now thus glorifying should not do anything, either financially or in terms of popularizing these athletes. From the words of Cu1:

*I am from the small town of Pryluky. I worked at a sports school for over 25 years. I worked with children, who I trained from the beginning until the national team level. Now I have three candidates for the Olympic Games 2020. But do you think in Pryluky, with a population of just under 60 thousand, does anyone know about them? Almost no one. Because the mayor of the city does nothing for this and for the promotion of sports in general. It would be very clever to use my athletes to promote sports and popularize athletics. Moreover, now there is a question of reconstruction of the local stadium. Honestly, this issue is moving very hard, because the mayor still needs to be explained that sport is important for people. She simply does not understand anything in this and does not want to understand. This is a problem.*

### Military clubs

Many athletes of the national team are members of military/police clubs. They get significant financial support from these structures and to be part of some of them it honorary in Ukraine. Au said:

*I am proud of being a part of a military club. I can represent Ukraine at the international competitions, and also we get very strong support from them. After successful performances, they usually gather all team in the Ministry of internal affairs or other official government organizations, and they give us medals, titles. I think it is a great popularization of sport through their structure.*

### Media

As in many nations, Ukrainian media are nowadays interested more in football, boxing and other sports, and pay comparatively little attention to track and field. In spite of this, the Ukrainian national championships are shown on television. This year, Ukraine hosted the European Combined Events Team Championships in Lutsk, which was shown on X-sports, as well as on live channels on YouTube. Also, in the wake of negotiations with the IAAF which provided a substantial discount for Ukraine, the athletics World Championship in Doha was aired on Ukrainian television, on the Mega Sports channel.

On social media channels, the national federation pays attention mostly if not only to elite athletes. They promote leaders, and they appear on TV and radio programs very often. But usually, athletes try to promote themselves through Facebook and Instagram. From Au words:

*I always post news about competitions where I go. Because no one will do it. They can post only information about the type of event and results. I describe everything in an interesting way, to attract subscribers and let them know about me and about track and field in general.*

In additional, Au observed:

*There was a billboard in the city with my photo. Where does it say who I am? But what is the use of this? I'm not a politician? But if you give a link to a sports school where children can come and train, this is a completely different result.*

### ***Environment in the time frame***

As with Poland, the influence of the post-Soviet system has significantly affected the current situation of the sport system in Ukraine in general. But here the two stories diverge. If Poland could make the transition to a new regime, in Ukraine the system is still far too often based on outdated norms that need to better meet today's political and economic realities. Mu1 stated following:

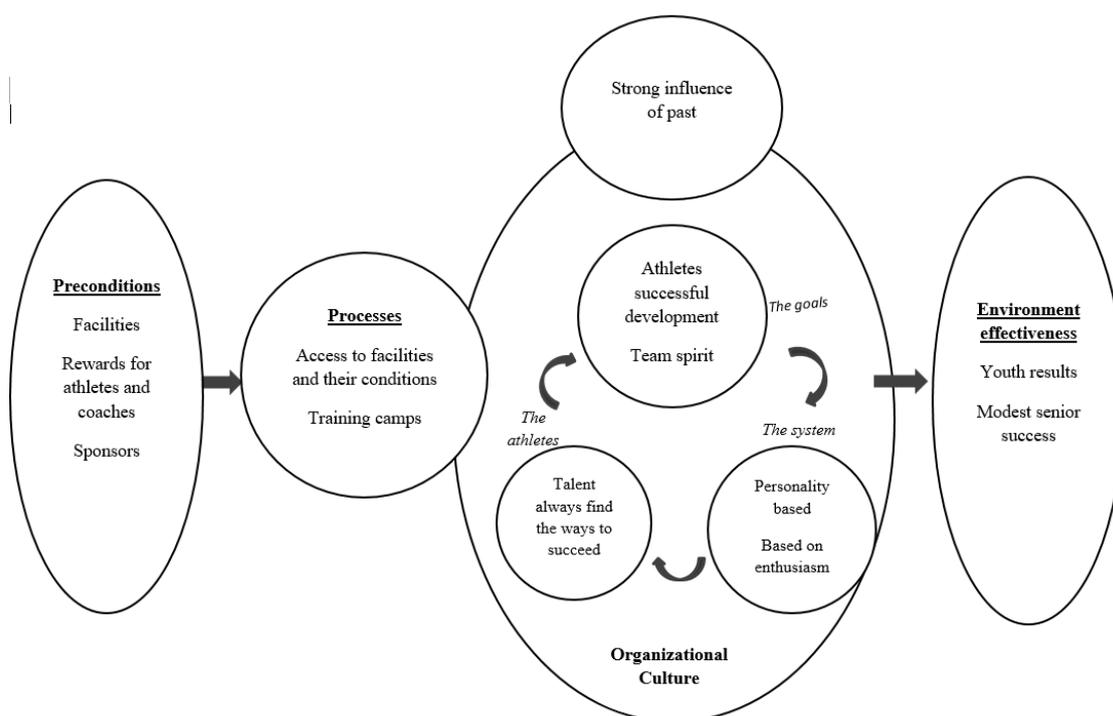
*We need to start with the adopting of a new law about physical education and sport. It is totally based on Post-Soviet regime. It begins with the statement that the government is steering sport. But the government should help and support, and make conditions for sports society, but not steer.*

#### 4.2.2. Identification of environment success factors

Figure 11 depicts all factors which affect talent development environment system in Ukrainian track and field national team.

**Figure 11**

*The environment success factors empirical model of Ukrainian track and field national team*



## ***Preconditions***

### Facilities

There are so many sports – and activities – for young people to choose from. In essence, there is a huge competition for talented children. For track and field to win this fight, it needs to offer good conditions (infrastructure, stadiums and more), good coaches and the real vision of personal, patriotic, financial and other opportunities.

*There should be good infrastructure in all cities. Because where will the parent take their child? Where there is a good coach and, besides, there should be a clean dressing room, good equipment, a good surface at the stadiums. So, we need to build good sports facilities and increase the salary of coaches. Now parents take their children more to football, swimming, gymnastics. (Mu3)*

### Reward for athletes and coaches

Members of the national team can get a salary, based on a ranking system (1-3 places per event) and standards. As an exception for talented young athletes, if they are the champion of Ukraine among juniors, and he/she fulfilled the norm of the master of sport, administrators of the federation can also apply for financial support to the full-time team (either juniors or youth) (Ukraine, n.d.).

In 2015, the Ministry of Youth and Sport launched an experiment within the Olympic cycle with the weightlifting, diving, track and field, basketball, hockey, field hockey federations relating to their autonomy. That is, these federations get their budgets from the government and are then responsible for the distribution of funds.

For its part, the athletics federation opted to be as transparent as possible. This means they show everyone the way the money is distributed. How does it work? There is a system of scoring according to the results of performance. Each competition can tally points. For the Olympics, up to 12th place can register points; for the World and European Championships, up to 8<sup>th</sup> place. Before 2019, the major national competitions were included in this system. Starting from 2019, the system changed: the results only of two international performances counted (which had the biggest value). There is, naturally enough, a value per point which translates to a precise amount of money. At the end of each year, all points are calculated per athletes and multiplied into a sum that is then allocated.

*We used to include the championship of Ukraine. But then we decided that we are training athletes for the World and European Championships. And we removed the national championships. We take into account the 2 best performances of the season, take the entire budget, the total number of points from people, and share them proportionally. But the leaders in our country will still get everything if even their money run out. We always do everything for leaders. Also, we have 40% of this budget to dispose of the money to additional needs. And if we see a talented child, we can send him/her with the trainer to the training camp, due to this 40 %.*

*(Mu3)*

Coaches' salaries come from the government. The amount depends on work experience, category and honorary titles. Those coaches who work with children and at sports schools have a comparatively smaller salary; those who work with leaders in track and field get higher pay. There is resolve to pay more but, as they would say in Hollywood,

this is currently in development. For medals at Olympic Games, World Championships, European Championships, and some other international level competitions, coaches can earn fractionally more and perhaps be awarded with what is called the Presidential scholarship, good for a year. And after successful performances, internationally coaches can get honor titles, medals, a diploma from the government. But unlike the situation in Poland, a coach's salary is not tied to success. Having athletes perform to a world-class best at, say, the World Championships or the Olympic Games does not mean a considerable salary raise. Where is the incentive?

And, overall, the situation is hardly financially remunerative. Mu2 added: *“Many good coaches should leave their jobs and go to work to another area or go to work in other countries.”*

### Sponsors

In Ukraine, the government is the primary underwriter of the athletics federation. The annual budget for 2019 is about 2,5 million USD, and for 2,8 million USD for 2020. This money goes to the organization of sport activities, training camps and other. It doesn't include salary for athletes coaches and other staff.

This figure is perhaps incomplete. To make it apples to apples, as the saying goes, the salary figures would assuredly be constructive. All the same, it is worth a comparison nonetheless because in Poland the federation budget is some 12 million USD while in Ukraine the 2020 figure is nearing 3 million. At the start line, Poland would appear to be ahead by a financial power of four.

It is obvious that government money would not be enough for the prosperity of the Ukrainian athletics federation. They try to attract sponsors. The federation has a number of sponsors, including Asics, Interop, Megabank, Pronin and Partners, X-Sport and MAU, but their support comes not via cash but rather through services – sports clothes and shoes, discounts on goods, help with competition expenses. The truth is that every coach and, as well, the principal of every sports school is looking for sponsors on his or her own in order to have the opportunity to go to additional training camps or to buy sports clothes and others. From the words of Cu2: *“From the federation, we can’t feel sponsors support. I found a sponsor by myself – a former athlete who I was coaching. Every coach should seek for sponsors by themselves.”*

Today, with the reformation of sport and the entire economic system in Ukraine there is a discussion about the adoption of a law on patronage.

*I don’t know any country where this law worked. Many countries, such as Poland, the Baltic states tried to implement it in their systems, but it did not work properly. Everyone in our country thinks if they enact a law on patronage, all sponsors will line up and scratch at the door, and the federations will close and say that they have nowhere to put money. And sponsors will beg to take money from them because they must be given to someone. It is a big delusion. (Mu1)*

## ***Process***

### Access to facilities and their conditions

In Ukraine, it is not uncommon for gold medalists in track and field – gold medalists – to have to train outdoors throughout the harsh and unforgiving eastern European winters.

As Au said:

*I still don't like winter, because everything in my memory related to intensive training goes back to when it was -10 C outside. In between training sessions, when I was at home for two weeks, I needed to train, of course. And the indoor facility was too tiny; there were no conditions. So I had to run outside on the snow surface. To be honest, I was scared all the time about getting hurt. Because it is just dangerous to do physical exercises when even your body is freezing, and sometimes under the snow, it could be ice, and you just could fall down accidentally. I all the time took a risk.*

### Training camps

With the loss of Crimea and its training camps, it is increasingly difficult to find a centralized place in Ukraine capable of hosting all the members of the national team.

### Medical support

In Ukraine, there are no government-run centers where athletes can consult with a doctor, get physio procedures, go for recovery and the like. An athlete needs to go to a private center; he or she needs to pay for everything. Mu3 noted:

*There are no government centers in Ukraine where a member of the national team could come and receive treatment. It used to be, but not anymore. There used to*

*be a center with saunas, medical rooms and doctors. And you come there, and they will examine you for free, and give help. No surgery of course. But recovery procedures.*

As an alternative, there is the Ukrainian sports clinic – for the athlete who needs to recover post- season or is seeking to heal an injury. They have high-level equipment and unique methods for recovery, and all staff are of the highest qualification. But the federation is not affiliated with this center. Au stated following:

*I know, that the director of this clinic talked to the president of athletics federation and offered his service for all national team. But, his offer was not considered and refused. I had a chronic Achilles tendon over the years. This doctors literally put me together and now I can train and compete. It is a shame that the federation can't afford to include this clinic in their system. It is for athlete's sake to have the place where they can be 'fixed.*

All athletes have insurance with the Ministry of Sport. This system exists but doesn't work properly. From the words of Mu3: *"We have just started to implement this system. Several athletes who were injured during competitions or training received partial compensation from an insurance company."*

### Organizational culture

Everything that can influence the spirit of athletes and coaches affect all system of talent development in Ukraine in general. This can be a mentality, which based on personal connections, and individualization and personal striving to self-realization, and patriotism and personal enthusiasm. Ukrainian system works because a lot of people

achieve results against all odds, without real support inside the team, only with the support of personal coaches, family, friends. When you are on top – everyone with you. If you fall down – only the closest people gives support. As Cu1 said: *“You need to be extraordinarily talented in order to succeed.”*

### Outcomes

Ukraine has a lot of talents. All international competitions, such as youth World Championships, Youth Olympic Games, Youth European Olympic festivals gives a lot of new and extraordinary stars to the country. Unfortunately, only a few of them make a successful transition to senior elite sport. There is no system in Ukraine – there is a luck to find the talent who can go through all difficulties of the system, and because of his/her determination and hard-working, reach the podium at the main competitions.

### **4.3. Comparative analysis of talent development environment systems in Poland and Ukraine**

Table 4 will answer the third research question of this study: What differences can be revealed about the talent development environment systems in Poland and Ukraine by each nation’s coaches, sports managers and athletes?

The results of the two empirical models of Poland and Ukraine presented above (see Figure 9 and 11) allow for the following analysis of the talent development environment systems in Poland and Ukraine.

**Table 4***Difference in opinions towards talent development system in Poland and Ukraine*

	<b>Poland</b>	<b>Ukraine</b>
<b>C</b>	Good salary for national coach	Small salary for national coach
	Increasing salary based on success	Presidential scholarship for medals
	Small salary for childrens' coaches	Small salary for childrens' coaches
	Additional PE classes	No additional PE classes
	PE teachers love athletics	PE teachers indifferent to athletics
	Clubs support if the child is talented	No clubs, sports schools – bad support
	People interested in running	People interested in running
<b>M</b>	First coach program	The first coach gets honor title
	International camps any time	Several times international camps
	Great stadiums	Limited amount of stadiums
	Access to sport facilities	Limited access to sport facilities
	Support from the government	Poor government support
	Support from sponsors	Poor sponsor support
	National training centers	No national training centers
TI programs	No TI programs	
<b>A</b>	Scientific and medical support are great	No scientific and medical support
	Strong family support	Strong family support
	Parent support in the initial stage	Parent support, but not financially
	Strong peer support	Strong peer support
	In-school focus on studying	Middle school difficult to combine
	Flexible schedule at university	Individual schedule at university
	Scholarship from sponsors	No scholarship from sponsors
Great recovery centers – for free	Recovery center – but by own cost	

To show the main points of this research a holistic, ecological approach was employed. But to emphasize the main differences in opinion about talent development environment systems it is eminently logical to use the sort of comparison table above. As a disclaimer, it will be obvious that differences in opinions necessarily will be forthcoming because each stakeholder has his or her own priorities and purposes. For coaches, it is important to make a training plan and prepare athletes for the competitions. For managers, it is important to organize all processes related to preparation. For athletes, the focus is almost

surely on training and processes of recovery, and at some point – if not consistently – on education for a life amid and then after track and field. Thus for purposes of this study the opinions can be separated naturally and organically. Table “C” means the group of coaches who were the object of this study from Poland and Ukraine, “M” includes sports managers from both countries and “A” refers to athletes from Poland and Ukraine.

At the outset, it should be emphasized that in both Poland and Ukraine there is a strong love for running and for track and field. Just as in Poland, running clubs, for instance, are open everywhere in Ukraine. As Cu2 said: *“Athletics is still popular, only it is not advertised. Running clubs are very popular now, where people can come and run for their pleasure. Many former athletes are in them. This is for a fee. Also popular: marathons, half marathons.”*

The issue is not the sport’s tradition, or history, or even its grassroots appeal.

It is systems – that is, two very different systems.

To start with coaches:

Of course, people come to a position in sport for any number of different reasons – to succeed and glorify their country, city, town and themselves. But these two positions must be stressed: coaching is a profession in which people choose to earn money, and it is important for everyone to have a good salary. In Poland, the system is directly tied to success. The better performance, the better salary a coach can receive from the government and federation. On the other hand, in Ukraine all coaches receive the same salary.

In Poland, just to take one example, to motivate coaches who work with children to find talent and pass children to higher-level coaches, the government there launched a program it calls “First Coach.”

Here is the key, as explained by Mp2:

*Within this program, if an athlete gets an Olympic or World Championship medal, we have a financial reward for the first coach who found this athlete. Even if the athlete had five coaches during the career – the first guy who found him/her will get a reward.*

In Ukraine, in the same case, that first coach can get a honorary title from the government but not financial reward (exception: if the athlete is willing to share with his or her first teacher).

The contrast between the two systems could not be more vivid. And the coaches in Ukraine understand – with clarity – this dilemma. From the words of Cu1: *“A coach who works with enthusiasm and passion and give all his or her time, love and knowledge to sport, can get the same money, as a coach who comes to the stadium because he/she must do it.”*

Their only ways to earn more is at the margins.

A successful coach can earn an honorary title, which can perhaps add some benefits to a monthly salary.

Also, if an athlete wins a medal at European and World Championships or at the Olympic Games, a coach can receive a scholarship from the president of Ukraine.

*Now, with a new government, the President of Ukraine promised to increase significantly the scholarship for winning a medal at the major competitions. For example, for first place at World Championship, a coach, the same with the athlete, can get around 2,000 USD per month within a year. (Mu3)*

As was mentioned before in the first two sections of this chapter, PE lessons and PE teachers are an important element at the initial stage of talent identification and development. In Poland, PE teachers have a much greater interest in athletics than do PE teachers in Ukraine – a notable irony considering the basis of the Ukraine system.

In Ukraine, the entire system starts naturally enough with children in sport, and in turn that is based not on clubs but on sports schools. The process of a fundamental switch to a club system is under discussion now at the governmental level. For now, though, speaking generally, children can't get enough support from sports schools. First, there are not appropriate conditions at the limited number of stadiums in Ukraine. Second there is not enough modern equipment throughout the nation. And, last but not least, sometimes it is difficult to find a good coach. So, parents give their child to athletics because they don't need to pay for the training. In Poland, by contrast, there are good clubs with great facilities and good coaches – everything a talented child might not just need but want.

In order to develop talent, this talent should be found. For this purpose, Poland has a deliberate system, indeed special talent identification programs (detailed in the first section of this chapter). There is no system in Ukraine of talent identification. The Ukraine 'system' is based on luck and chance.

Of course, in both countries, athletes need the support of family and friends in their sport pathway. But this is so individually. And every family has its priority. Across the board, interviewees said they were supported by their parents, and financially as well.

In both countries, it proved difficult during middle and high school to combine sport and education. But flexible and individual schedules were available during the university years.

Moving back to the infrastructure and logistics issues:

Poland has invested in modern stadiums and other sports facilities. Access is free for members of national team. Ukraine does not have the same sort of sports infrastructure nor does it afford access to what it has, even for members of national team. The athletics federation is consistently negotiating for such access with the owners of gyms and other locales.

The athletics federation of Poland supports its national team with significant medical and scientific resource. The Ukrainian federation's service in comparison is exceedingly limited.

All of this, of course, can in some sense be related to financial support.

The government of Poland, while remaining the federation's prime underwriter, nonetheless pushes many companies to invest money in the sport. Thus track and field in Poland has great attention from sponsors. Ukrainian track and field doesn't attract much interest from sponsors or investors.

Finally, the Ukrainian athletics federation has a transparent finance system through which its budget is released based on points that athlete could earn during the season.

What does this mean in practice? He or she – along with the coach – go to an international training camp if it's affordable. In Poland, the coach of national team sets out the number of international training camps – and the federation follows this plan.

Summary. This chapter explored the environment influences on the talent development systems in Poland and Ukraine.

## **Chapter 5. Discussion**

It is relevant to discuss the study outcomes suggested by the observations of the coaches, sport managers and athletes of the talent development environment factors surrounding the talent development systems in Poland and Ukraine.

Compared to Ukraine, Poland is smaller in territory and population. But Poland is a developed country. Ukraine – developing. So when it comes to a signature event in world sport, athletics, it cannot be surprising that the annual budget of the respective track and field federations is totally different – Poland’s more than four times larger. It is quite difficult for Ukraine to compete for a top-10 position in international competitions when the differences in government investments are almost six times smaller. But, theoretically, the talent pool should be better in Ukraine because, again, it has a population base. Ukraine has potential in the sport if all systems will be orchestrated.

However, the convergence of modern Poland and Ukraine looks deeply favorable. Due to low prices, in modern Ukraine, Polish citizens are actively buying land, houses, apartments, opening a business. In Poland, in turn, thousands of Ukrainians find the opportunity to work, receiving a much better standard of living and higher wages than in Ukraine itself. Tourism is developing - citizens of all developed countries have been traveling freely to Ukraine for a long time, and Ukraine received a visa-free entry to Schengen in 2017 (Poland and USSR , 2019).

Track and field in both countries are developed. Some 15 to 20 years ago, Ukraine would not even have considered Poles as a rivalry in athletics (see Tables 5 and 6). Since 2005 in particular, Polish athletes have started to get top 10 at IAAF World

Championships while Ukrainian athletes have seen a tendency to decrease the level of performances. How is it that countries with similar histories and traditions, even a lot of similarities in languages, perform differently can perform so differently? One sees the performance trend demonstrably and provably rising, while the other similarly can hardly maintain stability in performance and, indeed, wins medals – when it does – by chance or luck? For that second nation: it doesn't look like a system – because a system works and produces champions from the youngest ages to the senior level.

**Table 5**  
*Polish Placing at IAAF World Championships 1993-2019 (IAAF, 2019)*

<b>Year</b>	<b>Host City</b>	<b>Ranking</b>	<b>Gold</b>	<b>Silver</b>	<b>Bronze</b>	<b>Medals</b>
<b>1993</b>	Stuttgart	22	-	1	-	1
<b>1995</b>	Gothenburg	20	-	-	2	2
<b>1997</b>	Athens	13	1	2	1	4
<b>1999</b>	Seville	18	1	-	-	1
<b>2001</b>	Edmonton	10	2	-	3	5
<b>2003</b>	Paris	17	1	-	-	1
<b>2005</b>	Helsinki	10	-	2	-	2
<b>2007</b>	Osaka	9	-	-	3	3
<b>2009</b>	Berlin	8	2	4	3	9
<b>2011</b>	Daegu	11	1	-	1	2
<b>2013</b>	Moscow	10	2	1	-	3
<b>2015</b>	Beijing	8	3	1	4	8
<b>2017</b>	London	4	2	2	4	8
<b>2019</b>	Doha	8	1	2	3	6

**Table 6***Ukrainian Placing at IAAF World Championships 1993-2019 (IAAF, 2019)*

<b>Year</b>	<b>Host City</b>	<b>Ranking</b>	<b>Gold</b>	<b>Silver</b>	<b>Bronze</b>	<b>Medals</b>
<b>1993</b>	Stuttgart	13	1	1	2	4
<b>1995</b>	Gothenburg	11	2	-	1	3
<b>1997</b>	Athens	6	2	4	1	7
<b>1999</b>	Seville	12	1	1	2	4
<b>2001</b>	Edmonton	17	1	1	1	3
<b>2003</b>	Paris	10	-	-	3	3
<b>2005</b>	Helsinki	14	1	-	-	1
<b>2007</b>	Osaka	13	-	2	-	2
<b>2009</b>	Berlin	14	-	-	1	1
<b>2011</b>	Daegu	14	1	-	1	2
<b>2013</b>	Moscow	9	2	-	2	4
<b>2015</b>	Beijing	13	-	1	1	2
<b>2017</b>	London	29	-	1	-	1
<b>2019</b>	Doha	10	-	2	-	2

It's not only the economic stability of a country that affects the development of a sport, in this instance track and field. A wide range of other factors can play a huge influence, including cultural and personal values, beliefs of a nation, a common mentality, a striving and willingness to win, all of which can come together to create an effective environment for athletes.

Based on research findings, Polish society's values are focused significantly on a community-based environment, wherein Ukraine it is more about an individually-based relationship. Community unites sport, makes it be as a one, and create a supportive environment for developing talent.

Obviously there are a large number of factors influencing youngsters as they develop within their sporting careers and lives, including the aims and practices of talent identification and development, the coaching process, funding, resources, evaluation, and coach reward, competition, and club structure (Martindale Russell, 2005). In fact, recent research into the development of Olympic champions (Gould, 2002) has shown the wide range of long-term individual and institutional influences that may significantly influence development and that can reach far beyond the sporting context. The development will not occur unless the talent is valued by society and recognized and nurtured by parents, teachers, coaches and others.

The next section of this chapter highlights the key points of differences in sports systems between Poland and Ukraine and suggest good practice to implement into the Ukrainian talent development system.

### **5.1. Implications**

One of the objectives of this study is to provide recommendations for the Ukrainian government for the development of talent identification and a development environment system to increase future success at the highest levels of international competition.

This section provides such recommendations based on the suggestions and perspectives of sports managers, coaches and athletes.

### 1) Reform sports schools system

There should be a dynamic discussion among government and other influencers about whether the current model in Ukraine, which starts with and then features grassroots involvement at the level of the schools, should over the next series of years transition to a model that relies more intently — as is the case in Poland — on clubs. The full scope of such a transition is beyond this study; indeed, it is almost surely a white paper unto itself. However, it is immediately clear that in the liquidation of many unnecessary structures, in particular those between sports schools and the national team, such a transition would seem to offer promising cost savings and thus a renewed financial horizon for athletics in Ukraine.

### 2) Increase governmental investments into sports infrastructure

It is well known that athletic success, particularly at the world championships and the Olympic Games, is a means toward effecting soft power. China has executed this brilliantly, for instance. Poland has made itself an important player in athletics -- a top-10 medals winner -- and that has enhanced its reputation everywhere in the world. Ukraine can, and should, do the same. This should encourage policymakers at the most senior levels of government to review the Polish experience and seriously consider a robust investment in Ukraine in athletics infrastructure.

### 3) Increase salary for coaches.

Why should a coach in Ukraine who produces an international champion be paid more or less the same as a coach who works with 12-year-olds? To the former, what is the incentive? Success breeds success. This is proven by the way in Poland. Accordingly,

coaches in Ukraine should be paid for the success of their athletes, particularly for success at major championships such as the European Championships, World Championships, and Olympic Games. For the coaches, as in Poland, success ought to bring more money.

- 4) Revise the transparency system of distribution of money for athletes.

The current system of funds distribution is based on the international performances of athletes. But if someone did not have an opportunity to compete internationally, then what? This athlete will not have money to go to training camps during next year (only if other organizations can give support). This can be a circle, and there is a big chance to lose this athlete.

- 5) The government should seek sponsorship to invest in sport.

To help defray costs in the track and field landscape, the government might well want to consider the Polish model and enlist the help of Ukrainian corporate entities for sponsorship support. This would seem to be a common-sense solution.

## **5.2. Limitation of the study**

A limitation can be considered a condition that was not expected at the beginning of the current study. The original plan called for 3 participants for interviews per category (coaches, sports managers, athletes). The main aim for all athletes and their coaches was to perform successfully at the IAAF World Championship, where the research took place. It turned out that reaching athletes proved challenging. Also, with the Polish team, it was a problem finding athletes who could speak English. So, interviews with athletes were taken as broadly as possible in order to cover all research questions.

### **5.3. Conclusions**

Ukraine is one of the largest countries in Europe, with a great supply of resources, both natural and human. For years, Ukrainian athletes have been occupying leading positions in sport, both on the track, and in its governance. Unfortunately, in connection with the difficult economic situation in the country, Ukrainian sporting achievements are deteriorating every year, since the government cannot invest enough in sports in general, and in the talent development system in particular.

With the passage of a new government and a creative and ambitious president, it is hoped that all new ideas and initiatives will be accepted for consideration, and the results of this study will bring a practical application, and new programs and systems will be developed and implemented in the sports environment. To do this, it is necessary to acknowledge and learn from the past, and also to take an example from a country such as Poland, which rebuilt the old system and become one of the leading nations in world athletics.

### **5.4. Recommendations for the future research**

For future researchers, for a deeper understanding of the talent development environment system, it is recommended to expand the number of interviewees and increase the categories of participants, such as young athletes, coaches who work with young athletes, PE teachers, family, friends. This surely will give a broader insight from views of different range of stakeholders of the talent development system.

In the future, to continue to explore the Ukrainian athletics national team, we need to do similar research with using the same theoretical framework for all regional federations. It will give an understanding of the system from the bottom to the top.

Finally, in future research, an observation of the training processes of the team should be included. It will help to observe from within the team that process and environment.

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## Appendix I: Cover letter

### AN INVESTIGATION INTO TALENT DEVELOPMENT ENVIRONMENT SYSTEMS IN POLAND AND UKRAINE: A CASE STUDY OF TRACK AND FIELD

Dear participant,

Thank you for participating in my study.

My name is Olha Zavhorodnya, and I am from Ukraine. I am a former track and field athlete, a member of the Ukrainian national team (2005-2016), two-times World Universiade champion in 2007, 2011 (400m relays, 800 m), finalist of IAAF Athletics World Championship in 2011 (400 relays).

Currently, I am a master's degree student in a specialized sports management program at Seoul National University; the program, now in its sixth year, is recognized worldwide for the quality of its classes, professors and, if I may, its students, who come from around the world.

For my master's thesis, I am working on an analysis of talent development environment systems in track and field between developed countries and Ukraine particularly. One of the main purposes of this study is to identify certain systems applied in developed countries so that they might be adapted for use in Ukraine.

Your reply will provide valuable information for further exploration of the issues identified in the talent development system and the pursuit of international sports success.

For any further information and details relating to this project, please do not hesitate to reach me out at [olhazavhorodnya@gmail.com](mailto:olhazavhorodnya@gmail.com) or my adviser, Professor Lee Chung Gun, at [cgl81@snu.ac.kr](mailto:cgl81@snu.ac.kr). My WhatsApp is +82 9557-2888.

Thank you so much in advance for your attention and courtesy.

Sincerely, Olha Zavhorodnya



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## Appendix II: Questionnaire

### Introductory part

What is your nationality \_\_\_\_\_

What is your gender \_\_\_\_\_ What is your age \_\_\_\_\_

Please tick your highest level of education: No school qualification \_\_\_\_\_

High School graduate \_\_\_\_\_ University graduate \_\_\_\_\_ Post-grad degree \_\_\_\_\_

Please tick: Coach \_\_\_\_\_ Athlete \_\_\_\_\_ Manager/Administrator \_\_\_\_\_

How many previous IAAF World Championships have you participated in (or your athletes)? \_\_\_\_\_

How long have you been on the national team \_\_\_\_\_

Best performance at IAAF World Championships \_\_\_\_\_

IQ 1: Do you have an existing system provided by your government/institutions for identifying talented 400/800 m runner in your country? Who is the main stakeholders and their role in identification of talented 400/800 m runners?

- a) School-level detection;
- b) Sport school level detection;
- c) A national standard test battery;
- d) A club level test battery;
- e) Other (please describe)

IQ 2: How NGBs select talented 400/800 m runners to the talent group and the national team? Why in this way?

IQ 3: Depending on your position at the national team (e.g., coach, athlete, manager/administrator), what is the detailed procedure that you follow to identify talented 400/800 m runners youth?

- a) How do you identify talent?
- b) At what age typically is talent identify?
- c) Who brings talented athletes to track and field?
- d) How do you approach/convince the kid to bring him/her to your team? Why do you use this method? Which method do you think is the most effective one?

IQ 4: What would you suggest for the improvement of the talent identification and selection systems of talented 400/800 m runners in your country (governmental, federation and personal level)?

**Descriptive part**

IQ 5: How much track and field is famous in your country? What does the government do for the popularization of track and field and track athletes?

- a) Role of mass media;
- b) Role of sponsors and charity organizations in the promotion of talented youth

IQ 6: How social interactions with peers and adults affect talent identification and development? What kind of support do talented children get from each society? Who are the main stakeholders and their role in development of talented 400/800 m runners?

IQ 7: What kind of support programs does the government (or federation) provide to talented athletes at the talent development stage (seminars, psychologist, nutritionist, anti-doping seminars, etc.)? How should athletes educate themselves to reach adult sport? Why is this important?

### **Explanatory part**

IQ 8: What kind of governmental support services do NGBs have to develop an effective system for developing talents in track and field? How does the federation support talented youth? Answer each of the following points:

- a) Training, competition and accommodation facility and access to them;
- b) Running sport centers;
- c) National training and support programs for athletes, coaches and administrators;
- d) Financial support and reward for athletes, coaches and administrators;
- e) National/international training camps for talented pools; (group meetings;
- f) Medical/paramedical support and lifestyle support, insurance;
- g) Science and technology support;
- h) Others

IQ 9: What type of support does the government (or federation) provide, if any, so that talented athletes don't have to choose between training and education?

- a) During secondary education;
- b) During higher education;
- c) Special schools for talented athletes;
- d) Others

IQ 10: What support programs for talented track and field athletes function in your country? Have you ever been a part of this program?

- a) IAAF kid's program or similar initiative;
- b) Are athletics programs for children popular in your country?
- c) What do you know about the effectiveness of these programs?
- d) none

**Conclusive part**

IQ 11: How effective do you think the current track and field talent development system is in your country?

IQ 12: If the government did not support talented athletes during their initial stage, would it be possible for them to remain in the sport and reach the international level as adults?

IQ 13: Could you describe the ideal talent development pathway for young athletes in track and field?

## 국문초록

# 폴란드와 우크라이나의 토틀런트 육성 환경 시스템에 관한 조사: 육상 종목 사례 연구

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체육교육과 글로벌스포츠매니지먼트 전공

스포츠에서 토틀런트 발굴과 육성은 국제적인 성공을 성취하는데 필수적인 단계 중 하나이다. 토틀런트가 발굴되면 그에 관한 모든 지원이 이루어지고, 토틀런트 육성과 시니어 엘리트 수준으로의 전환을 위한 환경이 마련되어야 한다. 이 과정이 없이는 엘리트 스포츠도 없을 것이기에 이는 매우 중요한 과정이며, 정부 수준에서 반드시 고려해야만 한다.

이 연구는 폴란드와 우크라이나의 국가대표 선수들의 토틀런트 육성 환경 시스템에 관한 정교한 분석을 바탕으로 이루어졌으며, 두 국가 간에 상대적 격차가 벌어지는 이유를 정리하고자 수행되었다.

이 연구에서는 자료 분석을 위해 질적 연구 방법이 사용되었다. 자료 수집을 위해 도하 IAAF 월드 챔피언십 기간 동안 폴란드와 우크라이나 국가 대표

선수들에게 인터뷰를 수행하였다. 데이터 분석을 위해서는 전체생태학적 접근법을 적용하였으며, 이는 두 가지 모형(선수 talento 육성 환경 모형 및 환경 성공 요인 모형)을 포함한다. 선수 talento 육성 환경 모형은 폴란드와 우크라이나 선수들의 talento 발굴과 육성 환경 시스템의 주요 구성요소로서 역할과 기능을 분석하는데 사용되었다. 환경 성공 요인 모형은 두 국가의 talento 육성 시스템에 대한 환경적 영향을 분석하는데 사용되었다. 이러한 분석들을 바탕으로 비교표를 개발하였으며, 각 국가의 코치, 스포츠 매니저, 선수들이 가진 의견들의 주요 차이점을 확인하였다. 마지막으로, 우크라이나 정부에 대하여 향후 최고 수준의 국제 대회에서의 성공을 증대시키기 위하여 talento 육성 환경 시스템 개선에 필요한 제안 사항들을 제시하였다.

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**주요어:** talento, talento 발굴, talento 육성, talento 육성 환경, 스포츠 성공.

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