Innovative Tools of Sports Infrastructure Management: Overview of International Experience

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ABSTRACT

In the framework of the popularization of mass sport activities and a healthy lifestyle the necessity and importance of developing a sport infrastructure is intensifying. In this paper, the best international tools and world experiences of sport management, investment and funding to the sport industry are studied. In the framework of research, legislative acts and normative legal documents of the sport industry of foreign governments and advanced countries are also analyzed. In this research, an analysis, summary and proposed revisions to the successful tools of sports infrastructure development are also provided, particularly with regard to public-private partnership incentive systems. Based on this research, an innovative model of management and innovative investment tools for sports infrastructure in Kazakhstan based on the international experiences and best tools of sport management is proposed. The proposed model is innovative because it was created on the basis of more advanced methods, approaches and advanced mechanisms for managing sports infrastructure, implemented in the leading countries of the world. The innovativeness of the sports infrastructure management mechanisms are aimed at attracting and expanding investments in the sports industry and obtaining a material result from those investment. Recommendations on developing of a public-private partnership in the sport industry that it possible to use in the developing process of mass sport at Kazakhstan and optimization of sport management.

Key words: mass sport, sports infrastructure, sport management, innovative tools, tax preferences, budget allocations.

Introduction

Today, physical culture and sports have become an integral part of the life of a modern person. Along with financial well-being, an active lifestyle is one of the key indicators of the quality and duration of human life, which is an important aspect of the well-being of the population. Undoubtedly, sport makes a significant contribution to many aspects of society, including health, social well-being, economic livelihoods, and lifelong learning. Physical activity and sports, and especially elite sports, can be the most important basis for the formation of patriotic self-consciousness and national identity. In this framework, the branch of physical culture and sports in Kazakhstan is becoming one of the promising platforms that contribute to the consolidation of Kazakhstani society regardless of age and social status, as well as an important basis for the socio-economic development of the state (Adilet.kz, 2015).

In recent years, there has been a steady interest in the population of an active lifestyle and sports in Kazakhstan. This may be due to the implementation of sectoral and state programs in the field of physical culture and sports, as well as the desire of the state to improve the quality of life of Kazakhstanis. The state policy in the field of physical culture and sports is aimed at finding and applying the optimal mechanisms for the development of mass sports and elite sports (Adilet.kz, 2020). The priority task for the industry is to increase the share of the population actively involved
in physical culture and sports from the current 35% to 50% by 2025 (The Prime Minister of the Republic of Kazakhstan, 2022).

In the meantime, the result of the effective development of mass sports, as a rule, is high achievements in international competitions and the Olympic Games. The Kazakhstan sphere of sports has always been aimed at increasing the professionalism and skill of its athletes (Internet portal of the CIS, 2019). In this context, the construction of modern sports facilities serves as a powerful impetus for the development of the sports industry and the improvement of sports achievements.

Thus, the renewal of the sports infrastructure in the city of Almaty allowed Kazakhstan to qualify for the Winter Olympic Games 2022 (Zakon.kz, 2020). Such measures, however, should be carried out in all regions of Kazakhstan, since the lack of accessible sports facilities with appropriate equipment and inventory is observed throughout the country. In this regard, the state faces the task of improving the sports infrastructure, including the introduction of modern digital technologies. This measure also necessitates the study of international experience in the management of sports infrastructure.

Methodology

In the article, the authors used both qualitative and quantitative scientific methods, including comparative analysis and synthesis, system analysis and content analysis, case studies, thematic analysis, and the deductive method to determine approaches to the management and development of sports infrastructure in foreign countries.

By means of a comparative analysis and a case method, domestic and foreign experience in the development and management of sports infrastructure were analyzed. The importance of such an analysis lies in the fact that a case study allows the problem under study to be considered in terms of real events and objective facts. In addition, the use of a thematic approach provides a basis for identifying significant differences between government policies and approaches in sports infrastructure issues. Purposeful sampling is used to determine the specific subjects of the case study.

For the analysis of legislative acts and normative legal documents, the methods of systems analysis and content analysis were used. To generalize and analyze foreign experience and best international practices, the deductive method was used to develop recommendations for determining the mechanisms for managing and developing sports infrastructure.

Physical culture and health and sports facilities are an important tool for maintaining health and improving the quality of the life of the population. Physical culture and health and sports facilities in Kazakhstan are understood as a set of specially equipped (including sports equipment) facilities (grounds, buildings, structures) intended for physical exercise, sports and sporting events (Zakon.kz, 2014). According to Art. 51 of the Law of the Republic of Kazakhstan "On physical culture and sports," all types of sports and recreational and sports facilities are social infrastructure facilities and may be in state and (or) private ownership.

Meanwhile, the effectiveness of sports infrastructure depends on the effectiveness of the functioning of sports and recreation and sports facilities. In this context, the mechanisms for managing sports infrastructure are of decisive importance (Figure 1).
Thus, in the Republic of Kazakhstan, the main role in the management of sports infrastructure is the activity of the state. Powers to manage the sports sector are distributed between central and local self-government bodies. According to Art. 7 of the Law of the Republic of Kazakhstan "On Physical Culture and Sports" dated July 3, 2014 No. 228-V, the authorized body in the field of physical culture and sports approves the list of types of physical culture and sports organizations, the rules for the provision of paid sports services, the distribution of extra-budgetary funds, the placement of the state sports order, as well as per capita financing of sports sections for children and youth. The authorized body also maintains the state register of health and fitness and sports facilities (Zakon.kz, 2014).

**Figure 1: Sports Infrastructure Management Mechanisms in Kazakhstan**

![Sports infrastructure management mechanisms in Kazakhstan](source:Zakon.kz, 2014. Figure designed by the Author)

Local executive bodies, in turn, create the proper infrastructure for sports, including taking into account their accessibility for people with limited mobility, at the place of residence and in places of mass recreation; coordinate the use of health and fitness and sports facilities, exercise state control over the safe operation of sports equipment, etc. (Article 8 of the Law of the Republic of Kazakhstan “On Physical Culture and Sports”) (Zakon.kz, 2014).
### Table 1: Mechanisms of Legal Regulation of Public Relations in Physical Culture and Sports

<table>
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<tr>
<th>No.</th>
<th>Name of the Program</th>
<th>Goal and Main Results of the Program</th>
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Results:  
- the number of those actively involved in physical culture and sports in the country amounted to 24.1%,  
- the number of mass physical culture and health-improving events has increased,  
- the practice of holding industry sports days, including among schoolchildren and student competitions, has been revived. |
| 2   | The State Program for the Development of Physical Culture and Sports in the Republic of Kazakhstan for 2001-2005 (approved by Decree of the President of the Republic of Kazakhstan March 12, 2001 N 570). | Goals: the differentiated approach to the organization of physical education of the population of various age groups, including the disabled.  
Results:  
- For the first time, the tasks of introducing presidential tests of physical fitness of the population were implemented. |
- popularization of conscious physical culture and sports for the general population,  
- development of sports infrastructure, training of a high-quality composition of international-class athletes.  
Results:  
- there is a steady upward trend in the number of those involved in physical culture and sports;  
- holding various sports and athletics events, tournaments in sports, mass races,  
- holding monthly Presidential tests, each of which is attended by more than 2 million people. |
| 4   | The Sectoral Program for the Development of Physical Culture and Sports in the Republic of Kazakhstan for 2011–2015 | Goals:  
- increase in the coverage of citizens involved in physical culture and sports from 17.4% in 2010 to 26% in 2015, and children and adolescents from 9.5% in 2010 to 12.6% in 2015,  
- further development of sports infrastructure,  
- improvement of the system of training the personnel potential.  
Results:  
- the proportion of the population involved in physical culture and sports has increased (up to 25.1%);  
- the network of sports facilities increased to 34.9 thousand units;  
- the network of institutions of additional education has increased. |
| 5   | The Concept of Development of Physical Culture and Sports of the Republic of Kazakhstan until 2025. | Goals:  
- activation of leisure-oriented sports life population,  
- improving methods of working with children and Youth.  
Results:  
- increase in the share of the population involved in physical culture and sports up to 35%. |
- promoting a healthy lifestyle, expanding sports networks and holding sports events.  
Results:  
- a mechanism for per capita normative financing of the state creative order was introduced;  
- implementation of state creative and sports orders;  
- in 2021, 37.5% of children and adolescents (1.5 million people) were covered by sports sections;  
- 162 thousand children were covered by free sections. |

Nevertheless, the issue of infrastructural support for the sports industry is not easy since, compared with developed countries, the mechanisms of public-private partnership in Kazakhstan are not sufficiently developed. The influence of the state in this area is reflected not only in the amount of allocated public funds, but also in the mechanisms of legal regulation of public relations in the field of physical culture and sports. The dynamism of management measures in this industry can be judged by the list of adopted state programs and strategic documents of Kazakhstan (Table 1).

For example, in recent years, an important indicator for the sports infrastructure in Kazakhstan has been the adoption and implementation of the Concept for the Development of Physical Culture and Sports of the Republic of Kazakhstan until 2025, approved by Decree of the President of the Republic of Kazakhstan dated January 11, 2016 No. 168 (Zakon.kz, 2016). Thus, by the time the first stage of the implementation of this concept was completed (2016–2020), amendments were adopted to the Law of the Republic of Kazakhstan “On amendments and additions to certain legislative acts of the Republic of Kazakhstan on issues of culture, physical culture and sports,” providing for the development of mass sports with the provision accessible sports facilities.

In order to expand the access of children and adolescents to free sports facilities and their services, per capita financing mechanisms have been introduced at the legislative level through the implementation of the state sports order. The methodology for per capita regulatory financing of the state sports order defines a unified approach when calculating the per capita standard for financing the state sports order (order of the MCS RK dated April 27, 2021 No. 119) (Zakon.kz, 2021). As a result, today more than 162,000 children and adolescents aged 4 to 17 attend sports clubs for free (Nomad.su, 2022).

In addition, the construction and reconstruction of sports facilities is carried out through the efforts of the state. So, in 2019, 24 new sports and recreation complexes (FOCs) were put into operation and, in 2020, 35 sports centers were added. The construction of these facilities is carried out at the expense of local budgetary funds, non-budgetary funds, as well as within the framework of the republican programs "The village is the cradle of the country" [Ауыл ел бесігі] and "Employment Roadmap" (Inbusiness.kz, 2021). Further development of sports infrastructure is also provided for by the Comprehensive Plan for the Development of Physical Culture and Mass Sports for 2020-2025, approved by the Decree of the Government of the Republic of Kazakhstan dated April 23, 2020 No. 242, which also provides for the norms for providing sports facilities with sports equipment and equipment (Adilet.kz, 2020).

In general, sports infrastructure in the republic in 2021 is represented by more than 42 thousand sports facilities, of which about 23 thousand units are located in rural regions. According to the Ministry of Culture and Sports, a special plan for the development of sports infrastructure until 2025 has been submitted to the Government of the Republic of Kazakhstan, including 140 projects. Of these, 113 are for the construction of new sports facilities, 21 involve the reconstruction of existing ones, and 6 are for the retrofitting of sports facilities (Kazpravda.kz, 2022). Throughout the country, on average, about 35% of the country's population is involved in sports. The highest rates are observed in the Mangistau, Atyrau and Akmola regions, and the lowest in the cities of republican significance: Astana, Almaty and Shymkent. As previously mentioned, thanks to the measures taken by the state, including through policy documents as tools for the development of sports infrastructure (Table 1), it is expected that the number of people actively involved in physical culture and sports will increase by 2025 to 50% of the total population (The Prime Minister of the Republic of Kazakhstan, 2022).
Meanwhile, in many countries of the world, the same serious attention is paid to the development of sports infrastructure. In particular, scientists and practitioners focus on various models of sports management and sports infrastructure. When describing sports management models, researchers first of all indicate the parameters on the basis of which this or that management model is built. For example, according to British studies (Henry, 2009), based on the degree of participation of sports subjects in political decision-making in the field of sports, there is a European classification of sports management models in the countries of the European Union (Table 2).

However, in foreign practice, along with the active role of the state, the role of private investment in the development of the sports industry is also obvious (Henry, 2009). For example, to attract potential investors in the development of sports infrastructure, the Irish government provides a number of mechanisms to support sports projects (Didi et al., 2021). There are several mechanisms to manage a sport infrastructure, which are listed below.

1) **National Sports Infrastructure Fund:** It allocates funds for the construction of large-scale sports facilities and facilities. Priority is given to projects in the field of mass sports, including sports such as swimming, cycling and running. According to the Department of Transport, Tourism and Sports, since the announcement of the first allocations, between 2020 and 2022, about 86.4 million euros have been allocated to 33 large private projects in this industry (Department of Transport, Tourism and Sports, 2018; Sport Ireland, 2019).

2) **Sports Capital and Equipment Program:** It provides grants for the construction and renovation of sports facilities, as well as for the purchase of sports equipment. The program budget is partly covered by income from the National Lottery (Oireachtas.ie, 2022). Since the implementation of the program, about 400 million euros have been allocated to the sports infrastructure. The trend is shown in Figure 2 (Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media, Ireland, 2020).

### Table 2: Classification of Sphere Control Models Physical Culture and Sports

<table>
<thead>
<tr>
<th>Management Model</th>
<th>Parameters</th>
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<tbody>
<tr>
<td><strong>1. Bureaucratic model</strong> that demonstrates a high degree of state participation in decision-making in the field of sports</td>
<td>The role of public authorities (states represented by Ministry or Department responsible for sports)</td>
</tr>
<tr>
<td><strong>2. Entrepreneurial model</strong> showing a high level of involvement of market mechanisms in sports policy through the direct provision of services or trust management of state property</td>
<td>Level of participation of various actors involved in the sports industry</td>
</tr>
<tr>
<td><strong>3. Missionary model,</strong> which is characterized by the predominance of volunteer sports movements with great autonomy in decision-making</td>
<td>The role of the voluntary (volunteer), public and private sectors in the provision of sports services</td>
</tr>
<tr>
<td><strong>4. Social model</strong> with the predominance of civil society in decision-making</td>
<td>Adaptability of the system to demand volatility</td>
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*Source:* Henry, 2009. Table created by the Author.

Meanwhile, Ireland’s sports policy is characterized by a more pluralistic approach. National sports governing bodies, local sports private partnerships, as well as various representative sports organizations are actively involved in the sports industry (Sinnfein.ie, 2021). Thus, the national sports governing bodies are at the heart of Irish sport and play an important role in achieving the strategic and operational objectives of the industry. They also train professional coaches, officials and administrators in the sport, and coordinate amateur and representative sports (Figure 3).
Local sports private partnerships play an equally important role, with support for sports clubs, professional coaches and volunteers being a key priority. Representative sports organizations include the Federation of Irish Sports, the Olympic Council of Ireland, the Paralympic Committee of Ireland, etc., which make their contribution to state sports industry (Sinnfein.ie, 2021).

In turn, since 2016, the Chinese government has taken active measures to develop mass sports. In particular, a special state plan was approved, work to promote a healthy lifestyle was intensified, and the volume of major sporting events was also increased. A vivid confirmation of this is the holding of the Summer and Winter Olympic and Paralympic Games in Beijing this year.

Sports infrastructure is mainly developed at the regional level. According to the State General Administration of Sports of China, between 2003 and 2013, more than 1.6 million sports
facilities were built in the country's provinces, including 1,093 major sports arenas and stadiums. The costs for the construction of sports facilities were mainly covered by local budgets (Ruchina.org, 2020).

The public-private partnership (PPP) is also widely developed in China's sports industry. In particular, special tax preferences and benefits are provided for investors in the field of sports. In addition, the development of the sports business is an important priority. For these purposes, in 2019, a special plan was approved to support the sports business under which talented managers from the private sector are attracted to leadership positions in reputable sports associations. It also provides for the delegation of mass sports events to high-class commercial operators (He and Yu, 2017).

In order to increase the investment attractiveness of the sports sector, the authorities use effective marketing mechanisms that embody the investment potential of the industry. For regions with a shortage of sports facilities, a “regional image” is formed, emphasizing the entrepreneurial context of the area. For example, the Hangzhou Olympic Sports Center, located in the Qiantang River basin, with an area of 400,000 square meters, was presented to investors as a highly promising “City in Bloom” (English.www.gov.cn, 2021). Thus, the sports industry is a strategic tool for achieving larger national goals.

Special government grants and subsidies are also provided for investors involved in the development of sports infrastructure. These measures have a positive impact on the development of the sports industry. Thus, according to the National Ministry of Finance, by 2016, 176 PPP projects were implemented in the field of sports with a total investment of 116.3 billion yuan, which corresponds to about 18.3 billion US dollars (Xue and Mason, 2019). Acquisition by private Beijing company Bloomage International Investments Group Inc. control of a major sports arena for a 30-year period is also a significant example of a PPP in the sports industry (English.www.gov.cn, 2021).

Thus, the Chinese government recognizes the obvious importance of sports infrastructure in improving the health and quality of life of the population. The construction and reconstruction of sports infrastructure is considered one of the key indicators of the competitiveness of regions, which provides for both an increase in the social well-being of the population and the overall rating of a particular region (He and Yu, 2017).

The sports industry in the United States of America is self-sufficient and independent, which is largely a consequence of the ideology of the free market. Instead of traditional ministries or departments, sports in the United States are governed by National Olympic Committees. The activities of the Olympic committees do not receive direct government funding, but they are exempt from taxation in recognition of the social significance of sport (Ministry of Finance, 2016).

At the same time, the existing sports management bodies are highly specialized and are organized around four dominant subsectors as: professional sports, student and interscholastic sports, Olympic and Paralympic sports, and mass sports (Sauer, 2008) (Figure 4).

Despite such a division, the state still participates in the financing of sports. Thus, authorities at various levels allocate huge funds for the development of school and university sports, as well as for the construction and reconstruction of professional sports facilities. Local municipalities also finance the operation of city parks with sports grounds and equipment. Types of sports facilities are distinguished as: 1) open to the public, 2) intended for professional athletes.
Thus, small sports courts at municipal parks are financed from local budgets and are intended for public use. Sports facilities for professional sports have certain regulations, where athletes involved in them pay for the use of sports equipment and premises, and spectators of sports games pay for entrance to the facility and for the use of parking lots. Due to the fact that the construction of large sports facilities is financed by the state, such facilities are considered state-owned (Pitts and Zhang, 2020).

It should be noted that the fundamental principle of most sports programs is the creation of infrastructure for the development of professional sports. In this regard, in the process of promoting sports in the United States, the main emphasis is on the development of athletes, coaches, sports clubs and sports facilities.

At the same time, the main providers of mass sports are local authorities, national youth organizations, sports associations, private clubs, non-profit organizations, as well as educational institutions (Figure 5). For example, national youth organizations such as YMCA, YWCA, Boys & Girls Clubs of America, Scouts and Guides, etc., having their own sports facilities and clubs, are actively involved in the popularization of mass sports. The main attention is paid to the development of inclusive sports programs with a focus on the development of individual social skills (Infrastructureusa.org, 2016).

It should also be emphasized that sports leagues such as Major League Baseball, the National Football League, the National Basketball Association and the National Hockey League act as monopolists in the sports industry of the US regions (Slack and Parent, 2008; Mason, 2016).

In this connection, initiatives for the construction of additional sports facilities require mandatory coordination with the owners of sports leagues. However, legal control over local sports venues remains with the authorities, which also includes the removal of fees for the use of sports

**Figure 4: Existing Governing Bodies for Sports In Ireland**

![Diagram showing existing governing bodies for sports in Ireland.](image)

*Source: Sauer, 2008. Figure designed by the Author*
infrastructure. The authorities also provide assistance in holding team competitions, including in terms of ensuring security (Sauer, 2008).

**Figure 5: The Main Providers of Grassroots Sports in the USA**

![Diagram of the Main Providers of Grassroots Sports in the USA]

*Source: Infrastructureusa.org, 2016. Figure designed by the Author*

**Discussion**

As a result of an international review of the mechanisms and management for the development of sports infrastructure, the importance and value of sports facilities in the development of mass sports has been confirmed. As the international experience of China, Ireland and the United States in government politics and economics shows, due to the limited state resources, the sports industry cannot be controlled by the state apparatus alone.

The development of the sport industry requires the involvement of all stakeholders, including in terms of sharing the costs of maintaining the sports infrastructure and the athletes themselves. Also, it is important not to lose sight of the key role of sport in the formation of patriotic self-consciousness and the national identity of the state.

As can be seen from the case studies of developed countries, the introduction of tax preferences, budget allocations, and grant funding are the critical and innovative tools in attracting private investment in the sports sector.

The one of the good practice and innovative tools in sport management is the transfer of management of sports facilities to the private sector increases the functionality and performance of sports facilities, which affects the degree of their payback.
As a result, the sports infrastructure is the basis not only for mass sports, but also for the image of the sports industry, including regions with developed infrastructure. The Chinese experience embodies the effective transformation of sports facilities into an image product of the region. A vivid example of this is the Hangzhou Olympic Sports Center, positioned as the "City in Bloom" (English.www.gov.cn, 2021). This is another best innovative tool of the management for sport industry in the government policy.

**Figure 6. Proposed model of sports infrastructure development innovative mechanisms**

![Diagram of proposed model of sports infrastructure development innovative mechanisms](source)

*Source:* Figure designed by the Author based on literature analysis and review.

This research was designed to analyze the best innovative mechanisms and to propose an innovative model of sports facilities management mechanisms compiled on the basis of an international review and analysis of the best world practices. The designed and proposed innovative model is shown below, in Figure 6.

The proposed sports industry management model is innovative due to the fact that it is implemented on more advanced methods and advanced mechanisms for managing the sports infrastructure of the leading countries of the world. This understanding follows from the follow definition of innovation: “Innovation is the basis for the creation of new goods, services, new products based on improved knowledge, a new organization of labor and production, and better management methods (Baldin et al, 2010).

The contribution of this work lies in the use of the best international practices in the management of sports infrastructure, the adaptation of innovative mechanisms and tools for the development of mass sport.
Conclusion

This study was intended to study and analyze the international experience of advanced countries and the current state of the state management of sports infrastructure in order to develop an innovative model of state management of the sports industry in Kazakhstan.

The international review was designed the generate an innovative model that includes advanced and innovative tools for sport management.

The innovativeness of the tools was proven by the results of world practice and advanced experiences as well as the integration of different mechanisms and approaches in the management and financing to the sport.

The international experiences show a high quality of services in the sport development area and in sport industry management, as well as increases in the volume of people becoming engaged in mass and professional sport.

The proposed model is innovative, because it was created on the basis of more advanced methods, approaches and advanced mechanisms for managing sports infrastructure, implemented in the leading countries of the world (Kruchinina and Ulyashina, 2012).

In our study the innovativeness of the sports infrastructure management mechanisms lies in the generalization and proposal of innovations that are aimed at attracting and expanding investments in the sports industry, obtaining a material result from investing. In particular, applying and enhancing state-private partnerships is one of the best tools in this matter.

Taking to account the international overview, these innovative tools can be used to improve sport infrastructure management in Kazakhstan and to make sport management better in the interest of developing mass sport.

The public good served by the innovation under study is the provision of wide accessibility of sports facilities as well as the promotion and development of mass sports.

The proposed tools can improve the effectiveness of business processes of the government for investment, funding, and management area in sport industry of Kazakhstan.

Thus, the sports industry is an important platform for the deployment of various ideas and business projects with an obvious economic and social effect. As the experience of Ireland shows, with proper management, each tenge invested can return an equal or greater amount to the state budget (Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media, Ireland, 2020).

The sports industry in Kazakhstan requires some kind of rethinking by redistributing tasks and delegating certain functions between stakeholders. The use of international approaches can accelerate the development of mass sports, as well as attract the largest number of investors in the construction of sports facilities.

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