# Research on Sports Architecture and Industrial Reconstruction under the Background of Free Trade Port Construction

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Abstract—Through the investigation of the present situation of sports building and industry in the construction of free trade port, the gap between Hainan sports industry and international and domestic sports industry development is obtained through statistical analysis and research. Then through expert argumentation, under the leadership and support of the government, a series of sports buildings and industrial policies suitable for the construction of free trade port are formulated. The long-term construction plan of sports architecture and industry is put forward to make positive contribution to the construction of free trade port.

#### Keywords—sports building, Free trade port, industry

- I. RESEARCH STATUS OF SPORTS ARCHITECTURE AND INDUSTRY AT HOME AND ABROAD
- A. Overview of Foreign Sports Construction Industry Policy Research

In western developed market economy countries, sports has long been an industrial sector, especially since the 1970s, with the economic development of various countries, the scale of sports industry has been gradually expanded, the economic function of sports has been continuously developed, and the sports industry has shown a rapid and international development trend. Sports industry has become an important industry of national economy in many countries, some even become a pillar industry, such as the United States, Italy, Britain and other developed countries. Other developed countries such as France, Germany, Japan and other countries also have a considerable scale of sports industry.

Since the 1990s, some developed countries have put forward the concept of "Gross national sports output Value" because of the increasingly obvious role of sports in promoting economy. The sports industry has become an important economic sector in developed countries and an important part of the national economic system.

In terms of specific sports management system, Japan and South Korea carry out the typical government management of sports management system; The United Kingdom, Australia, New Zealand, Spain and Singapore adopt integrated sports management system; The United States, Italy, Germany, Sweden and Norway adopt the corporate-managed sports management system.

B. Summary of Domestic Sports Construction Industry Policy Research

Under the condition of planned economy, our sports

enterprise adopts the method of sports management by the whole people, which depends on the financial allocation and investment of the state completely. The relationship between sports and economy is manifested as the relationship between sports and finance. Sports is a pure consumption sector (Guofa, 2009). The amount of national financial investment in sports not only affects the speed and structure of sports development and growth, but also indirectly determines the influence of sports growth on economic growth.

With the establishment of the socialist market economy, our country economic base and great changes have taken place in social environment, at present, the industrialization of sports in China is in the midst of the shallow layers of management stage, sports as an economic sector, its size, structure and hierarchy are not mature (Hainan Provincial People's Government), the economic function of sport is far from developed. In recent years, the State General Administration of Sport, the National Development and Reform Commission and the Ministry of Finance have worked out a number of policy opinions on promoting the development of the sports industry through a large number of investigations and studies to gradually improve the situation. But in general, the sports industry level and sports industry policies in our country are not commensurate with national conditions at present (Wang & Zhou, 2009).

Hainan international tourism island construction approval time is short, suitable for the development of Hainan sports architecture industry policy is not an in-depth research, especially poverty rural sports building little, below is a combination of Hainan island a countryside sports venues (see below), so, under the background of Hainan international tourism island construction of sports industry policy research, either in content or point of view, Are basically blank.

#### II. RESEARCH PURPOSE

The construction of Hainan Free Trade Port has been included in the overall plan of national development. Through the investigation, statistical analysis and research on the status quo of sports construction and industry in the construction of Hainan free trade port, the development gap between Hainan sports construction and international and domestic sports construction industry is drawn (Liu, 2005). Then through the expert argumentation, with the support of the government, a series of sports construction industry

policies suitable for the construction of free trade port are formulated. It mainly includes: Hainan sports financial financing policy, Hainan sports tax policy, Hainan sports tourism policy, Hainan sports competition management policy, Hainan sports laws, regulations, policies and so on. The construction plan of sports building and industry is put forward to make positive contribution to the construction of Hainan Free Trade port.



Fig. 1. A sports complex in a village of Hainan Island.

- A. Theoretical Significance of the Topic-Implement the Basic State Policy of Free Trade Port Construction
- 1) Several Opinions on Promoting the Construction and Development of Hainan Free Trade Port issued by The State Council

Under the State Council in the "about promoting the free trade port construction and development of several opinions" of the article 12 clearly put forward "speed up the development of culture and sports and convention and exhibition industry," and put forward for the first time "in Hainan pilot some common international tourist sports entertainment, explore developing quiz type sports lottery and large international events that lottery". It can be seen that the sports industry is an important link in the construction of Hainan international tourism island, and the formulation of corresponding sports industry policies has become the top priority in the construction of international tourism island.

2) Hainan Provincial Committee of the Communist Party of China and Hainan Provincial People's Government shall implement the decision of "Several Opinions of The State Council on Promoting the Construction and Development of Hainan as an International Tourism Island"

In the Decision, the development of the sports industry is involved in the ten major events that Hainan Province focuses on. First, it is to upgrade the Hainan Happy Festival, plan and organize a number of influential cultural entertainment, festivals, exhibitions and sports events, and strive to have festivals every month. The second is to establish a tourism development investment and financing platform, make good use of the special subsidy funds given by the central finance to Hainan international tourism island construction, and strive to make it an incubator for key tourism development projects in the province. This provides a breakthrough point for the formulation of sports industry policies in Hainan from the two aspects of capital and event management.

3) Hainan Province "Outline of Hainan International Tourism Island Construction and Development Plan"

In the Outline of Hainan International Tourism Island Construction and Development Plan (2010–2020), it is

clearly proposed to vigorously develop the cultural and sports industry, especially the sports and fitness industry. We will actively develop the sports and fitness industry, hold sports events with Hainan characteristics, and foster a sports and fitness market. We will vigorously develop coastal sports such as diving, sailing, windsurfing, surfing, fishing, beach volleyball and beach football, and outdoor sports such as cycling, mountaineering, rafting and outdoor development. At the same time, investment and financing policies, fiscal and taxation policies are put forward in terms of policy measures, which points out the direction for the policy research of sports industry in Hainan.

4) Hainan Provincial People's Government "Hainan International Tourism Island Construction Action Plan"

According to the Action Plan for the Construction of Hainan International Tourism Island, the basic connotation of the construction of Hainan international tourism island includes three aspects: establishing new goals, establishing new systems and implementing new policies. One of the most prominent is "new". Currently, the construction of Hainan as an international tourism island will be fully launched, including the construction of an international tourism service guarantee system. Sports tourism is an important part of Hainan tourism, which provides the necessity and feasibility for the research of sports construction policy under the background of Hainan Free Trade port.

B. Expected Application Value-to Provide Institutional Support for the Sports Building Development of Hainan Free Trade Port

At present, the sports buildings in Hainan are mainly "extensive construction" of low grade, not optimistic. Compared with the large sports buildings in Beijing, Shanghai and Guangzhou, the development of sports buildings is not enough. There are many restricting factors, but the lack and imperfection of sports construction policy cannot be ignored. Without the formulation and improvement of sports industry policies, the development of sports industry in Hainan will lose its vitality. This study is expected to have application value in the following aspects and inject vitality into the development of sports industry in Hainan.

In terms of general policies of the sports industry, policies on sports asset management and development, sports investment, sports market management, sports taxation and sports service price are formulated, so that sports industry policies can be applied to all aspects of investment, operation and management (Qiu, 2003).

In terms of sports subject industry policies, the formulation of competitive sports industry policies, mass sports industry policies, sports venues industry policies, sports education and technology industry policies, sports intangible assets development and management policies, sports lottery operation and management policies can promote the initial formation of the sports industry system.

In terms of sports-related industrial policies, mature sports industry policies can clarify the connotation and extension of sports-related industries, help relevant departments jointly hold regular sports trade fairs and trade fairs, activate sports economy and promote sports commodity exchanges. From

the perspective of sports, the production and management of all kinds of sports related products are guided, consulted, helped, inspected and supervised, and various ways, methods and means are adopted to expand and improve the variety of sports products.

In terms of internal sports industry policies, perfect sports industry policies can clarify property rights, reasonably evaluate and protect state-owned assets, on the one hand, strictly prevent losses in various ways, and on the other hand, ensure due benefits; Government and enterprise should be strictly separated from business and independent accounting, and the content of body industry should gradually be as close as possible to sports and transformed into sports main industry.

### III. THE RESEARCH METHODS

#### A. Research Objects

Investment, management and operation of sports (social sports and competitive sports) industry in Hainan under the background of international Free Trade Port construction.

#### B. Research Steps and Process

Consult and collect domestic and foreign literature on sports industry policy research by literature method; Determine the research direction, apply for project approval, and lay a good foundation for further research.

On the basis of the existing literature, the expert survey method was adopted to solicit expert opinions, and the Questionnaire on the Status Quo of International Tourism Island Sports Industry was made, and the reliability and validity were tested. 1000 copies of the form were printed. Conduct a comprehensive survey on sports industry in Hainan and obtain relevant data (Chen, 2007).

Use U test and comparative analysis method to sort out, analyze and infer the survey data and data (see the formula below), and draw a conclusion on the feasibility of the development of international tourism island sports industry. At the same time, according to the actual situation of the construction of international tourism island, relevant experts will be organized to formulate various sports industry policies in Hainan (Hao, 1996).

$$u = \frac{\left(\overline{X}_{1} - \overline{X}_{2}\right) - \left(\mu_{1} - \mu_{2}\right)}{S_{\overline{X}_{1} - \overline{X}_{2}}} \left(\sim N(0,1)\right)$$
$$u = \frac{\overline{X}_{1} - \overline{X}_{2}}{\sqrt{\frac{S_{1}^{2} + \overline{X}_{2}^{2}}{n_{1}} + \frac{S_{2}^{2}}{n_{2}}}}$$

Submit the preliminarily drafted sports industry policies of international tourism islands to relevant experts and government departments for guidance and suggestions, and obtain corresponding support.

According to the feedback of experts and leaders, the project team will be organized again to conduct statistical analysis and discussion on the data, and form "Sports Industry Policy of International Tourism Island", "Sports Industry Policy Research and Experiment Report of International Tourism Island" and related papers.

Organize 5 experts in sports, law and economics to discuss the first draft of Sports Industry Policy Research

and Experiment Report of Free Trade Port and related papers, and put forward suggestions for improvement.

#### IV. CONCLUSION

Through the statistical analysis and research of the data obtained from the consultation and investigation, the disparity between Hainan's sports industry and the international and domestic sports buildings and industrialized cities is obtained. And then through expert argumentation, the following conclusions are drawn (Liu & Hao, 2005).

In the construction of free trade port, the effective use of non-public capital, especially international capital, can promote the development of sports construction industry in Hainan and broaden the capital channels for the construction of free trade port.

Sports tourism is the living soul in the construction of international tourism island, and sports tourism will soon become the mainstay of Hainan tourism market. At the same time (Li, 2001), it is also a powerful driving force for the development of sports industry in Hainan.

Reasonable sports tax policy can effectively regulate the development of sports construction industry in Hainan. It is necessary to further explore the characteristics of the tax policy of Hainan sports industry under the construction of free trade port.

In the construction of free trade port, the development prospect of mass sports industry is broad. We will improve mass sports organizations, improve the national fitness system, and provide more and better public sports services for domestic and foreign tourists and the people of Hainan.

Sports lottery is the driving force for the development of sports construction industry. Further improve the issuance and management of sports lottery. Make the sports lottery become the inexhaustible power for the development of sports construction industry in Hainan.

Sports teaching, scientific research and sports construction industry policies interact with each other and develop together. The cultivation of professional sports talents is conducive to the implementation and development of sports construction industrial policies.

Under the background of free trade port construction, Hainan should continue to promote the reform and innovation of sports architecture. To adapt to the new situation of the continuous development of the socialist market economy, constantly innovate the development system of sports construction with the spirit of reform and innovation, and promote the coordinated development of sports construction industry in Hainan.

## V. SPORTS BUILDING AND INDUSTRIAL RECONSTRUCTION PATH OF FREE TRADE PORT

Under the guidance and support of the government, a series of sports architecture and industrial policies suitable for the construction of free trade port have been formulated (Wang & Zhou, 2009).

In terms of sports financial financing policies, focus on promoting the construction and maintenance of public sports venues, equipment for mass sports and fitness venues and residents' physical fitness monitoring, etc., and appropriately increase the policy special investment for supporting the economic development of the sports industry; Formulate policies to encourage various social funds to invest in sports industry economy, implement low-interest or discount interest loans to emerging and innovative sports industry economic projects through deepening reform, and arrange certain policy-based loans for the development of various sports construction industry economy; Encourage the establishment of sports industry economic fund organizations and sports investment companies at all levels and of various types to form a new pattern of diversified sports construction industry investment subjects.

In terms of sports tourism policies, sports and tourism departments should actively cooperate with relevant departments to establish sports tourism information industry groups and network sports tourism information systems, develop sports tourism information markets, develop efficient and efficient sports tourism websites, and enhance the enthusiasm of domestic and foreign tourists to participate in sports tourism; To enhance the image of sports tourism products, maximize the development of sports tourism resources, national and special sports tourism products to the world, expand the influence of Hainan Island sports tourism at home and abroad.

In terms of sports tax policy, the sponsorship of major international and national sports competitions and performances that are beneficial to expand the popularity of enterprises is allowed to be included in the cost of enterprises as production and operation expenses; In view of the diversity of sports items carried out by fitness and entertainment enterprises, different tax policies such as high tax, low tax and tax reduction or exemption are implemented. Special additional tax is levied on sports and entertainment items with high consumption, and low tax or tax reduction or exemption is implemented for mass consumption items. To adjust the development of sports construction industry in Hainan with tax revenue as the lever.

Take various forms to publicize and popularize the knowledge about sports and fitness, enhance people's fitness consciousness, and improve people's sports consumption level and level; To further activate the sports, fitness and entertainment consumption market, strengthen macro guidance and regulation, encourage and support the development of commercial sports facilities such as health city, bowling alley, fitness center and roller skating rink; To formulate measures for the administration of mass sports activities such as wushu, river rafting, Qigong and dragon boat.

In terms of operation and management policies of sports lottery, football lottery with sports characteristics should be issued according to the actual situation of Hainan International Tourism Island construction, which can not only expand sales and financial resources, but also stimulate the development of football industry. At the same time, the current sports lottery and disabled welfare lottery will be merged, using the form of six lottery, by the national lottery company exclusively unified operation in the country. The sports department participates in sharing according to the chapter, achieves the national unification, standardization, specialization and regularization, expands the sales volume and improves the operating efficiency. At

the same time, we will explore the development of guessing sports lotteries and instant lotteries for large-scale international competitions, and vigorously absorb the income from sports lotteries to supplement the funds for large-scale sports construction.

In terms of industrial policies of sports education and technology, sports colleges and universities and sports scientific research departments in the province should face the society and the market, open their doors to run schools and conduct scientific research. On the premise of accomplishing national tasks, they should carry out various forms of training, guidance, scientific research and consultation activities in combination with their own business. On the one hand, we can make more contributions to the development of sports and the sports industry, and on the other hand, we can enhance our own vitality. At the same time, the Ministry of Education, Hainan provincial government and colleges and universities in Hainan province should work together to speed up the construction of doctoral programs in physical education in colleges and universities in Hainan province, so as to provide strong intellectual support for the development of the sports industry.

Vigorously introduce domestic and foreign large-scale events, actively develop the sports and fitness industry, hold sports events with Hainan characteristics, and cultivate the sports and fitness market. Such as golf events, bicycle events, beach sports events, water sports events, mind sports events. At the same time, we will pilot some internationally accepted tourism, sports and entertainment projects in Hainan, and promote the transformation and upgrading of large-scale sports tourism building elements according to the internationally accepted sports tourism service standards.

Develop golf tourism, promote the integrated development of golf and tourism, leisure vacation, health care, education and training industries, introduce golf equipment brand enterprises, and lengthen the golf industry chain. Actively introduce the famous golf professional, amateur and tour tournaments at home and abroad to cultivate the local brand of golf events.

Formulate and issue the Construction and Development Plan of Sports Venues and Sports Industry in Hainan Free Trade Port, as well as a number of supporting laws and regulations, to establish a complete system of large-scale sports venues and sports industry in Hainan.

#### CONFLICT OF INTEREST

The authors declare no conflict of interest.

#### **AUTHOR CONTRIBUTIONS**

Hao Yanlong conducted a survey to obtain data; Yang Qinqin and Shen Weiqin were responsible for data sorting and statistical inference; Hao Wenting analyzed the data; Hao Yanlong, Yang Qinqin, Shen Weiqin and Hao Wenting co-wrote the paper; Hao Yanlong reported the results of the paper at the conference; all authors had approved the final version.

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