

Innovation and Development Strategy of China's Sports Industry under the New Economic Ecology

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Abstract—This paper firstly reviews the development status and problems of China's sports industry, and then elaborates the transformation and changes of the sports industry under the new economic ecology. Basing on that, it puts forward the development strategy and path of sports industry in China, including promoting the transformation of China's sports industry into industrialization and marketization through transforming and opening up; improving the scientific and technological strength, comprehensive competitiveness and sustainable development of China's sports industry through comprehensive innovation; and boosting the large sports industry to come into being through industrial integration. Openness, innovation, and integration together provide a reference for China's sports industry to achieve transformation and development in the new economic era.

Keywords—*sports industry, industrial innovation, industrial integration, industrial transformation, transformation and opening up*

I. INTRODUCTION

Since the 29th Summer Olympic Games in Beijing in 2008, China's sports industry has been growing and the proportion of output value has been increasing year by year. China's sports industry becomes an important force in the national economy development but also faces a series of problems and challenges. Some problems are spiny, such as weak overall strength, internal structural imbalance, lack of demand-based policy tools, lack of supply-oriented policy tools, and environmental policy tools surplus [1]. Under the background of "Made in China 2025", the transformation and upgrading of the sports manufacturing industry also faces challenges, including the low-end monopoly of developed countries on China's sporting goods manufacturing industry; lack of innovative talents in this field; low cultural influence of brands and innovation; and the product similarity and malicious competition [2]. Today, the development mechanism of China's sports industry does not meet the requirements of the rapid development in this field. The main reasons are that the government's functional orientation in sports industry development is not clear; that the social development function of sports social organizations is not perfect; and that the cultivation of market entities is insufficient, resulting in ill management [3].

This paper explores the innovation and development strategy of China's sports industry under the new economic ecology. We sort out the development status and problems of China's sports industry after a literature review, then expound the transformation and changes of sports industry under the

new economic ecology, and finally put forward the development strategy and path of the transforming and opening up, comprehensive innovation and industrial integration in sports industry.

II. LITERATURE REVIEW

In recent years, the integration trend of China's sports industry with tourism, leisure and other related industries has increased. Besides, domestic researches on the integration and development of sports industry are going deeper. Technological innovation and heterogeneous competition promote the integration of the sports industry and other industries [4]. The integration is based on the intervention of sports consumption demand, value proposition changes, technological innovation, and government regulation. The intersection, infiltration and reorganization of industrial factors within the sports industry or with other industries lead to the blurring or contraction of the boundaries of the original sports industry and the formation of a dynamic pattern of new industrial forms [5]. The integration will eventually form a new type of industry with multiple industrial characteristics. During the process, market integration will be achieved through technology integration and product integration [6]. The foreign sports industry is widely integrated with other industries, achieving industrial penetration, industrial crossover and industrial restructuring. Besides, the integration has six major effects, namely, innovative optimization effects, competitive structural effects, organizational structural effects, competitive capacity effects, consumption capacity effects, and industrial regional effects [7]. The development of sports industry has four basic characteristics, including cultivating mature markets, emphasizing innovation and development, focusing on brand management and realizing industrial clustering [8].

The New Economic Ecology has brought profound changes to the sports industry. The concept of "New Economy" emerges in the United States, referring to changes in economic growth patterns, economic structures, and economic operating rules caused by the new technological revolution [9]. A notable feature of the new economy is digitization. Lopez-Gonzalez and Tulloch explored the intersections between sports bodies, media companies and gambling industries in European football, and argued that the digitalization of betting platforms has reconfigured the links between the traditional actors and created a new "online football betting ecology" [10].

Innovation has always been the topic of discussion on the development of sports industry. Desbordes conducted an

empirical analysis of the innovation phenomena in the sports equipment industry, and presented the results of a survey conducted in 108 firms in the French sports industry [11]. Hyysalo explored the micro-innovation in sports industry development by investigating user innovation and everyday practices [12]. Fredberg and Piller focuses on the paradox of tie strength in customer relationships for innovation by a case study in the sports industry, which is based on a 7-year longitudinal research project with Adidas, a global sporting goods company [13].

In recent years, China's sports industry has been developing at a high speed, showing a vibrant growth trend. It is believed that when the per capita GDP reaches about 5,000 US dollars, the sports industry will usher in a "spurt" development. In 2015, China's per capita GDP has reached 8,016 US dollars. People's pursuit of quality life and sports health has become increasingly vigorous. According to international development experience and China's economic and social development level, sports industry in China has great potential and is stepping into its rapid development period. It is expected to become a new driving force for future economic development and consumption upgrading.

The United States is the first power in sports. Its sports industry has experienced over 100 years of commercialization, resulting in high marketization. It has developed large and mature sports industry structure and consumer market, which build a sports industry system with professional sports and fitness as the core and with the specialized development of

other related industries. According to estimation made by Plunkett Research, a US industrial research organization, the world sports industry produced about \$1.5 trillion in 2015, while the US sports industry market was \$498.4 billion, accounting for 33% of the global total. Compared with developed countries, there is still a huge gap between them and China in terms of the development of sports industry. Jiang and Liu analyzed the mode of sport industry development in Germany and extracted some enlightenment to China [8], while Zhang et al. compared the sports industry among China, USA and Japan, and offered suggestions for the development of Chinese sports industry [14].

III. DEVELOPMENT STATUS AND PROBLEMS ANALYSIS OF CHINA'S SPORTS INDUSTRY

China's sports industry, on one hand, had a strong administrative tendency in the past, on the other hand, started late. At present, it has just entered the early stage of industrialization and large-scale development, and the internationalization of the industry can hardly be seen yet. In 2015, China's sports industry produced 1.7 trillion yuan, with the industrial added value being 549.4 billion yuan (Table I), accounting for 0.8% of the GDP in the same period, which is far from the figures in developed countries (2%~3%). Structural imbalance still exists in the development of China's sports industry, especially when the scale of the sports service industry is still very weak. Due to the large population in China, the per capita sports resources and value outputs are far behind developed countries.

TABLE I. TOTAL OUTPUT AND ADDED VALUE OF CHINA'S SPORTS INDUSTRY IN 2015 [15]

Sports industry categories	Total (100 million yuan)		Structure (%)	
	Total output	Value added	Total output	Value added
National Sports Industry	17107.0	5494.4	100.0	100.0
Sports management	229.1	115.0	1.3	2.1
Sports competition performance	149.5	52.6	0.9	1.0
Physical fitness and leisure activities	276.9	129.4	1.6	2.4
Sports venue services	856.2	458.1	5.0	8.3
Sports intermediary services	47.0	14.0	0.3	0.3
Sports training and education	247.6	191.8	1.4	3.5
Sports media and information services	100.0	40.8	0.6	0.7
Other related services	299.0	139.6	1.7	2.5
Manufacture of sporting goods and related products	11238.2	2755.5	65.7	50.2
Sales, trade agency and rental of sporting goods and related products	3508.3	1562.4	20.5	28.4
Construction of sports facilities	155.2	35.3	0.9	0.6

China's sports industry started on the basis of state-owned and state-run sports. The material foundation and human resources in the initial stage of sports industrialization were all built and cultivated by the state. The government has played a leading role in this field for a long time. Therefore, China's sports industry is a government-involved industrial structure model, rather than a market-oriented model. At present, the main disadvantages that restrict the long-term development of China's sports industry are as follows:

- The overall marketization degree needs enhancement; the sports resources are not open enough and the market demand is insufficient; the role of market optimization and allocation is not obvious; and the institutional mechanism problem for serving the sports industry market economy has not been completely solved.
- The development structure of the sports industry is uneven, while the development of the sports service industry being seriously lagging behind.

- The comprehensive strength and competitiveness of sports enterprises are weak. The science and technology have not reached a high level; neither have the products and services. Technical capabilities, market development and marketing capabilities need to be improved, and so do the cultivation, stimulation, and leadership of sports consumption. All those factors result in weak international competitiveness.

IV. TRANSFORMATION AND CHANGES OF SPORTS INDUSTRY IN THE NEW ECONOMIC ERA

The concept of "New Economy" originated in the United States. At first, it mainly refers to the sustained growth of American economy in the 1990s. In a broad sense, it refers to the mode of economic growth, changes in economic structure and rules of economic operation, etc., caused by the new technological revolution that originated in the United States and extended to the world. The new economy is quite different from the traditional economy. It can be understood simply as "economic development and growth promoted by the new technological revolution" [9]. It not only includes the impact of the current information network technological revolution on the economy, i.e., the economic upheaval and industrial upgrading brought about by the so-called "3rd Industrial Revolution"; but also includes the economic changes caused by a series of new technological revolutions and new methods, such as biotechnology, nanotechnology, 3D printing, energy storage, quantum computing, artificial intelligence, block chain, etc. The New Economy covers the conceptual categories of "information economy", "digital economy", "network economy", "sharing economy", "and green economy" and so on.

The "Internet +" initiative has brought about a wave of economic transformation and social changes. The "Internet + sports industry" has become an emerging field in which industrial capital is competing to enter. With its "customer first, open integration, equal interaction, iterative innovation" concepts for ways of thinking, the Internet economic ecology has penetrated into the sports industry, promoting the automation and intelligence of sports products, network marketing and precision of product marketing, systemization of event operations, real-time media communication, informationization and sharing of venues, and personalization of fitness and leisure services. The traditional sports industry management ideas and models are undergoing tremendous changes. The organic integration of sports and the Internet has been creating new sports consumption models, products and services. And "a new ecosystem of sports industry" is coming into being. Software combining internet and sports can be seen, such as internet applications: Mi Sports, Joyrun, KEEP, Codoon, Ledongli, Daily Yoga, Hupu Run, and Sports Covers; webcast platforms for sports: PPTV and Tiantian.tv; and Sports Site Booking platform: Quyundong.

With the new global industrial revolution led by the Industry 4.0, China's sports industry, especially the manufacturing industry, needs to stand on the commanding height of "innovation drive + intelligence" to look at the industry and its own development. The core of Industry 4.0 is "interconnection", which closely connects equipment,

production lines, factories, suppliers, products and customers through vertical integration within the enterprise, horizontal integration between enterprises, and end-to-end integration between enterprises and customers. In the "Internet of Things" era, sporting goods are intelligent, and sports services are everywhere. Smart devices can be seen everywhere: smart bracelets, smart running shoes, smart bicycles, smart equipment, smart venues, etc. In the future, almost all sporting goods, equipment and facilities may become intelligent terminals containing hardware, software, content and services. The sports manufacturing industry is gradually transformed from the traditional industrial organization mode to large-scale, base-based, automated, intelligent, and personalized manufacturing. At the same time, intelligent sporting goods and information collection terminals will continuously collect users' physiological and behavioral data, upload them to the cloud for users to manage. That will become a big data base for sports services and other industries.

Under the guidance of the national "Entrepreneurship + Innovation" initiative, a group of talents and cross-industry entrepreneurs in the sports industry with the characteristics of innovation, practice, internationalization and informationization are gathered in the forefront of innovation and entrepreneurship. They have gradually become a living force for the innovation and development of the sports industry, constantly integrating various resources to promote the penetration, restructuring and cross-border integration of industrial factors, thus promoting the innovation, transformation and upgrading of the sports industry.

V. CHINA'S SPORTS INDUSTRY DEVELOPMENT STRATEGY AND PATH

According to an analysis on the development status and problems of China's sports industry, and considering the requirements on transformation and changes of the sports industry under the new economic ecology, we put forward the following development strategy and path for Chinese sports industry.

A. *Transformation and Opening Up: Further Promote the Transformation of China's Sports Industry into Industrialization and Marketization*

China's sports industry has long been promoting the development model of the national system with competitive sports as its core. The overall level of China's competitive sports represented by the 2008 Beijing Olympic Games has reached its peak. China's sports industry is not yet an independent and complete system, and it is still in an imperfectly competitive market, or, in other words, the market-oriented operating mechanism of the sports industry has not yet been matured. Government management is still segmented and distributed to multiple departments. The management boundaries and functional definitions are not clear. The long-term management model of the national system around competitive sports has not been fundamentally changed, and it does not conform to the operating law under the market economic system. China's sports industry needs to further break through the obstacles of the development mechanism and build a mature and complete sports industry system. We need to break the relatively closed management system and resource

monopoly of the sports industry, promote the national system management model based on competitive sports, and shift the mode to national fitness and social sports. And the role of the government should be changed from management to service-oriented, to ensure the separation of government and enterprise and that of management and operation. Through deep-level reforms, we will release and increase the market supply of sports resources, break down the economic barriers between the government and the people, promote the socialization and industrialization of sports value resources, give play to the role of market optimization and allocation, and fully release the vitality and creativity of the sports industry.

To ensure the long-term rapid development of the sports industry, it is necessary to start with the change of the current management system and mechanism of the sports industry.

- We should transform the government's management functions, simplify administration and decentralize, and shift from a more centralized administrative management to a market-oriented management system. Besides, it is imperative to make the role of the government in the management of sports industry clear, promote sports industry associations and professional organizations, formulate supporting policies to attract and gather various social resources to the sports industry, and play a good role in government management to regulate "the tangible hand."
- We should further improve the market mechanism of the sports industry and create a fair, open and transparent market environment. We will promote the reform and restructuring of state-owned sports enterprises and institutions, break the monopoly of industry resources, break down the barriers and market segmentation, at the same time increase the social openness of various sports resources and the market launch of industrial factors, and establish a fair and orderly mechanism for competition, circulation and distribution. We need to give play to the market's guiding role in technology research and development direction, route selection and innovative resource allocation, strengthen inclusive policy support, and promote enterprises to truly become the source and main force for technological innovation decision-making, research and development investment, scientific research organization and transformation of results.
- We should actively carry out international exchanges and cooperation in the sports industry, expand the space for its development, and achieve the goals of introducing and going out. With the continuous opening up and inputting, it will bring advanced management concepts, management experience, supervision system and new operating mechanism of foreign sports industry, thus improving the international competitiveness of China's sports industry. At the same time, we should seize the strategic opportunity of the "One Belt, One Road" initiative, give full play to the characteristics and comparative advantages of China's

sports industry, and output the sports industry and capital to all countries in the world.

B. Comprehensive Innovation: Effectively Enhance the Scientific and Technological Strength, Comprehensive Competitiveness and Sustainable Development Capability of China's Sports Industry

Compared with enterprise technology innovations, such as network information, mobile communication, big data, artificial intelligence, high-end manufacturing, quantum computing, and enterprise innovation represented by Huawei, Alibaba, Tencent, and Lenovo, the current technological innovation, collaborative innovation and integration capabilities of China's sports industry are weak. In the technical innovation of the sports industry, there are problems such as lack of scientific and technological innovation personnel, insufficient investment in science and technology research and development, poor transformation of scientific and technological innovation achievements, lack of vitality of innovation mechanisms, insufficient technological innovation capabilities, and few outstanding achievements. In the non-technical innovation of the sports industry, the soft powers, such as management innovation, organizational innovation, and business model innovation powers, are particularly weak. Today's global industrial divisions of labor and production relations are undergoing major changes and adjustments. The development of new economy, new technology, especially the Internet, has brought about tremendous expansion and change of the concepts, connotations, forms, contents, paradigms of innovation. Competition and development must focus on the times and the world. We need to take the road of science, technology, and innovation, implement innovation-driven development strategies, and promote comprehensive innovation with sports science and technology innovation as the core. The comprehensive innovation of the sports industry is the optimization and creative destruction of the old industrial structure. It must be oriented to the construction of the sports industry chain and the ecological chain, focus on the innovation of sports enterprises, and attract the integration of sports resources and various innovative elements. We will form an enterprise cluster structure of independent innovation and collaborative innovation in the sports industry and create an ecological platform for comprehensive innovation of the sports industry, thereby driving the growth of the overall industrial strength.

According to the overall situation of China's sports industry innovation and development, it is imperative to promote in the following areas:

1) Build an innovation system and entrepreneurial ecology for the sports industry, create a group of sports industry agglomeration innovation platforms, and support the construction of a new sports industry characteristic park.

The sports industry is a highly connected industry. It requires a lot of supporting enterprises, institutions and organizations to work and make progress together. It fits the industrial agglomeration development. Sports industry innovation can be divided into independent innovation, technology introduction and collaborative innovation. This requires high concentration, high frequency and high density of

various innovation elements, which work together within different combinations with the fittest surviving. Therefore, government departments should actively guide and build a regional innovation cluster structure for sports industry in areas with better conditions in terms of sports industry, relying on sports backbone enterprises or larger market players to form an ecological industrial system with small and medium-sized sports enterprises, various service organizations and upstream and downstream enterprises working together. Large enterprises and small and medium-sized enterprises each have their own innovation advantages. There exist the complementary and cooperative advantages of the various entities in the ecological chain rather than the disadvantages of competition. The cluster effect is prominent.

At present, professional and large-scale sports industry innovation clusters are not common. Sports industry incubators, accelerators, sports towns, sports industry complexes have just begun to develop. Some factors related to talent introduction, venture capital, government policies, technology introduction, information exchange, financial environment, incentive mechanism, etc., also greatly restrict the development of innovation and entrepreneurship. The Chengdu Sports Industry Innovation and Entrepreneurship Incubation Park established in 2016 mainly relies on the basic resources such as Chengdu Shuangliu Sports Park, Shuangliu Sports Center, International Tennis Center, Sheffield United Football Park, National Badminton Training Base and China Modern Pentathlon Event Center. The Incubation Park makes innovation plans, formulates policies, encourages innovation and entrepreneurship, and actively introduces sports creative enterprises such as sports planning, sports film and television development, event promotion, sports training, sports experience, etc.; it also attracts sports industry elites to become a gathering place for sports industry; and establishes sports venues alliance, formulates related supporting policies, and creates of "the famous city of events", which is driving the formation of a new highland for the sports industry development.

2) Vigorously cultivate and introduce innovative talents, professional talents and cross-border talents in the sports industry, especially the diversified compound talents who are familiar with the sports industry, and rapidly expand the team of innovative and entrepreneurial talents in the sports industry.

Excellent talents are the scarce resources of intellectual capital and times. However, the development of an industry depends on the quantity and quality of talents. Talents are the most fundamental and crucial factor in the core competitiveness of industrial development. The lack of industrial talents and compound talents has become a "bottleneck" that restricts the innovation and development of the sports industry. Therefore, to cultivate talents in the sports industry, we must, first, establish a combined training mechanism of long-term and short-term training, and focus on cultivating diversified and complex industrial talents who understand the market and are professional in certain fields; second, set up a multidisciplinary and complex knowledge education system; third, expand the multi-channel and multi-level training methods, adhere to the sequence of introducing, training, and reserving talents; fourth, in the industrial practice,

encourage outstanding innovation and cross-border talents to stand out.

3) Accelerate sports finance innovation, unblock and broaden the investment and financing channels of the sports industry, and activate the sports industry capital market.

The vigorous development of the sports industry is inseparable from the support of sports finance. The developed sports finance has greatly promoted the development of the sports industry. The great potential of the future development of China's sports industry is emerging. The market potential has triggered great domestic and foreign capital. First, venture capital, internet finance, and crowdfunding capital swarms, followed by banks, securities, insurance and funds. The recently established China Sports Fund, Deng Yaping Sports Fund, Ali Sports, Wanda Sports, LeTV Sports and other institutions invested on the scale of billions. The sports industry investment is in full swing.

In order to ensure the long-term healthy and stable development of the sports industry, the government should provide targeted investment and financing support policies for the sports industry, arrange government guidance funds, promote the establishment of sports investment funds (such as the sports industry investment fund established by the Shandong Provincial Sports Bureau) and supervise the fund operation; increase sports risk investment, encourage sports financial innovation, especially to make full use of modern financial instruments and financial leverage means such as Internet finance, sports crowdfunding, debt-to-equity swap, financial leasing, asset securitization, and share option; optimize the investment and financing structure of the sports industry, broaden the way, attract all kinds of social capital to invest in the sports industry, form a diversified investment and financing structure, and realize the "resource-aggregate" investment and financing development model; combine the sports industry with the capital market, establish multi-level, multi-channel, multi-form industrial capital exit channels and property rights transfer mechanisms, such as establishing a sports resource trading platform, promoting asset securitization, and working out option trading; and at the same time develop sports insurance markets and expand the scale of sports betting.

4) Strengthen institutional innovation, increase policy support, and revitalize institutional vitality.

In the "13th Five-Year Plan" of the sports industry, the State Sports General Administration takes the sports industry market system improvement and market vitality stimulation as one of the main tasks in the next five years. It is imperative to "establish a unified, open, competitive and orderly sports market, take effective measures, eliminate administrative monopoly, industry monopoly and local protection, and eliminate regulations and practices that hinder the formation of a unified national market and fair competition in the sports industry." It is also necessary to "accelerate the transformation of government functions, reduce the examination and approval matters related to sports activities, implement negative list management, and promote the opening of airspace waters. The government should combine the reform of administrative system and that of sports industry associations, further open up sports resources, stimulates market vitality, and promotes

industrial integration; mobilize the enthusiasm and creativity of sports social organizations, trade associations and market players, and provide the society with a variety of sports products and services." [16]

The top-level design and institutional innovation in the national sports industry policy is the decisive factor in stimulating the innovation and development vitality of the sports industry. The reform and innovation of the sports industry system is a top-down systems engineering. It is a process of breaking down the old thinking framework and interest pattern, forming an open concept, constraining and supervising the operation of power, and marketizing, socializing and publicizing resource elements.

C. Industry Convergence: Strengthen the Main Industry of Sports and Accelerate the Formation of the Large Sports Industry

Industrial integration refers to the dynamic development process in which different industries or different aspects of the same industry penetrate each other, cross each other, and finally integrate into one, gradually forming new industries in the end. It can be divided into three categories: industrial penetration, industrial cross and industrial restructuring [17]. Industrial integration includes both the blurring of industrial boundaries based on technological integration and the blurring of industrial boundaries caused by certain "relevant factors" [18]. It directly leads to structural changes in the market, which changes the original competitive landscape, and further influences the various links of the industrial chain and value chain through the market transmission mechanism. Industry integration under the Internet background often creates new products and services or a new business model, which optimizes, expands and reshapes the industrial ecology. In the developed countries in Europe and America, the sports industry has become a pillar industry of national economies, and has fully integrated with tourism, commerce, construction, communications, news media, game networks, and health, creating huge industrial and social benefits.

1) Industry integration is the inevitable course for China's sports industry to expand, upgrade, and develop coordinately.

The world today is undergoing the changes brought about by the third industrial revolution. Technological innovation has been widely and rapidly expanded in various fields. Infiltration, crossover, and reorganization are happening between different industries. The boundaries of the original industry have been extended or contracted and gradually blurred. Industrial integration has led to the emergence of new business or the completion of a wider and higher form of industrial division of labor and collaboration which has promoted the industry's iterative upgrade. The integration of the sports industry with mobile Internet, Internet of Things, virtual reality, artificial intelligence, 3D printing, nanotechnology, biomedical technology and other high-tech and emerging industries has changed the original value creation process. The competition and synergy between enterprises will be re-adjusted; the industrial elements will be re-aggregated and distributed; the sports industry will be reshaped; and the organization and operation of the industry and resource allocation will undergo major changes. Industrial integration enables the sports

industry and other industries' advantages and resources to be combined, creating new and more advanced sports products and services, guiding or meeting new market demands, thereby enhancing market competitive advantages and expanding sports industry functions and performance space.

In recent years, due to the development of the deepening reform of the sports industry and further liberalization of resources and deregulation, the "sports+" and "internet + sports" models of industrial integration have grown rapidly. A large number of cross-border integration cases have emerged, such as "I Want to Work out", an application combining sports and mobile Internet. As a one-stop sports health platform, it realizes fast positioning and intelligent booking service on mobile communication terminals. The integration of sports, insurance and the Internet has produced a series of "Sports Covers" applications: products that implement sports insurance services on mobile communication terminals. The combination of sports and video games has emerged as e-sports projects. The combination of sports and virtual reality has emerged as virtual racing cars and virtual bicycle products and services. In addition, bilateral or multilateral integration of sports, finance, media, Internet and other industries has also produced a large number of new products and services. These have formed a new industrial chain and value chain relationship, and profoundly affected people's consumption patterns.

2) The integration of sports industry needs to break through the restrictions of industry management, break down barriers and obstacles in industrial integration, and innovate management methods.

There are still many obstacles in the integration of China's sports industry and related industries, coming from the sports industry itself as well as from other industry management. Some cross-border integration formats are even gaps in industry and market management. Industry regulatory policies sometimes contradict each other and are difficult to reconcile. The management and support of the new cross-border integration format requires understanding and researching countermeasures from a development perspective, for example, how to supervise and support the sports webcast platform and how to deal fairly with the competition between webcasting and traditional media. The sports industry itself is relatively closed, the industry barrier of which is high. However, the marketization of sports resources is not high while the administrative management is divided, the market entity is not clearly defined, and the property rights are not clear. Besides, the mechanism is rigid in a lack of innovation while the management efficiency is low. What's more, it also lacks the advanced incentives, core competitiveness of sports enterprises, and comprehensive talents required for industrial integration. All those are unfavorable factors that restrict the development of sports industry integration. Therefore, it is imperative to be determined to break down the old system barriers, gradually eliminate the unreasonable or untimely constraints, and use market pressure to force the industry reform.

3) It is necessary to promote the development and growth of the main sports industry, give play to the industrial integration and synergy, and foster a large sports industry.

China's sports industry has an unbalanced business structure, regional distribution, low level of science and technology, insufficient contribution of the sports industry to the national economy, insufficient driving force and insufficient influence of the industry. It is of great significance for the optimization, quality improvement and scale growth of China's sports industry to promote industrial integration, exert the industrial integration capability of the "sports+" model, and develop the sports relating industry, such as Internet sports, smart equipment, stadiums, hardware, and sport events.

Out of 11 major categories (Table I) of the sports industry output structure in 2015, sports product manufacturing and sports facilities construction accounts for two-thirds of the total output while the sports service industry (the other nine major items) accounting for only one-third. There is still a huge gap between the industrial structure of China's sports service industry and that of developed countries. Therefore, while improving the core competitiveness of China's sports manufacturing industry, such as scientific and technological content and management level, we should also develop the sports service industry by opening up and integrating and consolidating. At the same time, through industrial cooperation and integration, the scope of resource integration will be expanded, the cross-border flow of industrial factors will be promoted, and the integration of innovation results will become competitive advantages. The new industry chain and value chain ecology fostered through cross-industry, cross-regional and cross-industry cooperation will help form a large sports industry pattern and realize the integration of agglomeration innovation and division of labor in a broader market and at a higher level. The radiation and driving effects of the compound economy will be exerted.

VI. CONCLUSIONS

The innovation and development of China's sports industry is in the most important period of strategic development opportunities. The sports industry must seize the opportunity and take advantage of the momentum. At present, the sports industry still has many problems and difficulties in terms of institutions and mechanism, market supply and consumption demand, industrial environment and basic conditions. The problems and difficulties need to be solved step by step by emancipating the mind and deepening reform. The transformation and opening up of the sports industry are the first driving force for the industrialization and complete marketization of China's sports industry. The comprehensive innovation of the sports industry is the source of power for China's sports industry to enhance its strength, form its core competitiveness, and develop sustainably. The development of industrial integration is the only way to strengthen the main industry of sports, accelerate the formation of a large sports industry, and enhance its contribution to the national economy.

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