Study of the Development of Chinese sports Industry in the Context of Supply-side Structural Reform

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In recent years, China's sports industry has witnessed rapid development, Abstract: gradually forming an emerging strength in its Supply-side Structural Reform and thus increasingly being highlighted in the development of the national economy. Being integrated, society-based, green and sustainable, the sports industry is gaining popularity among the Chinese people. This paper studies the overall development of Chinese sports industry during the 12th Five-Year Plan period (2011-2015) and unveils the key achievements it made, such as the expansion of scale, the diversification of products and services, the improvement of industry policies, the apparent upgrading and optimization of the industry's structure and its further integration with the Internet. However, there are still some problems in the development of China's sports industry & Chinese sports industry accounts for a fairly low proportion in the gross domestic product (GDP) and cannot yet compare with those of developed countries. Besides, given that its the sports services make up only a small share and that a supply-demand imbalance still exists in the sports products and services, its industrial structure requires further upgrading and optimization. In addition, failure to fully stimulate an innovation initiative restricts this industry's further development. Targeting the bottleneck facing Chinese sports industry and corresponding path selection, this paper mainly analyzes its institutional mechanism reform, structural upgrading and layout, product quality improvement and talent supply optimization. Based on the analysis, it is concluded that the development of Chinese sports industry is of great importance to China's economic transformation, upgrading and healthy development and it echoes the call of Supply-side Structural Reform.

Keywords: Supply-side Structural Reform; the sports industry; industrial upgrading; innovation

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Since ancient times, the sports games have been popular across the world, satisfying people's needs for fitness and leisure. In contemporary times, the sports games continue to gain more popularity and have become one of the best choices for those who pursue a modern lifestyle. People today prefer the sports games with higher quality and better comfort. In such a context, the economic function of sports games is increasingly highlighted, and is on a par with their traditional functions such as fitness and entertainment. On the other hand, highly developed scientific technology significantly improves productivity and refines divisions of labor, giving rise to a variety of industries. With the integration of sports games with economic activities, the sports industry gradually came into being. Such an integration enables mutual promotion of the sports games and economic activities and accelerates the development of sports industry. According to the assessment of a U.S.A-based advisory agency, the sports industry has risen to the most vigorous industries in the 21st century.

Currently, China is faced with the mounting pressure of an economic downturn and economic reform is now at a critical stage. Under such circumstances, it introduced Supply-side Structural Reform, continuously improving and upgrading its economic structure and, more importantly, optimizing its industrial structure. During the economic structural optimization and upgrading, the sports industry is playing an increasingly important role. As a "sunrise industry" which is new and sustainable, the sports industry features low pollution, low energy consumption and green development. On the one hand, the development of sports industry has some traditional merits such as improving physical and mental health and bringing people a quality lifestyle; more importantly, it also improves work efficiency in governments, public institutions and enterprises. Its development enables suppliers to provide consumers with a diversity of sports products and services (the sports wear, the sports equipment, the sports club, etc.), through which the suppliers make more profits. On the other hand, from a macro-perspective, the sports industry, which is in line with China's newly proposed development concept, is expected to become a new growth pole of the national economy. Just like other industries, the sports industry can help boost China's domestic consumer demand and attract more investments that will contribute more to the growth of Chinese economy. The interactions among industries significantly enhances the integration and inclusiveness of sports industry. While achieving self-improvement, the sports industry also drives the growth of other industries such as tourism, catering, telecommunication, commerce, culture and financial information, and combines with these industries to realize integrated development. This in turn helps attract more social capital to the sports industry, which has a relatively low barrier for entry and a huge growth potential.

The development of Chinese sports industry

In recent years, the Chinese economy has been on the rise and the Chinese people's income has kept increasing. People no longer feel satisfied with material consumption and have an increasing demand for cultural and spiritual consumption, which is interactive and experiential. Targeting this new consumer demand, sports products and services are exactly what fulfill the consumers' anticipation. Thus, the general public's urgent pursuit of sports consumption indirectly drives the rapid development of sports industry in China and fosters it into an indispensable strength for the sustainable development of Chinese economy and society.

1.1 The continuous expansion of sports industry

The added value and growth of China's sports industry

As the Supply-side Structural Reform is further implemented in Chinese sports industry, China attaches more importance to sporting activities, while gradually playing down the dominance of competitive sports. This move is conducive to the development and prosperity of sports, brings tangible benefits to the public, satisfies their multiple and diversified consumer demands, and promotes the concept of health. According to statistics from the National Bureau of Statistics, the General Administration of Sport of China and iResearch, the total output of the Chinese sports industry in 2013 was RMB 1.1 trillion, a year-on-year increase of 11.91%. Of this figure, the added value was RMB 356.3 billion, accounting for 0.63% of that year's GDP. The total output of Chinese sports industry in 2016 was RMB 1.9 trillion, a year-on-year increase of 11.1%. Of this figure, the added value was RMB 647.5 billion, accounting for 0.9% of that year's GDP. Judging from the industry's internal structure, the total output of sporting goods and relevant products reached RMB 1,196.21 billion, accounting for 62.9% of total output of Chinese sports industry. In 2016, the total output of sports services increased significantly to RMB 682.7 billion and its proportion in the total output of this industry increased by 2.5% compared with that of 2015. Progress was also made in the leisure & fitness sector, with both of its nominal total value of output and added value increased by over 30%. These figures indicate that the sports industry is gradually forming an endogenous power that secures the quality development of the Chinese economy.



Source: General Administration of Sport of China, 36Kr



The contribution of China's sports

1.2 Breakthrough and improvement of the sports industry

With China's per capita GDP on the rise, Chinese people's cultural needs are increasing and their capacity for sports consumption has been enhanced. Given the gradual increases in sports users and their relevant consumer demand, the Chinese government has formulated and implemented a series of sports industrial policies to enable higher-quality and healthier development, and to encourage and support the sports suppliers to satisfy consumers' differentiated demand with multi-layered sports products and services in different categories. For example, early in 2006, the Chinese government implemented the 11th Five-year Plan for the Sports Industry, calling for shaping a great power in sports and further popularizing sports games to satisfy consumer demands for sports and culture. Following that, the 12th Five-year Plan for the Sports Industry,



introduced in 2011, for the first time specified the goal ofsports industry, i.e. a year-on-year increase of 15% in added value. In 2014, the Chinese government issued and implemented the Opinions on How to Accelerate the Sports Industry and Promote Sports Consumption, further specifying development requirements concerning the industry's development direction, environment, status, opportunity and incorporating the sports industry into the national strategy of economic development. Later, relevant specifications and improvements have been made in the subsequent policies and documents: policies concerning the construction of sports venues, a football development plan, the 13th Five-year Plan for the Sports Industry, fitness-for-all program, competitive sports plan, fitness & leisure programs, winter sports development plan, and others. The introduction and implementation of these policies has promoted the healthy development of sports industry, broken down the

Relevant policies of China's sports industry

The 11th Five-year Plan for Sports Industry July 2006

The 12th Five-year Plan for Sports Industry April 2011

Strategic Plan on Accelerating the Development of Sports Industry, Stimulating Sports Consumption and Promoting "Sports for All" September 2014

Opinions on How to Accelerate Sports Industry and Promote Sports Consumption (Doc. 46) October 2014

Opinions of the General Administration of Sport of China on Advancing the Reform of the Examination and Approval of Sports Events December 2014

Scheme for Reforming the Chinese Football Association August 2015

The 13th Five-year Plan for Sports Industry May 2016

Source: the State Council, the General Administration of Sport of China, 36Kr

Development goal: Extensively popularize sports for all and finish the construction of a fitness—for—all system with Chinese characteristics to satisfy Chinese people's growing demand for sports culture and significantly improve the health of the Chinese nation.

First definite goal of sports industry: The annual growth of the industry's added value reaches 15%; by the end of the "12th Five-year Plan" period (2015), the industry's added value exceeds RMB 400 billion, accounting for over 0.7% of then GDP; the industry offers 4 million jobs.

Pave the way for the enactment of relevant sports industry plans; adhere to the principle of reform and innovation; rely more on the market power to accelerate the development of sports industry, stimulate sports consumption and promote fitness for all.

By 2025, increase the business scale of sports industry to R.MB 5 trillion; streamline the examination and approval of sports events; advance the reform of professional sports; improve venue operation; attract more social capital; optimize industrial layout and improve industrial structure; perfect sports facilities and launch more leisure programs and sports events; encourage sports infrastructure construction and maximize venue utilization; promote sports culture.

Except those concerning national multi-sport events and a few special sports games, all examinations and approvals of national sports events (in both commercial and mass sports category) are without exception cancelled.

Football becomes the first sport to be free from the control of the General Administration of Sport of China and to become a selfsustaining entity completely under "association" management.

By 2020, the population of regular exercisers will reach 435 million; the per capita sports area will be 1.8m2; the total scale of the Chinese sports industry will exceed RAMB 3 trillion, accounting for 1% of then GDP; the added value of sports services will exceed 30%, the sports consumption will account for over 2.5% of per capita disposable income policy barriers to its development, and unleashed its market vigor and consumption potential. China relies primarily on innovation to boost the transformation and upgrading of its sports industry, better satisfy consumer demands for quality sports goods and services, and ultimately increase Chinese people's happiness index.

1.3 The optimization and upgrading of the sports industry

Previously, China's sports focused on competitive sports in order to win more medals, especially gold medals in major international sporting events, for which it adopted a governmentdominant development model. For a time, this model significantly promoted China's sports cause and development ofsports industry. However, it relied excessively on the government's executive order without fully leveraging the market or giving play to the idea of "sports for all." In recent years, China has been implementing Supply-side Structural Reform in the sports industry and has introduced a market mechanism to make up for the governmentdominated sports development model. Specifically, suppliers of this industry play their economic role in accordance with the law of the market, make stakeholders of this industry subjects of the market economy, and increase market participation to facilitate the further optimization and upgrading of the sports industrial structure. This shift of dominance from the government to the market not only creates more benefits for the suppliers of this industry but also increases jobs.

Chinese people today attach more importance to quality leisure and lifestyle. For the sports industry, this means increased emphasis on the quality of the sports services and constant improvement of people's experience in healthy sports. It is imperative for suppliers of this industry to realize this inevitable trend. According to statistics from the General Administration of Sport of China, the output value of sporting goods manufacturing accounts for more than half of the total output value of the Chinese sports industry; yet at the same time, sports services keep increasing their proportion. In other words, the sporting goods manufacturing is not the only "superpower" in this industry, with sports organization & management, sports leisure & fitness, and sports venue management respectively taking up 8%, 5% and 2% of the total output value of this industry. The sports service sector is expected to have an even more promising prospect, as China's Supply-side Structural Reform and economic structural optimization will surely benefit this sector of the sports industry. The shift of focus to sports services in this industrial restructuring stimulates service consumption. The sports service consumption quality, increase consumption amount, accelerates the development of sports economy, and subsequently promotes quality growth of China's economy.

1.4 The integration of the sports industry with the Internet

In recent years, the "Internet +" development model has been introduced to all walks of life, creating a disruptive trend for many existing industries. This new development model advocates an emerging economic concept. Seizing the opportunity of the "Internet +" the sports industry fully combines the Internet with competitive sports, sports performances, sports media, sports consumption, sporting goods manufacturing, leisure sports, etc. and initiates an innovative reform in the business model of the sports industry. For example, consumers can purchase tickets for sports games via online ticket platforms, which saves time and money spent on waiting in lines and (often) scalped ticket. More importantly, via sports related APPs, consumers

can get acquainted with other fans and interact with them. In terms of equipment, traditional sports equipment has been replaced with more advanced items. In terms of data analysis, big data, cloud computing and other IT means are applied to facilitate sportsrelated data analysis, data tracking, data feedback, and generate rational sports advice. The in-depth integration of the sports industry with the Internet changes the consumers' conventional way of participation and creates a





brand-new model of efficient information sharing. For the sports industry, it is a coordinated, open and green development model that drives industrial innovation.

2. Challenges facing China's sports industry

2.1 The relatively small scale of the sports industry

China has held a variety of major sports events, significantly boosting consumer demand for sports products and services and promoting the development of sports industry. It is true that China's sports industry has had its business scale significantly expanded. Still, it does not account for a big proportion in national economy and cannot yet play a critical role in boosting economic growth. According to statistics from the General Administration of Sport of China, in 2016 the total output of China's sports industry reached RMB 1.9 trillion and its added value merely accounted for less than 1% (0.9%) of that year's GDP. To become a pillar industry of the national economy, China's sports industry will need to raise this proportion to 4%. Fang Gang, director of the sports channel of China Central Television (CCTV-5) holds that China's sports industry today is still at the stage of "sowing," which is far from the stage of "harvesting." China's sports industry remains far behind those of developed countries in the West, whose added values normally account for 1%-3% of their GDP. The added value of the US sports industry accounted for 3% of GDP of U.S., making this industry a pillar of the economy of U.S.

Also, it should be noted that as the consumption of sports products and services increase, the scale of sports industry will grow accordingly. In fact, the consumption of sports products and services in China is generally low, mainly due to the fact that the consumption levels of households and students remain low. Relevant statistics indicate that household sports consumption is only 28.2%. Worse still, many families in China do not have any sports consumption at all. The consumptions of all sports items, sporting goods, exercise & fitness, or tickets for major sports events, are without exception low. China's per capita sports consumption level is only 1/10 of the world's level and is much lower than those of developed countries. According to Ding Shizhong, Chairman of the Board of ANTA, in 2016, 300 million pairs of sneakers were

Global GDP ranking	Country	Total value of sports industry (unit: USD 100m)	Sports industry's proportion in GDP	Sports participation rate	Year
1	USA	435.0	3.0%	63.0%	2013
2	China	216.6	1.9%	33.9%	2015
3	Japan	94.9	2.2%	50.0%	2006
4	Germany	65.2	2.3%	49.0%	2011
6	UK	53.0	2.3%	44.7%	2011
12	Australia	12.9	1.0%	33.6%	2011
14	South Korea	31.6	3.0%	41.5%	2011

Partial GDP data & sports industry's contribution

Data source: Economist Intelligence Unit (EIU); Annual Report on Development of Sport for All in China (2015). As aforementioned, China–related data are provided by ECN. Data related to other countries are retrieved from the above annual reports issued by the General Administration of Sport of China.

sold in China, a country with a population of 1.4 billion; also, 300 million pairs of sneakers were sold in the U.S.A, a country with a population of 323 million. China's consumer demand for sports products and services is notably lower, which explains the smaller scale of its present day sports industry. Given that, there is a huge growth potential for this industry in China.

2.2 The irrational structuring of the sports industry

In a country or region with a well-developed sports industry, the sports service sectors (fitness & leisure and sports events in particular) are sure to take up a fairly high proportion of the total sports output and therefore play a significant role in the entire sports industry. In recent years, the added value of fitness & leisure and sports events has increased their proportions of China's sports industry. Even so, compared with that of sporting goods, this proportion remains quite low. In 2016, the added values of fitness & leisure and sports events respectively accounted for 2.7% and 1.1% of the sports industry, both of which were far lower than the sporting goods' figure of 84% (source: the National Bureau of Statistics, the General Administration of Sport of China). Affected by an irrational and outdated industrial structure, China's sports industry became polarized. This irrational structure lead to the slow development of core sports businesses and exerted an adverse influence on the scale of expansion and the benefit increase of the entire sports industry. Likewise, of all sports segments, the sports agency service segment performs the worst, for it failed to boost the inner vigor of the sports industry and weaken its role as a bridge.

In China, competitive sports have been under state control and are favored and protected by the Chinese government, which directly funds them. This state-run system has promoted the development of competitive sports and won numerous honors for China. By contrast, mass sports receive far less support from the government and rely primarily on self-funding, for which the development of mass sports is substantially restricted. Such a reality results in an imbalance between competitive sports and mass sports. From a macro-perspective, development levels vary from region to region. Regions with better economic development have more advantage in advancing the local sports industry. In the vast areas of central and western China, however, affected by their under-developed economy, local landscape, traditional values and culture, social customs, etc., the sports industry remains at a low development level lagging behind the rest of China. It is the regional imbalance that results in the irrational distribution of China's sports industry.

2.3 Failure to ensure the supply of quality sports products and services

As Chinese people's incomes keep increasing, they develop an increasing demand for intangible goods and attach more importance to the consumption of such services as fitness and leisure. This requires sports enterprises to provide sufficient quality products and services. It should be noted that some sports enterprises are incapable of satisfying consumers' multi-layered needs for various products and services, thus giving rise to short and ineffective supply bringing about a supply-demand imbalance and information asymmetry. The sports enterprises are too absorbed in expansion and profit maximization to care about supplying quality products and services. Regarding sports products, those on sale tend to be homogeneous and can even be of low quality. Their producers are reluctant to pursue product differentiation, improve product quality and performance by high-tech means, and invest more in production. Instead, they just blindly expand production without addressing consumers' real needs. In terms of sports services, there are a variety of problems, such as low standards, passive attitudes, monotonous forms, cheap images and poor after-sales service (no response to/no prompt process of consumers' complaints). Once the supply of sports products and services is not good,



a sports enterprise will lose its core competency, making it difficult to forge a brand image and form a positive brand effect. Without much innovation, their products simply copy famous brands (Nike, Adidas, etc.) to various degrees. For China's sports industry, a range of problems are standing in the way of its development, among which are a lack of market segmentation and precise positioning, a failure to forge internationally wellknown brands and the absence of a global perspective. Take ANTA as an example. Most of its sports products are sold in domestic markets and its overseas sales are too little to be mentioned. Even in the domestic markets, it faces fierce competition from international rivals.

China's market economy is far from sound and complete, which may give rise to cut-throat competition among sports enterprises. Going against the laws of a market economy, fueled by a lack of effective government supervision, results in an irrational or short supply of sports products. This supply shortage can lead to products being over-priced which will to some extent restrain consumer demand for sports products and services. After all, Chinese consumers in general are not rich enough to afford expensive items whenever they wish. Over-pricing deprives the public of sports consumption and restricts it to a "game for the rich." Consequently, it prevents the consumption structure from upgrading and weakens domestic demand.

2.4 A lack of highly competent creative talents

The development of the sports industry requires the in-depth integration of scientific technology. Sports enterprises should make full use of scientific technology to produce high-tech sports products and services in a bid to satisfy market demand and promote healthy development. Essentially, technical innovation and promotion cannot be achieved without the participation of highly competent tech talents. The sports products and services supplied by Chinese sports enterprises lack innovation and technology, mainly because of



Source: the General Administration of Sport of China, 36Kr

a severe shortage of creative tech talents. On the one hand, sports enterprises pay little attention to the cultivation of creative tech talents and are obsessed with expansion. Such an approach results in poor R&D capacity. The clients and agents of these sports enterprises hold that the sports industry mainly belongs to the tertiary industry, which does not require in-depth involvement of high-tech talents. In short, professionals in this industry do not attach due importance to technology. On the other hand, poor awareness in this regard leads to insufficient investment in high-tech research and development, the disconnection of the sports industry from high technology, and low popularization of technology-based products and services. In addition, sports enterprises have not yet established any substantial cooperation with institutions of higher education or scientific institutions, let alone the industry-college-institute cooperation model. Chinese enterprises in this industry simply go on their own way without real cooperation or coordination. These are all factors contributing to Chinese sports brands' inability to compete with well-known foreign brands (Nike, Adidas, etc.) in high-tech products and services.

It is not just creative tech talents, but also creative management talents that China's sports industry is in shortage. The management of Chinese sports enterprises generally consists of retired players and coaches, who are very familiar with the sports industry and have an in-depth understanding of relevant knowledge and norms, but lack needed management and expertise concerning macro-economics, market positioning & planning, marketing, market research & development, policy interpretation, and relevant laws and regulations. By contrast, professional managers are much better at such management. Yet, they lack relevant sports knowledge. Such a dilemma is brought about by the attributes of China's sports industry. This industry needs compound talents who are proficient in both sports knowledge and operations management. A shortage of these creative compound talents restricts the development of China's sports industry.

3. Approach to the development of China's sports industry

At present, China is advancing Supply-side Structural Reform, which concerns all aspects of China's economy. As a systematic all-round reform, it helps to transform and upgrade the established economic structure, facilitate new and old kinetic energy conversion, and boost quality growth of the national economy. China's sports industry, being an emerging economic area, should seize the opportunity of Supply-side Structural Reform to break through innovation bottlenecks, expand development space, explore development potential, accelerate sports development, and make the sports industry a key contributor to national economic growth during the 13th Five-year Plan period and beyond.

3.1 Deepening the structural reform of the sports industry

China's sports industry is still at an early stage of development, for which it falls behind developed countries in terms of market scale. Besides, seldom giving play to market forces, this industry is faced with a variety of problems, which may further hinder its expansion and improvement. In the context of Supply-side Structural Reform, institutional supply is key to the innovation of sports supplies. More specifically, the improvement of its institutional supply includes deepening institutional innovation, reforming established mechanisms, transforming its development pattern and facilitating all-round development. To this end, the government should transform its role into a highly efficient service provider with limited authority. The Chinese government should simplify administration, delegate powers, optimize services, reduce market



interventions, and let the market play its decisive role in resource allocation. By giving full play to the market's dominant role, the government can take the initiative to arouse market vitality, align the sports industry with market laws, enable the division of labor between the government and social organizations, and between the government and enterprises, introduce modern enterprise systems to the sports industry, and stimulate further development. Moreover, while striving to create favorable policies and market environments for the sports industry, the Chinese government should also improve self-management and self-supervision and ensure efficient and clean governance tobenefit the development of the sports industry. For example, the government should simplify the administrative approval system concerning sports to enable responsible persons representing the sports enterprises to complete relevant application processes in one time. Regarding market access and supervision, work focus should be shifted from antecedent supervision to subsequent supervision. Also, the Chinese government is expected to improve its sports industrial reform in policy design, market micro-structure shaping, law & regulation enactment, finance & taxation, technological innovation, and creative talents introduction. These areas form the institutional elements of the sports industry and lay an institutional basis for the industry's development.

3.2 Optimizing the structure and layout of the sports industry

Dominated by the government, Chinese competitive sports have been well developed, which to some extent fosters sports enterprises' preference for product manufacturing. After all, sports equipment and goods produced by the sports enterprises are supposed to be supplied to professional players and coaches, who can create a "celebrity effect," attracting many more consumers. To maximize this "celebrity effect" and boost product sales, some sports brands prefer to sign sport-stars for commercial endorsements. Against such a backdrop, the segment of sports services is bound to be significantly overshadowed. In recent years, the segment of sports services has seen a certain increase, which, however, remains insignificant and falls far behind sports manufacturing. In other words, sports manufacturing still accounts for the majority share of the sports industry. Such an industrial structure is by no means rational. It is imperative to rationalize and optimize sports industrial structure, reduce the proportion of sports manufacturing while increasing the proportion of sports services, improve sports services and expand the service scope. After all, a rational structure is a key yardstick of the healthy development of the sports industry. First, the government should encourage and guide sports enterprises to develop sports services, introduce favorable policies and conditions, and create more room for the future development of sports services. Second, sports enterprises should accurately grasp the change of the sports consumption concept in China, and increase investments in leisure and health sports and entertainment sports including sports tourism, etc. Third, more private capital should be injected into sports services and be encouraged to engage in this segment. Integrating sporting goods and sports services into an organic whole, players in this industry can offer professional sporting goods and experiences tailored to users' individual needs.

In terms of sports industrial layout, based on local development advantages and resources, each region should cultivate a sports industry with local characteristics to achieve coordinated development in their region. For example, China's eastern coastal region is economically more advanced than central and western China. Given that, in the eastern coastal region, the sports industry can pursue centralized large-scale integrated development; it should specialize the division of labor, diversify the spatial layout, pinpoint corresponding positions, catch up with the development of the global sports industry, attract the input of production factors,

expand the economic scale, and boost the development of other industries or other regions through correlation, ripple and gradient transfer effects. Central and western China should make the most of the eastern coastal region's "ripple effect" and at the same time give full play to local natural resources, the Silk Road and the interconnection along the Yangtze River to develop a sports industry with local characteristics. For example, mountain sports are good choice for western China, while an ice and snow industry is suitable for northeastern China. Such local advantages, catalyzed by the Internet, facilitate the coordination and interactions of the sports industry among regions.

3.3 Improving the quality of sports products and services and increasing effective supply

A key target of the Supply-side Structural Reform, which is now under way, is to improve the quality of product supply. Product quality plays a vital role in enterprise operations, directly concerns consumers' interests and credit, and is the lifeline of an enterprise. That explains why enterprises should keep increasing effective supply and the sports enterprises are no exception. If the sports suppliers cannot guarantee the quality of products and services they provide, they will be unlikely to form an integrated and centralized sports industry. Thus, while focusing on an expanding business scale, sports enterprises should also attach more importance to connotative development, which is primarily reflected by the quality of sports products and services. Sports enterprises should adhere to the principle of "quality first," trying all means to ensure the quality of products and services at all procedures from design, research & development, production and sales to feedback. The improvement of product & service quality can help increase effective supply, reduce ineffective supply, lower the occurrence of supply-demand imbalance, cut production and operating costs, and increase profits.

Sports enterprises need to use new technologies and new management models to upgrade their products and services, seek product & service differentiation, avoid blindly following the steps of their rivals, and enhance the core competence of their products and services in a bid to satisfy the varied individual needs of different consumers. When the quality of its products and services is ensured, a sports brand will gradually form a good reputation and cultural influence. A positive image of a sports brand symbolizes high-quality and liability and subsequently boosts the supply of sports products and services. A brand speaks for its quality.

3.4 Cultivating highly competent creative tech talents

During the advancement of the Supply-side Structural Reform, China also highlights the role of innovation in boosting economic growth and places innovation at the first place of the five development concepts. In such a context, China should regard innovation as the primary driver and guide the development through innovation. During this development process, the Chinese sports industry should sharpen its sense of innovation, introduce innovation elements to the industry's every aspect, make use of scientific innovation, and combine scientific innovation with the sports industry. This requires the participation of highly competent creative tech talents, who are supposed to play a dominant role in integrating scientific technology with the sports industry, reach their full potential, and take the initiative in innovation activities. Creative talents are key to the development of the sports industry, which comprises a variety of sports and leisure categories, each of which features different attributes and requires different talents. This becomes a major challenge for the sports industry to gather sufficient innovative talents. First, to cultivate innovative talents, the Chinese sports industry should observe the principle of "people first;" respect, care about and protect talents; emphasize humanistic care; follow the objective law of talent development; implement an incentive mechanism for



talents. Second, when it comes to talents cultivation, institutes of physical education or sports should strive to attract more applicants and offer courses in economics and management to equip sports majors with multilayered knowledge. For professionals engaged in the sports industry or retired sports players, it is imperative to equip them with knowledge of business operations and management and enable them to understand and apply cutting-edge technologies, such as the Internet+, big data, cloud computing and artificial intelligence. Third, sports enterprises should seek in-depth cooperation with entities in various areas (institutions of higher education, industry research-oriented think tanks, government authorities, etc.). These enterprises, further empowered by industry-college-institute cooperation, should break the barriers between different entities to allow staff communications and exchanges, the free flow of innovative tech factors, and promote the conversion of technological achievements in the sports industry to benefit consumers. Last, the Chinese sports industry should seek effective cooperation with international partners and learn advanced management philosophies and the latest scientific technology from overseas sports industries. More importantly, it should promote talent communications and cooperation in the international arena, introduce creative talents from overseas sports industries, improve the competence of domestic talents, enhance its talent pool and boost the development of our domestic sports industry. Only by doing so can China broaden its vision of international sports, facilitate the transformation and upgrading of its domestic sports industry, expand the influence of domestic brands, and enhance the competitiveness of the Chinese sports industry.

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