

Exploration on the Conversion Path of the New and Old Kinetic Energy of Chinese Sports Industry

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ABSTRACT. *The conversion of new and old kinetic energy has important theoretical value and practical application for promoting the development of China's sports industry. This article uses the literature research method and the logical analysis research method to study the connotation, significance and realization path of the conversion of the old and new kinetic energy of the Chinese sports industry. The study found that: the realization path of the conversion of new and old kinetic energy in the sports industry can be achieved through technological innovation, obtaining new power for the conversion of the old and new kinetic energy of the sports industry; structural coordination, showing the new state of the conversion of the old and new kinetic energy of the sports industry; shared development, and opening up a new mode of conversion of the old and new kinetic energy of the sports industry.*

KEYWORDS: *sports economy, sports industry, conversion of new and old kinetic energy*

1. Introduction

In the past 40 years of reform and opening up, China has achieved impressive economic achievements in the world. It has become the world's second largest economy and created the "Chinese miracle" of sustained rapid economic growth. However, the rapid rise of China's economy is dominated by scale expansion and extensive development. With the outbreak of "COVID-19", the downward pressure on China's economy has increased, and economic development has entered a period of important strategic opportunities. Based on this macro background, the General Office of the State Council has continuously introduced new measures aimed at promoting the transformation of economic structure and upgrading of the real economy, advancing supply-side structural reforms, and achieving sustainable economic development. Industry is the core focus of the transformation of China's economic kinetic energy from new to old, and it is a strong support. As an important

part of China's economy, the sports industry is an area covered by the transformation of China's economic growth momentum. At present, the conversion of new and old kinetic energy in other industries has achieved initial results, and the development of China's sports industry is still facing many problems. It needs to communicate with other mature technology industries as well as the reference and application of technology, starting from the sports industry itself, targeted conversion of new and old momentum of the sports industry.

2. Connotation of the conversion of new and old kinetic energy of sports industry

"Kinetic energy" in physics refers to the energy of an object due to its motion. Cited in economics, it means the energy to promote economic development. The energy that drives economic development can be understood as the core factor that influences and promotes economic development at a certain stage of economic development [1]. The factors that affect economic development can be divided into the following categories: labor, natural resources, capital, knowledge, and systems. Each stage of China's economic development process has different leading factors affecting economic development: the fishing and hunting economic stage with labor as the leading factor, the agricultural economic stage with land resources as the leading factor, and the industrial economic stage with capital as the leading factor. Knowledge economy stage where knowledge is the dominant element. It can be seen that the core element of each stage of economic development is the core kinetic energy that drives economic development. The process of changing the dominant elements of the development process from one stage to the next is a process in which new kinetic energy replaces old kinetic energy. It is the process of transforming old and new kinetic energy.

The realization of changes in the core elements that drive economic development is to obtain a combination of new production elements through innovation. Therefore, it can be said that the method of transforming old and new kinetic energy is innovation. For the understanding of innovation, Schumpeter's innovation theory is the most classic: innovation is an economic concept, not a technical concept. Innovation is to establish a new production function, that is, the recombination of production factors. The new combination of conditions is introduced into the production system to realize the new combination of production factors or production conditions and obtain new production capacity [2]. The conversion of new and old kinetic energy is closely related to the transformation and upgrading of industries. From the perspective of the nature of development, industrial transformation and upgrading is the external manifestation of the conversion of new and old kinetic energy of economic development; from the law of development, the conversion of old and new kinetic energy is the internal driving force of industrial transformation and upgrading. Industrial transformation and upgrading refers to the advancement of the industrial structure, which refers to the process of continuous improvement of the overall development level of the industry, or the development process of the industrial structure from a low level to a high level [3].

Therefore, the understanding of the conversion of new and old kinetic energy in the sports industry can be understood from the following three levels: obtaining new kinetic energy through innovation, realizing structural optimization outside the sports industry, rationalization and advancement of the internal structure of the sports industry, and various industries in the sports industry high value-added internal output structure. Through the above analysis, the connotation of the conversion of the old and new kinetic energy of the sports industry is: in an innovative way, form a new leading element that affects the economic development of the sports industry, obtain new impetus for the economic development of the sports industry, and replace the old economic development elements that dominate the development of the sports industry, to realize the structural optimization, transformation and upgrading of various industries outside, inside and inside the sports industry, and finally realize the economic development of the sports industry.

3. The era value of the conversion of new and old kinetic energy of the sports industry

3.1 Continuously inject momentum into the sustainable development of the sports industry

The development of the sports industry conforms to the law of Marx's development of things. It is an objective historical process that continuously evolves from low-level to high-level, has internal logic, and does not depend on human will. According to the life cycle theory of industrial development, the development of the sports industry needs to go through an investment period, a growth period, a mature period and a decline period [4]. If you want to achieve the development of the sports industry, make the curve of the life cycle of the sports industry change suddenly, return to the peak, and enter the next stage of development, you must transform the old and new kinetic energy of the sports industry—innovative ways to influence the economic development of the sports industry. The new leading element of the sports industry has gained new impetus for the economic development of the sports industry. Through the transformation of high and new technology, the technical content can be improved to create new demands or to change the environment of economic development, so that it can "rejuvenate" and "bring out new shoots from old trees", and obtain a new round of development. Such reciprocation can achieve the enduring of the sports industry. Therefore, the conversion of new and old kinetic energy of China's sports industry is conducive to the sustainable development of China's sports industry, and is a direct driving force and necessary means to realize the sustainable development of China's sports industry.

3.2 Conducive to the continuous expansion of the total scale of the sports industry

The total scale of China's sports industry is insufficient. First of all, the total scale of China's sports industry is still very small compared with the cultural and tourism industries. According to statistics, the added value of China's sports

industry in 2017 was 781.1 billion yuan, and the proportion of China's sports industry's added value to China's GDP has increased year by year, from 0.64% in 2014 to 0.94% in 2017. In 2017, China culture and related industries accounted for 4.2% of GDP, and tourism and related industries accounted for 4.53% of GDP [5-7]. Secondly, compared with foreign developed countries, the scale of output value of the sports industry and its contribution to the entire national economy are still in the developmental stage and there is still a long way to go. Therefore, the scale of China's sports industry is relatively small, whether it is compared with Chinese culture and tourism, or compared with the development of foreign sports industry. The conversion of new and old kinetic energy of the sports industry can obtain new momentum for the development of the sports industry through innovative methods, thereby accelerating the transformation and upgrading of the sports industry, and obtaining high-quality development of the sports industry. The performance is: the sports industry creates new demand through the conversion of new and old kinetic energy or to meet the current increasing demand of people, the total scale and total output value of the sports industry have achieved rapid development.

3.3 Conducive to the upward climb of the sports industry in the global value chain

With the globalization of economic development, the economic development of any country does not exist in isolation, it will be affected by the world economy, and the sports industry as a part of economic development is no exception. Economic development generally follows the theory of comparative advantage. The knowledge and technology of developed countries are generally relatively advanced, which occupies the two ends of the global value chain such as design, research and development, and sales. The production and manufacturing with low added value will generally be transferred to developing countries because their knowledge, technology, and capital are relatively scarce, and their labor is relatively abundant. Therefore, developing countries generally occupy the middle part of the global value chain. If it is in the middle part of the global value chain for a long time, it may cause the global positioning of China's sports industry to form an inertial dependence and face the risk of being "locked in". At present, the development of China's sports industry is facing such a situation. For example, the sports equipment and equipment manufacturing industry with high technological content and high product added value is still in a relatively blank stage, while the sports shoes and apparel industry with relatively low technological content the development is relatively good [8]. The conversion of the old and new kinetic energy of China's sports industry can obtain new development advantages of the sports industry through innovation, climb up the global value chain, and promote the overall upgrade of China's sports industry trade structure and industrial structure.

4. The path to realize the conversion of the old and new momentum of the sports industry

4.1 Technological innovation to obtain new and old kinetic energy conversion of sports industry

Innovation is a way to realize the conversion of new and old kinetic energy of the sports industry, and is the source of new impetus for the development of the sports industry. Strengthen the innovation of sports smart wearable devices and enter the high-value industrial value chain. According to the global fitness trend survey results, smart wearable devices are enthusiastically sought after by consumers, and smart wearable devices have a high technological content. The current situation is the transformation and development of China's sports goods industry into the high value-added industrial value chain good opportunity. First, do a good job of government public services, create a good market environment, and give play to the basic regulatory role of the market. Furthermore, give play to the leading role of the government, create conditions, encourage enterprises to conduct scientific research, innovation and production of high-tech sports goods such as smart wearable devices, and then the government and the market work together to create a good consumer environment for sports smart wearable devices to ensure the rights and interests of consumers and actively cultivate the consumer market.

Make full use of modern science and technology such as the Internet and big data to improve innovation efficiency. Using modern Internet and big data, first of all, it is possible to quickly understand the needs and preferences of consumers, and to carry out targeted innovations in sports technology, management, and service models; secondly, the social network formed by modern Internet technology can realize organic innovation organization the realization of scientific and technological innovation provides a good organizational environment for scientific and technological innovation and accelerates the acquisition of innovative scientific and technological achievements. Furthermore, new technologies such as the modern Internet and big data provide the cornerstone for technological innovation in the sports industry, allowing the technological innovation of the sports industry to take off on the shoulders of giants, greatly improving the efficiency of technological innovation in the sports industry. Third, pay attention to the coordination and cooperation of production, education and research, and give full play to the joint force. The colleges and universities can train high-quality talents for scientific research institutions and enterprises. They can also provide scientific research results for enterprises together with scientific research institutions. Enterprises can provide opportunities for university and scientific research institutions to transform their results. The innovation and application of industrial knowledge and technology provide a good ecological environment, thereby accelerating the acquisition of new kinetic energy. It is also necessary to strengthen the dominant position of enterprises in collaborative innovation. Encourage enterprises to participate in basic, cutting-edge, and key innovation projects, closely cooperate with universities and scientific research institutions, and form a link for collaborative innovation led by

large enterprises and small and medium-sized enterprises to reduce innovation risks and increase the success rate of innovation.

4.2 The structure is coordinated, showing the new state of the sports industry's new and old kinetic energy conversion

Industrial transformation and upgrading is the external manifestation of the conversion of new and old kinetic energy of the sports industry. The characteristic of the transformation and upgrading of the sports industry is that the structure of the sports industry tends to be rationalized and advanced, so as to realize the coordinated development of the structure of the sports industry. However, the current structure of China's sports industry is unreasonable and uncoordinated.

First, strengthen the development of the sports industry service industry and promote the transformation and upgrading of the industrial structure. According to Petty-Clark's law, with the development of the economy, the industrial structure gradually shifts from the primary industry to the tertiary industry as the leading structure, that is, the more optimized industrial structure is the service industry as the leading industry. Therefore, it is necessary to strengthen the development of the sports service industry. Sports service industry generally refers to nine items except sports manufacturing and sports facilities construction. Among them, the sports competition performance industry and the sports fitness and leisure industry have higher demand elasticity and stronger correlation. Therefore, under the guidance of relevant national policies, continue to strengthen the development of the sports competition performance industry and the sports fitness and leisure industry, and also need to do a good job in the development of the sports service industry, especially the construction of the supporting policy system for the development of the competition performance industry and the sports fitness and leisure industry. Improve, such as consumer protection related policies, fiscal policies, taxation policies, investment and financing policies, etc.

Second, optimize the industrial layout and promote coordinated regional development. At present, China's sports industry presents the status quo of uncoordinated regional development. Differentiated sports industry regulation and control policies can be implemented according to the characteristics of the resource advantages of each region, so as to realize the rational and effective allocation and utilization of resources and form a new layout for coordinated development of various regions. Aiming at the economically developed southeast coast, innovate knowledge, technology, and management models to develop in the direction of high-tech, high-quality, integration and internationalization. In view of the relatively backward economic development in the central and western regions, firstly, use its own good national culture, natural landscape and other resources to develop sports tourism; secondly, formulate policies to form an attractive business environment to attract the degree of dependence on high-level consumers shift production of lower sports goods manufacturing industry. In addition, strengthen the supply of sports infrastructure and other public sports services to cultivate sports consumers.

Third, cater to sports consumption and guide the supply-side structural reform of the sports industry. With economic development, the increase of residents' disposable income, the promulgation and implementation of the national fitness policy, and the impact of China's hosting of large-scale events such as the Olympic Games, Chinese residents' sports consumption awareness and spending power have gradually increased. China's current sports consumption is gradually transitioning from the consumption of sports goods to the consumption of sports services of fitness, entertainment, viewing, and participation. In the era of economic globalization, compared with foreign sports products and services, Chinese sports products and services have a series of problems such as low technology content, quality and performance that cannot meet the needs of consumers, and insufficient brand value. Therefore, the Chinese sports industry needs to cater to the current sports consumption and carry out supply-side structural reforms in order to realize the structural adjustment of the sports industry and promote the conversion of the old and new momentum of the sports industry.

4.3 Sharing development, opening up a new model of sports industry conversion from old to new kinetic energy

Shared development is shared by all people. Shared development has rich connotations. It is understood literally that the right to use or know the goods or information is jointly owned and used by others, sharing and co-construction are inseparable [9]. In the field of sports industry, it means that the whole people will share the scientific and technological achievements of sports and the innovative development of sports industry. The way to realize the conversion of new and old kinetic energy is innovation. Innovation is not just a matter for scientific research workers. Only by "mass entrepreneurship and innovation", the collaborative innovation of industry, university and research can achieve better and faster innovation results. The sharing of knowledge and technology is the prerequisite for realizing the soaring of innovation results, and efficient innovation can produce more sports science and technology results, thereby forming a virtuous circle, accelerating the conversion of the old and new kinetic energy of the sports industry, and promoting the healthy development of the sports industry.

First, improve the public service level of the sports industry and ensure the shared development of the sports industry. In order to realize the shared development of the sports industry and accelerate the acquisition of innovative achievements, on the one hand, the government needs to provide a good policy environment for sharing and co-constructing sports scientific and technological achievements. First of all, it is possible to encourage the sharing of scientific and technological achievements of the sports industry by formulating relevant fiscal and taxation policies. Furthermore, formulate feasible industrial development standards, supervise the behavior of enterprises, ensure the quality of sports products, and avoid the waste of resources of scientific and technological knowledge in the sports industry. On the other hand, the government needs to improve the quality of public services and realize the integrated development of public services. For example, do a

good job in the construction of transportation, hydropower and other infrastructure for the development of the sports industry, guide and encourage the development of supporting industries for the sports industry, and jointly plan and formulate the sports industry in multiple regions development strategies to achieve integration of public services, etc.

Second, open up channels for scientific research and technological achievements and practical applications to build a scientific and technological information platform for the sports industry. In the field of sports, there is still a long way to go between scientific and technological achievements and practical applications, especially in the field of sports industry. For example, many scholars in universities have made more cutting-edge physical training and sports performance or body shaping. Academic achievements, but these achievements only flow in limited units such as universities. Front-line market practitioners, such as gym or sports club staff, are also very eager for this knowledge, but it is difficult for them to obtain corresponding learning opportunities. Therefore, it is necessary to open up the channel between academics and society, and under the guidance of the government, gather forces from all walks of life to build a scientific and technological knowledge sharing platform for the sports industry, share knowledge and technology, and promote the high-quality development of the sports industry.

Finally, use "big data + blockchain" to accelerate the realization of the achievements of the sports industry to be shared by all. Big data relies on Internet technology to re-use idle resources and improve the utilization efficiency of sports industry resources. Blockchain technology is a distributed database technology that can achieve decentralization and improve the security of knowledge exchanges [10]. The combined use of the two technologies can make resource allocation more reasonable, credit information more accurate, get rid of the dependence of traditional industries on oligarchs, open up the information island of big data, solve information sharing problems, and realize the safety and transparency of knowledge and information achievements in the sports industry, healthy growth. The technology of big data and the Internet can not only realize the sharing of domestic knowledge and information, but also connect the world, truly realize the "global community", and realize the sharing of scientific and technological achievements of the sports industry by all people and the world.

5. Conclusion

China's economy is facing an important turning window. In the process of improving the quality of economic development and promoting the conversion of new and old kinetic energy, the sports industry should not only be a bystander, but can become an important driving force. In the context of the conversion of the old and new kinetic energy of the Chinese economy, although the development of my country's sports industry has achieved initial results, there are still many problems. The conversion of the old and new kinetic energy of the sports industry is urgently needed. The professional field has begun to obtain new kinetic energy through innovation to replace the old kinetic energy, but it is advancing in groping and lacks

systematic theoretical guidance. Through the research on the conversion of the old and new kinetic energy of the sports industry, it is possible to deepen and clarify the connotation of the conversion of the old and new kinetic energy of the sports industry, why the conversion of the new and old kinetic energy of the sports industry is carried out, the feasible conditions for the conversion of the old and new kinetic energy of the sports industry, and how to carry out the conversion of the old and new kinetic energy. Give practical guidance for the conversion of the old and new kinetic energy of the sports industry, accelerate the conversion of the old and new kinetic energy of the sports industry, and realize the vigorous and sustainable development of the sports industry.

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