

The Practice Path of High-quality Development of Sports Industry Driven by Digital Economy

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Abstract: The rapid development of digital economy has brought new opportunities and challenges to the sports industry, which helps to promote the high-quality development of the sports industry. This paper focuses on the practical path of high-quality development of the sports industry under the background of digital economy, and puts forward countermeasures and suggestions from the aspects of digital transformation, integrated development, ecological construction, talent training and legal supervision. It injects new impetus into the sustainable and high-quality development of the sports industry.

Key words: Digital Economy; Sports Industry; High Quality Development; Practice Path; Development Strategy

1. Introduction

The innovative application of digital technology is profoundly changing the development pattern of all walks of life, and the sports industry is no exception. The arrival of the digital economy era has brought new opportunities and impetus to the development of the sports industry, which has spawned the transformation and upgrading of the sports industry. How to make full use of the advantages of the digital economy to promote the high-quality development of the sports industry is an urgent practical issue to be solved.

2. Accelerate the Digital Transformation of the Sports Industry

2.1 Deep Integration of Digital Technologies

Digital technology is profoundly changing the development mode and operation mode of the sports industry. To accelerate the pace of digital transformation, the sports industry must deeply integrate digital technology and give full play to the innovation-driven role of digital technology in the sports field. Specifically, we can proceed

from the following aspects: On the one hand, vigorously promote the application of big data in the sports field. Through the collection and analysis of massive data such as athletes' training data, event data and user data, data value can be found, training programs can be optimized, event organization can be improved and user experience can be enhanced to provide decision-making basis for sports development. On the other hand, it actively explores the application prospect of artificial intelligence technology in the field of sports, and uses computer vision, speech recognition, natural language processing and other technologies to realize intelligent analysis and evaluation of athletes' movements and intelligent decision-making assistance, so as to empower the development of sports. It is also necessary to strengthen the innovative application of immersive technologies such as virtual reality (VR) and augmented reality (AR) in sports to create an immersive watching experience and improve the immersion and fun of sports consumption. Finally, promote the extensive application of 5G, Internet of things and other new infrastructure in stadiums and sports events to build new smart sports infrastructure, strengthen the digital transformation of stadiums, build intelligent and networked smart stadiums, improve the service and security level of events, and promote the intelligent upgrade of sports equipment. Sensors and chips are embedded in sports equipment to achieve intelligent monitoring, automatic analysis and other functions, providing intelligent assistance for athletes' training and fitness.

2.2 Innovative Sports Products and Services

Digital technology has injected new vitality into the innovation of the sports industry and spawned a series of innovative sports products and service models. On the one hand, traditional sports products and services have been upgraded with the help of digital technology. For example,

the development of sports training and teaching products through virtual technology, the use of big data analysis to optimize fitness programs, and the use of artificial intelligence technology to assist referee law enforcement continue to improve the quality and level of sports products and services. On the other hand, digital technology has promoted the birth of a number of new sports products and service models, expanding the breadth and depth of sports consumption. For example, e-sports, as a new form of sports, has sprung up and brought new growth points to the sports industry. E-sports clubs, e-competitions and e-sports live broadcasting have all become hot formats in the sports industry in the era of digital economy. New digital sports services such as outdoor sports apps, online fitness courses and smart wearable devices based on mobile Internet have come into being. It has expanded the scenarios and channels of sports services to meet the diversified and personalized sports consumption needs, and new service models such as sports marketing and sports finance are also emerging, opening up new space for the sports industry.[1]

3. Promote the Integrated Development of Sports Industry and Digital Economy

3.1 Increase Investment in Capital and Technology

To promote the deep integration of sports industry and digital economy, it is necessary to increase capital and technology investment as a prerequisite. In terms of capital investment, the government should increase financial support for the digital transformation of the sports industry, improve relevant policy support mechanisms, attract social capital into the field of digital construction of the sports industry, and encourage sports enterprises to increase investment in research and development and actively carry out digital technology innovation. To promote the transformation and upgrading of traditional sports enterprises to intelligent and digital, we should also actively explore the use of new financing models such as government and social capital cooperation (PPP) to leverage social capital into sports digital infrastructure, new sports formats and other fields, form a joint force of government and market funds, and inject lasting impetus into the digital reform of the sports industry. In terms of technology investment, we should focus on

strengthening the research and development and application of emerging information technologies such as artificial intelligence, big data, Internet of Things, and 5G in the field of sports, cultivate a number of scientific and technological innovation enterprises focusing on sports, and encourage sports enterprises to carry out industry-university-research cooperation with scientific and technological enterprises to jointly tackle key core technologies. At the same time, accelerate the intelligent upgrading and transformation of sports events, stadiums and other fields to build new intelligent sports infrastructure, actively layout the sports big data system to build a sound data collection, storage, analysis and other service systems, and promote the application of artificial intelligence in sports intelligent analysis, intelligent referee and other fields.[2] Promote the implementation of new technologies such as 5G, virtual reality/augmented reality in live sports events, sports training, intelligent fitness and other scenes, and constantly increase the penetration and integration of scientific and technological innovation in the field of sports.

3.2 Create A Favorable Environment for Development

It is crucial to create a good policy environment and market environment, which first requires the government and other relevant parties to support and cultivate the emerging digital formats and business models in the sports field, support the digital transformation and digital operation of sports enterprises, and encourage and attract social capital to invest in the digital construction and development of the sports industry. On the other hand, accelerate the construction of sports digital economy industrial parks in China, build a group of professional sports digital economy industrial agglomeration areas to create an agglomeration development environment for the digital development of sports industry, and strengthen exchanges and cooperation with international advanced sports digital economy industrial parks to learn from mature experience. In addition, create a good market environment to further expand the market opening of sports products and services, create a level playing field for sports enterprises to innovate, cultivate and expand the digital consumer market of the sports industry, promote the formation of new sports consumption hotspots and growth poles, improve the open

sharing mechanism of sports industry data resources, break through data resource barriers, and promote the integrated development of all links of the industrial chain. Only by giving full

play to the two forces of the government and the market can we create a good environment for the integrated development of the sports industry and the digital economy.[3]

Table 1: Table of the Practical Path Parameters of the Digital Economy Driving the High-Quality Development of the Sports Industry

order number	The parameter name	index value	Affect the field	goal object	Implementation time
1	Application rate of big data analysis	85%	Athletes' training optimization	Sports team, coach	2024
2	Number of AI technology application scenarios	30+	Intelligent event	Event organizer	2025
3	5G base station stadium coverage	95%	Smart sports venues	Venue operator	2024
4	VR / AR technology experience session	100 Times / year	Watch the games experience	spectator	2025
5	Permeation rate of smart wearable devices	60%	Personal fitness tracking	customer	2025
6	Digital transformation training program	50	Talent ability improvement	Sports practitioners	2024-2025
7	The amount of live views	100 Million times	E-sports promotion	Fitness enthusiasts	2024
8	Online fitness course participants	Five million times	Five million times	Fitness enthusiasts	2024
9	Smart sports equipment update rate	Annual 20%	Fitness enthusiasts	Fitness enthusiasts	2024-2025
10	Investment in sports industry digital project	five billion	upgrade industries	Investors, businesses	2025

4. Build A Sports Industry Digital Economy Ecosystem

4.1 Integration of Industrial Chain Resources

To build the digital economic ecosystem of the sports industry, it is necessary to integrate the upstream and downstream industrial chain resources to form a synergistic effect. Specifically, it is necessary to connect the upstream sports goods manufacturing, sports facilities construction, sports science and technology research and development and other links of the sports industry with the downstream sports event operation, sports venue services, sports training, sports consumption and other links. We will promote close collaboration between the upstream and downstream of the industrial chain, and realize complementary advantages of resources and efficient coordinated development. In the upstream of the industrial chain, sports science and technology innovation should be further strengthened, the development of sports intelligent manufacturing

industry should be promoted, the level of intelligence and personalization of sports equipment should be improved, traditional manufacturing enterprises should be encouraged to carry out technical cooperation with science and technology companies, and emerging technologies such as the Internet of Things, big data and artificial intelligence should be integrated to achieve flexible customized production, while accelerating the construction of intelligent sports facilities.[4] We will build new infrastructure such as smart sports stadiums and virtual simulation training centers, actively cultivate a number of specialized sports technology companies, and strengthen cutting-edge technology research in sports big data and sports analysis. In the middle reaches of the industrial chain, focus on the development of digital service formats such as sports event operation and sports training, use digital technologies such as big data and cloud computing to enable live sports events and virtual interaction to improve event experience, use artificial intelligence, virtual simulation and

other technologies to innovate new sports training models to achieve personalized and intelligent teaching, and accelerate the production and dissemination of sports digital content. Cultivate sports TV programs, sports games and other products. Develop intelligent fitness, online sports community, sports finance and other new formats in the downstream industry chain to meet the personalized and diversified sports consumption needs of consumers, encourage the development of new sports consumption models based on mobile Internet to achieve online and offline integration, cultivate sports digital economy platform enterprises, and create new scenarios for sports digital consumption. In addition, we should pay attention to the protection of intellectual property rights in all links, improve the mechanism of property rights trading and circulation, and maintain the healthy and orderly development of the ecology.

4.2 Build Characteristic Brand Clusters

To build the sports industry digital economy ecosystem, we must build a group of sports brand clusters with distinctive characteristics, cultivate and form regional brand advantages, and achieve differentiated development. We can focus on advantageous resources in specific fields, and vigorously support and cultivate enterprises with good development momentum around key directions such as e-sports, intelligent fitness, and sports science and technology research and development. Build a number of core competitive backbone enterprises and well-known brands. Taking e-sports as an example, Beijing can rely on rich event resources and talent advantages to focus on building world-class e-sports brands and professional clubs, Hangzhou, Chengdu and other cities can target e-sports game research and development, e-sports live broadcasting and other segments, Shanghai can focus on the development of e-sports creative products and other derivative brands, local combined with their own endowment advantages of division of labor and cooperation, dislocation development. Form the linkage effect of brand industry. In the direction of intelligent fitness, we can cultivate a group of fitness apps and product brands based on mobile Internet and wearable devices, encourage enterprises to develop intelligent fitness systems with human-computer interaction through big data analysis of

personalized exercise habits, and provide personalized services such as intelligent private education. The government can cultivate a group of leading enterprises to attract investment and build regional industrial cluster advantages. In the field of sports science and technology, with sports equipment manufacturing as the starting point, it focuses on developing sports science and technology brands such as intelligent sports analysis and virtual simulation training, encouraging the introduction of international advanced technology, cultivating sports equipment brands with independent intellectual property rights and core technology advantages, and developing supporting hardware and software suppliers to form a complete sports science and technology ecosystem.[5]

5. Strengthen the Training of Digital Economy Talents in Sports Industry

5.1 Reform the Education and Training System

To meet the needs of the digital economy era, it is imperative to reform the education and training system. At the level of higher education, it is necessary to adjust the existing sports-related professional Settings according to the changing situation, and add cross-compound majors such as sports big data analysis, intelligent sports equipment design, and sports new media operation to cultivate compound talents who master sports professional knowledge and digital skills. In terms of talent training mode, it is necessary to strengthen the integration of production and education, integrate enterprise practice into the whole teaching process to improve the practicality and pertinence of talent training, establish a flexible credit bank system to support students to take courses across disciplines and disciplines, and broaden their knowledge horizon. Secondly, we should pay attention to the role of vocational education, set up intelligent sports facilities operation and maintenance, sports new media design and production and other skills in short supply, cultivate application-oriented talents for the front line, higher vocational colleges should closely match the needs of industry enterprises to optimize talent training programs, and strengthen the construction of online education resources to provide diversified learning channels for on-the-job personnel. It is also crucial to improve the continuing education

system for in-service personnel, which requires the establishment of diversified re-education platforms, the use of modern information technology means to provide online and offline digital skills training for existing employees, and encourage industry associations, backbone enterprises and other professional training bases to provide personalized and customized training services for employees. Help them learn the necessary digital skills.

5.2 Improve the Talent Introduction Mechanism

Training sports digital economy talents is a gradual and long-term process, so it is necessary to introduce a large number of talents from the external market to make up for the short term talent supply gap. The government should formulate a market competitive talent introduction policy, give preferential measures in terms of salary, entrepreneurship support, household registration and other aspects to increase attraction, and provide broad career development space for talents. Give them a chance to shine. As the main destination of talents, enterprises should also improve the talent introduction and incentive mechanism, establish a market-oriented salary system for ranks, implement flexible distribution systems such as annual salary system and option incentive to improve salary competitiveness, pay attention to creating a good environment and atmosphere for innovation and entrepreneurship, build a stage for talents to play their own value, and smooth career development channels. Establish a scientific career plan to attract and retain talented people. In the introduction of talent channels to maintain openness and diversity, adopt the "overall introduction", "individual recruitment" and other flexible methods, for the shortage of professional talent team can adopt the "hand in hand" overall introduction, the development of sports industry "high-level talent special plan", precise recruitment of top talents at home and abroad, encourage enterprises and universities to carry out school-enterprise cooperation, from the campus directly reserve outstanding fresh talents. It is also necessary to establish a platform for talent exchange and cooperation. Regular talent exchange meetings within the industry are held to promote talent flow, human resource information sharing mechanisms are established to form a unified and open talent market,

provide sufficient development opportunities for talents, and create a relaxed environment for innovation and entrepreneurship are the key to attracting and retaining talents.

6. Improve the Legal Supervision of Sports Industry Digital Economy

6.1 Improve Relevant Laws and Regulations

In the era of digital economy, the sports industry has ushered in new development opportunities but also faces new legal supervision needs. Therefore, relevant laws and regulations must be improved to provide legal protection for the digital transformation and development of the sports industry. First of all, a special sports industry digital development promotion law should be formulated to make top-level system design on the overall requirements, key areas and support measures to promote the digital transformation of the sports industry, clarify the division of responsibilities of relevant departments, establish a coordination mechanism and standardize the application of digital technology in the sports field, and strengthen the protection of data ownership and personal privacy. Timely revision and improvement of existing laws and regulations for emerging digital formats, such as regulating the legality, organization and management of new sports such as e-sports and youth protection; Put forward clear requirements for market access and operation supervision of new models such as Internet fitness training and live sports broadcasting; Special provisions have been made on the dissemination of sports digital content and the protection of sports intellectual property rights, and supporting rules have been formulated in accordance with practical needs in different fields, so that emerging forms of business can be followed by laws.

6.2 Strengthen Supervision and Law Enforcement

Improving laws and regulations is only the basis for strengthening law enforcement and supervision. Relevant government departments should strengthen supervision and law enforcement, establish and improve supervision and coordination mechanisms to regulate law enforcement behaviors, strictly investigate and maintain legal authority for violations of laws and regulations according to law. On the other hand, we should play the role of industry

self-discipline to encourage associations to formulate industry regulations and strengthen self-discipline management within the industry. Give play to the supervisory role of consumer associations and the media, accept the supervision of all sectors of society, respond to concerns in a timely manner, and increase exposure to punish "black" behavior, and standardize market order. In addition, it is necessary to actively explore the establishment of a new regulatory model combining government supervision and industry self-discipline, encourage industry associations to undertake government supervision functions, establish an internal supervision and evaluation system and dispute resolution mechanism, use big data and other technical means to strengthen intelligent supervision and improve regulatory efficiency, and create a new pattern of benign interaction and co-governance between government supervision and industry self-discipline. At the same time, it is necessary to vigorously promote public participation and social governance to smooth the channels for public supervision, improve the complaint and reporting mechanism, give play to the role of mass supervision to strengthen regulatory transparency, take the initiative to accept supervision by public opinion, protect the public's right to know, participate and supervise, and promote the socialization of regulatory work and the rule of law.

7. Conclusion

The digital economy has injected new impetus into the high-quality development of the sports industry and opened up broad prospects. The implementation of the above practical paths is conducive to giving full play to the advantages of the digital economy, stimulating the new

vitality of the sports industry, promoting the high-quality development of the sports industry, and contributing important forces to the construction of a sports power.

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