

Research on Empowering the High-Quality Development of Zigong's Sports Industry with New Quality Productive Forces

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Abstract

As an advanced form of productivity driven by technological innovation, New Quality Productive Forces (NQPF) provide a new pathway for the high-quality development of Zigong's sports industry. Based on the perspective of NQPF, this paper systematically investigates the current development status, existing challenges, and optimization strategies for Zigong's sports industry. Research indicates that Zigong has initially established a new development pattern for its sports industry by improving policy frameworks, upgrading infrastructure, and deepening industrial integration. However, constraints such as an irrational industrial structure, insufficient technological empowerment, and a lack of professional talent remain. In response, this study proposes five strategies: strengthening innovation-driven development, advancing digital transformation, deepening industrial integration, cultivating talent pools, and institutional reform and innovation. The aim is to empower Zigong's sports industry through NQPF, fostering qualitative, efficiency, and dynamic transformations, thereby offering theoretical insights and practical references for the high-quality development of sports industries in similar regions.

Keywords

New Quality Productive Forces; Sports Industry; High-Quality Development; Digital Transformation; Zigong City.

1. Introduction

China's economy is currently in a critical period of transforming its development model, optimizing its economic structure, and shifting its growth drivers. New Quality Productive Forces (NQPF), as an advanced form of productivity led by innovation and characterized by high technology, high efficiency, and high quality, are becoming an important engine for driving high-quality economic and social development. The sports industry, as a green industry, healthy industry, and sunrise industry, possesses unique advantages in expanding domestic demand, increasing employment, and cultivating new economic growth points. Zigong City, an important city in southern Sichuan known as the "Hometown of Sister Jiang, the Salt Capital of a Thousand Years, the Home of Dinosaurs, and the Lantern City of China," boasts rich sports resources and cultural heritage. How to leverage NQPF to achieve high-quality development of its sports industry has become a research topic of significant theoretical value and practical importance. NQPF play a key role in promoting the high-quality development of the sports industry, providing transformative potential. By integrating cutting-edge digital technologies such as big data, artificial intelligence (AI), and the Internet of Things (IoT), it can not only improve the operational efficiency of the sports industry but also optimize management models and provide

personalized consumer experiences. Furthermore, sustainable development is an inherent requirement of NQPF, aligning with environmental protection trends. This shift encourages the sports industry to not only promote economic growth but also create positive social impacts. Zigong's sports industry is actively exploring deep integration with NQPF in its development process, focusing on technological innovation to achieve qualitative, efficiency, and power changes in the sports industry.

This study, based on the perspective of NQPF, systematically analyzes the current development status, existing problems, and proposes corresponding development strategies for Zigong's sports industry. It aims to provide theoretical reference and practical guidance for the high-quality development of Zigong's sports industry, while also offering insights and references for the development of sports industries in similar regions.

2. Current Development Status of Zigong's Sports Industry

2.1. Gradually Improving Policy System

The Zigong municipal government attaches great importance to the development of the sports industry and has successively introduced a series of policy documents, providing strong guarantees for its high-quality development. In 2019, the Municipal Government Office issued the "Implementation Opinions on Accelerating the Development of the Fitness and Leisure Industry," explicitly stating that by 2025, a development pattern for the fitness and leisure industry with rational layout, complete functions, and comprehensive categories should be basically formed, with the total scale of the fitness and leisure industry reaching 4 billion yuan. In 2022, the Municipal Education and Sports Bureau officially issued the Zigong Sports Development '14th Five-Year' Plan, clarifying the goals and tasks for Zigong's sports reform and development during the 14th Five-Year Plan period, charting the course for building a modern sports powerhouse. These policy documents provide comprehensive guidance from industrial layout, business cultivation, market entities, and facility construction, forming a relatively complete policy support system.

2.2. Significantly Improved Infrastructure

In recent years, Zigong City has continuously increased investment in sports facility construction, achieving remarkable results. According to statistics, the number of open public sports venues in the city has grown leaps and bounds over the past five years: from 8 in 2021 to 19 in 2025, and the core open area has expanded from 78,335 square meters to 145,116 square meters, increases of 137.5% and 85.2% respectively. By the end of 2024, the city had over 6,500 various sports venues, with a per capita sports area of 2.96 square meters, ranking 4th in the province. Particularly in August 2025, the Southwest Cycling Sports Center officially opened. This modern comprehensive venue, built to the standard of Union Cycliste Internationale (UCI) Class 1 events, integrates an Olympic-level BMX freestyle arena and an internationally certified track cycling arena. Its hardware facilities have reached top Asian levels, filling a gap in the Southwest region.

2.3. Deepening Industrial Integration

Zigong City actively promotes the integrated development of sports with related industries, forming new models and formats such as sports + tourism, sports + culture, and sports + health. Rong County has successfully built a sports + tourism demonstration industrial cluster. The inaugural Mountain Bike Open held in 2025 boosted sales of specialty products like cherries and tea by 200% week-on-week, directly stimulating over 8 million yuan in catering, accommodation, and specialty agricultural product sales. Online searches for scenic spots like the Rongxian Giant Buddha surged by 150%, and hotel occupancy rates in the county town increased by 80%. The related events of the 7th Sichuan Provincial Mass Fitness Winter Season

innovated the winter sports event model for southern counties, filling the gap in winter sports events in Southern Sichuan and creating a new paradigm of "sports events + seasonal consumption.

Furthermore, Zigong City fully utilizes its local resource advantages, constructing a characteristic water sports industry belt. Based on developing the water resources of the Fuxi River and the Tuo River, it focuses on developing water fitness and leisure sports projects such as kayaking, motorboating, dragon boating, and fishing. Simultaneously, it develops premium routes for motor sports and cycling, focusing on building the Jianshan Mountain Bike Trail sports base, and creating self-driving tourism and cycling premium routes in Eastern Fushun Forest, Gao Shiti in Rong County, Niufu Ancient Town in Da'an, Tianchi Mountain in Gongjing, and Rocket Lake in Yantan.

2.4. Gradual Advancement in Technology Application

Regarding technological innovation, Zigong's sports industry has also begun to actively explore digital transformation. By applying cutting-edge digital technologies such as artificial intelligence (AI), big data, and the Internet of Things (IoT), it aims to improve the operational efficiency of the sports industry and create more personalized experiences for consumers. For example, advanced AI technology is installed on smart ski simulators to provide skiers with a 5D skiing game experience, constructing realistic skiing scenes through the combination of Virtual Reality (VR) and Augmented Reality (AR) technologies. IoT technology can be used to create smart ski villages, where digital ski passes and contactless access systems are adopted. Tourists can purchase and manage ski passes through mobile applications, avoiding long queues at ticket offices.

Meanwhile, Zigong is also promoting the development of Internet + fitness and leisure, encouraging the development of fitness and leisure services supported by mobile internet, big data, and cloud computing technologies, and pushing traditional fitness and leisure enterprises to shift from sales-oriented to service-oriented. By establishing a big data interconnection platform for citizen fitness monitoring and health sports archives, it provides citizens with more scientific and precise fitness guidance services.

2.5. Initial Scale of Talent Team

Zigong has always valued sports talent cultivation. Over the years, it has produced 11 world champions including Gao Min and Tong Ling, and co-trained Paris Olympic champion Deng Yawen. The "Cradle of Champions" continues its legacy. For cycling projects, it co-established the Sichuan Provincial Second Cycling Team with the Provincial Sports Bureau, innovatively creating a full-chain cultivation system of selecting seedlings - nurturing talent outputting/supplying. It has supplied 4 athletes to the national team and 22 to the provincial team, hosting national and provincial training camps over 10 times a year. In 2025, five athletes from Rong County, Gu Jiantao, Liu Zengsheng, Yang Kun, will represent the Sichuan team at the 15th National Games. Gu Jiantao will also compete in the World Rowing Championships held in Shanghai in September.

Furthermore, Zigong has solidly promoted the pilot reform of integrated physical education curriculum. The first batch of 19 sports alliance schools held full-member sports meets, and the second batch of 13 schools conducted large-scale recess activity evaluation and displays, attracting over 60,000 participants including teachers, students, parents, and community members. The youth training system construction has achieved remarkable results. The primary - junior high - senior high integrated training model continues to exert force. Rong County Shuren Primary School and Xijie Primary School were successfully established as national campus football characteristic demonstration schools. Rong County Middle School was

rated as a Sichuan Provincial New Type Amateur Sports School. The number of municipal youth training bases and reserve talent bases expanded to 15.

3. Problems in the Development of Zigong's Sports Industry

3.1. Industrial Structure Needs Optimization

Although Zigong's sports industry has made significant progress, the problem of an unreasonable industrial structure remains prominent. Currently, the industry still relies mainly on traditional sports goods manufacturing and sales, while the development of modern sports services is relatively lagging. Core industries such as sports competition performances, fitness and leisure, and sports training account for a relatively low proportion, making it difficult to form a complete industrial chain and value chain. Meanwhile, the depth and breadth of integration between the sports industry and other industries are insufficient, and the sports+ model has not yet fully exerted its due driving effect.

On the one hand, the innovation capability of sports manufacturing is not strong, product added value is not high, and there is a lack of core technologies with independent intellectual property rights and well-known brands. On the other hand, sports service formats are singular, service quality is not high, making it difficult to meet consumers' diversified and personalized needs. Especially, the supply of high-end sports services is insufficient, and emerging service formats such as sports brokerage, sports finance, and sports information are developing slowly.

3.2. Integration Depth Needs Strengthening

Although Zigong has proposed integrated development models such as sports + tourism, sports + culture, and sports + health, problems such as imperfect integration mechanisms, unreasonable benefit distribution, and insufficient resource sharing still exist in the actual implementation process. The integration of the sports industry with related industries mostly stays at a superficial level, lacking deep integration and innovative breakthroughs.

For example, in the integration of sports and tourism, the current approach mainly involves conducting sports activities in tourist scenic areas or attracting tourists through sports events, lacking genuine product and format innovation. In the integration of sports and culture, the exploration of Zigong's unique well salt culture, dinosaur culture, and lantern culture is not deep enough, resulting in a lack of sports products with cultural connotations and local characteristics. In the integration of sports and health, the model of combining sports and medicine has not been truly established, the construction of a sports health service system is lagging, making it difficult to meet the people's growing health needs.

3.3. Insufficient Empowerment by Technology

Zigong's sports industry lacks technological innovation capability, and the support from NQPF elements is insufficient. This is mainly manifested in the following aspects: First, sports enterprises have weak awareness of technological innovation, insufficient R&D investment, and lack independent innovation capabilities. Second, the channel for transforming scientific and technological achievements is not smooth, the industry-university-research cooperation mechanism is not sound, and a large number of scientific and technological achievements have not been effectively transformed into productive forces. Third, the level of digitalization, networking, and intelligence is not high, and the application of new technologies such as big data, AI, and IoT in the sports field is not extensive or deep enough.

Specifically, the construction of smart sports venues is lagging; most existing venues have a low level of intelligence, making it difficult to provide personalized and precise services. The technological content of sports products and services is not high, lacking innovative products and services based on new technologies. A complete sports big data platform has not yet been

established, and the value of data elements has not been fully utilized. These problems seriously restrict the high-quality development and transformation of Zigong's sports industry.

3.4. Insufficient Talent Supply

The development of the sports industry requires a large number of professionals, but Zigong City has an insufficient reserve of sports talents, especially a severe shortage of high-quality, interdisciplinary talents. On the one hand, there is a lack of sports management and operation talents who understand both sports and business management, such as professionals in sports venue operation, sports event organization, and sports marketing. On the other hand, there is a lack of sports technology talents who master new technologies and skills, such as technical talents in sports data analysis, sports digital platform development, and sports intelligent equipment maintenance.

Meanwhile, in the cross-over fields between sports and other industries, such as sports tourism, sports health, and sports culture, there is a lack of interdisciplinary talents who understand both sports and the knowledge of related industries. These problems seriously restrict the innovative development and quality improvement of Zigong's sports industry. Although Zigong has universities such as Sichuan University of Science & Engineering in the field of education, there are still problems such as lagging discipline construction, single training model, and weak practical ability in the cultivation of sports industry professionals.

3.5. Inflexible Systems and Mechanisms

The development of Zigong's sports industry also faces institutional and mechanistic obstacles, mainly manifested in the following aspects: First, the market mechanism is not sound, the relationship between the government and the market has not been fully straightened out, and there are phenomena of government overstepping, absence, and misplacement. Second, the development of social organizations is insufficient; sports industry associations, sports clubs, and other social organizations do not play their roles fully, and their self-discipline and coordination functions are weak. Third, the policy system is imperfect; the implementation of existing policies is not in place, and they lack pertinence and operability.

Especially in the operation and management of public sports venues, although Zigong has adopted models such as separation of management and operation, and public construction and private operation, promoting market-oriented commercial operation, the systems and mechanisms are still not flexible enough, and the operational efficiency and service quality of the venues are not high. At the same time, the threshold for social capital to enter the sports industry is high, and the approval process is complex, which is not conducive to attracting social capital investment in the sports industry. These problems constrain the vitality and competitiveness of Zigong's sports industry.

4. Strategies for Empowering High-Quality Development of Zigong's Sports Industry with NQPF

4.1. Strengthen Innovation Drive, Enhance Industrial Capability

NQPF take technological innovation as the core driving force. Zigong should give full play to the enabling role of technology to enhance the capability and core competitiveness of the sports industry. On the one hand, it is necessary to strengthen technological innovation in the sports industry and promote the wide application of new technologies such as big data, AI, IoT, and VR in the sports field. For example, building smart sports venues to provide comprehensive services such as online venue booking, ticket sales, information inquiry, fitness guidance, communication and interaction, event participation, and connected consumption, thereby enhancing the intelligence and informatization level of sports venues. On the other hand, it is

necessary to strengthen the innovation of sports products and services, develop new sports products such as smart sports equipment, wearable devices, and virtual sports games, and provide personalized and customized sports services.

At the same time, it is necessary to promote innovation in sports industry models, vigorously develop new models such as the sharing economy and platform economy, and promote the optimal allocation and efficient utilization of sports resources. For example, building a public service platform for the sports industry to provide services such as information release, resource connection, technology transfer, and business incubation, reducing the operating costs of sports enterprises and improving resource allocation efficiency. It is also necessary to promote organizational innovation in the sports industry, encourage sports enterprises to form a number of sports industry groups and clusters with core competitiveness through mergers, acquisitions, restructuring, and strategic alliances.

4.2. Promote Digital Transformation, Enhance Development Momentum

Digital transformation is an important way to develop NQPF. Zigong should accelerate the digital transformation of the sports industry to enhance new momentum for development. On the one hand, it is necessary to strengthen the construction of digital infrastructure for the sports industry, including 5G networks, IoT, and cloud computing platforms, to provide basic support for digital transformation. On the other hand, it is necessary to promote the digital transformation of the entire sports industry chain, from sports product R&D and manufacturing to marketing services and consumer experience, comprehensively advancing digital upgrading.

In terms of digital marketing, it is necessary to make full use of new media platforms such as social media and mobile internet to carry out precision marketing and brand promotion. For example, by developing mobile applications to provide fans with services such as live game broadcasts, instant replays, and digital ticketing, while enabling real-time social media participation. In terms of digital consumer experience, it is necessary to use technologies such as VR and AR to provide immersive and interactive sports consumption experiences. For example, VR technology allows fans to watch games virtually, while AR technology can send real-time game statistics directly to fans' smartphones.

Furthermore, it is important to value the role of data elements, build a big data platform for the sports industry, collect, integrate, and analyze data related to the sports industry, and provide data support for government decision-making, enterprise operation, and public consumption. Through data-driven approaches, achieve refined operation and intelligent decision-making in the sports industry.

4.3. Deepen Industrial Integration, Expand Development Space

NQPF are characterized by integration. Zigong should deepen the integrated development of the sports industry with related industries to expand development space. On the one hand, it is necessary to deeply promote the integration of sports + tourism, fully utilize Zigong's rich tourism resources, and develop sports tourism products and routes. For example, launching premium routes like Cycling the Salt Capital and Night Riding the Lantern City, stringing together the well salt culture, dinosaur wonders, and lantern scenery like pearls, making the turning wheels a link connecting culture and scenery. On the other hand, it is necessary to actively promote the integration of sports + culture, explore Zigong's unique well salt culture, dinosaur culture, lantern culture, and other cultural resources to develop sports products and services with cultural connotations and local characteristics.

Simultaneously, it is crucial to vigorously promote the integration of sports + health, develop models that combine sports and medicine, build sports health promotion centers, and provide services such as exercise prescriptions and health management. It is also necessary to explore the integration of sports + education, strengthen school sports work, carry out youth sports

skills training, and cultivate teenagers' interest and habits in sports. Furthermore, it is important to promote the integration of sports with agriculture, forestry, water conservancy, and other industries, and develop new formats such as rural sports, forest sports, and water sports.

4.4. Cultivate Talent Teams, Strengthen Intellectual Support

Talent is a key element of NQPF. Zigong should strengthen the construction of sports industry talent teams to provide intellectual support for the high-quality development of the sports industry. On the one hand, it is necessary to introduce and cultivate high-level sports industry talents, including sports management and operation talents, sports technology talents, and sports skills talents. This can be achieved by implementing a Sports Industry Leading Talent Plan to introduce a group of high-end sports industry talents with international vision and innovative capabilities. On the other hand, it is necessary to strengthen the cultivation of local sports industry talents, support local universities such as Sichuan University of Science & Engineering in strengthening disciplines and majors related to the sports industry, and cultivate application-oriented and interdisciplinary talents that meet the development needs of the sports industry.

At the same time, it is necessary to establish and improve a training system for sports industry talents, conduct continuing education and vocational training for incumbent personnel, and enhance the professional quality and ability level of existing sports industry personnel. It is also necessary to improve the evaluation and incentive mechanism for sports industry talents, break the limitations of academic qualifications and seniority, establish an ability and performance-oriented talent evaluation standard, and stimulate the innovative and creative vitality of talents. Especially in terms of sports management and operation talents, efforts should be made to cultivate sports entrepreneurs with reasonable knowledge structure, comprehensive ability and quality, and certain personal charm and a sales team with expertise and specialized skills, possessing practical marketing experience and skills for the commercial operation of specific sports service projects. These talents are crucial for the reasonable and efficient utilization of sports facility resources and are directly related to the effectiveness of the comprehensive development and utilization of sports facility resources.

4.5. Deepen Reform and Innovation, Optimize Development Environment

The development of NQPF requires institutional and mechanistic innovation as a guarantee. Zigong should deepen the reform of sports systems and mechanisms to optimize the development environment for the sports industry. On the one hand, it is necessary to correctly handle the relationship between the government and the market, give full play to the decisive role of the market in resource allocation, and allow the government to play its role better. The government should shift from directly providing sports services to purchasing services, formulating standards, and strengthening supervision, creating a fair competitive market environment for enterprises. On the other hand, it is necessary to deepen the delegating power, improving regulation, and upgrading services reform, simplify approval procedures related to the sports industry, lower market access thresholds, and attract social capital to invest in the sports industry.

At the same time, it is necessary to innovate the operational mechanism of public sports venues. Through models such as separation of management and operation, and public construction and private operation, promote market-oriented commercial operation to improve venue operational efficiency and service quality. It is also necessary to strengthen the construction of the sports industry standard system, formulate standards for sports product and service quality, sports venue operation and management, sports training, etc., to improve the standardization level of the sports industry.

Furthermore, it is essential to increase policy support, implement policy measures such as tax incentives, financial subsidies, and land supply to support sports enterprises. In particular, encourage technological innovation in sports enterprises, provide a certain proportion of subsidies for R&D investment, reward the transformation of scientific and technological achievements, and stimulate enterprises' innovation vitality.

5. Conclusion and Outlook

NQPF provide new opportunities and pathways for the high-quality development of Zigong's sports industry. By strengthening innovation drive, promoting digital transformation, deepening industrial integration, cultivating talent teams, and deepening reform and innovation, Zigong's sports industry will achieve qualitative change, efficiency change, and dynamic change, becoming an important force in promoting economic and social development.

In the future, the development of Zigong's sports industry should closely focus on the people's growing sports needs, take high-quality development as the theme, supply-side structural reform as the main line, and technological innovation as the driving force, and accelerate the construction of a modern sports industry system. On the one hand, it is necessary to give full play to Zigong's resource endowment advantages, create sports products and services with local characteristics, complete the sports industry chain, and enhance the added value and competitiveness of the sports industry. On the other hand, it is necessary to actively participate in the sports industry collaboration within the Chengdu-Chongqing economic circle, achieve resource sharing, market co-development, and complementary advantages, and jointly build a western sports industry highland.

With the continuous empowerment of NQPF, Zigong's sports industry will present development trends such as digitalization, intelligence, integration, and greening, becoming an important carrier for meeting the people's needs for a better life and an important force for promoting high-quality economic development. Through continuous efforts, Zigong is expected to become a high-quality outdoor sports destination in Southwest China and a characteristic tourism destination on the Bashu Cultural Tourism Corridor, contributing Zigong's strength to the building of a leading sports nation.

It is important to note that the high-quality development of the sports industry is a long-term process that requires the joint efforts of the government, enterprises, and society, with continuous investment and innovation. Zigong should base itself on the present, focus on the long term, formulate scientific and reasonable development plans, take effective measures to solidly advance, ensure the sustained, healthy, and high-quality development of the sports industry, and provide the people with richer and higher-quality sports products and services.

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