Dynamic Evolution and Influencing Factor Modeling of Policy Instrument Selection for China's Leisure Sports Industry

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Abstract

China has transitioned to a "new normal" economy and reached the critical phase of constructing a moderately prosperous society on all fronts. Chinese individuals actively pursue a healthy lifestyle due to their rising living levels. National fitness, an essential tool for achieving universal health, has been raised to the status of a national policy. According to the connotation of the leisure industry and the characteristics of sports, the leisure sports industry can be characterized as a group of organizations that supply goods, services, and facilities to satisfy the consumption demands of individuals in the leisure sports sector. In a sense, the leisure sports sector can also be viewed as an industry that caters to people's leisure sports requirements. Against this backdrop, the growth of the leisure sports industry is destined to improve the health of everybody and generate a new economic growth sector. Sports industry policy instruments have the roles of communicating the vision of local government policy planning, promoting the achievement of policy goals, and resolving specific sports industry issues. This paper examines China's policy instruments for the leisure sports industry in recent years. It analyzes the factors influencing the selection of policy instruments for the leisure sports industry using multiple approaches, including a literature review, a comparative analysis, and a logic analysis. Several factors were recognized as impactors of policy instrument selection for the leisure sports industry, including policy objective, environment, instrument performance, and organizational path.

Keywords: leisure sports industry, policy instrument selection, influencing factor model

1. Introduction

Relying on the current sports industry policies, the leisure sports industry has begun to take shape in China Ding et al. (2020). China has fiercely encouraged and supported the development of social forces in sports for decades, resulting in a more diversified sports pattern. Social organizations, businesses, and individuals continue to invest aggressively in sports, and actual sports industries have emerged Feng (2012). Due to the favorable policies for sports socialization and industrialization, a longtime issue with the Chinese sports system has been resolved: the lack of funding, equipment, and facilities no longer limits the scale of sports (Liu, Zhang, & Shen, 2019).

For now, the leisure sports industry is still an emerging service industry with an immense potential yet to be untapped. Many aspects of the industry are directly related to the social economy, technology, finance, and culture. The traditional planning concept still constrains both policy researchers and policymakers. As a result, the existing policies in the leisure sports industry cannot satisfy the needs of sports industry development.

In light of those mentioned above, it is vital to scientifically plan and control the growth of the leisure sports industry, design policies that are adaptable to social development, and fulfil the policy goal of transforming China into a leading sports nation. This necessitates the development of multiple policy instruments, i.e., how the government carries out its policies. According to the experience of various industrialized nations, the stable and healthy growth of this business is contingent on the efficacy of policy instruments. Liu (2014) Based on sports industry regulations, a nation can scientifically manage and control the development of the leisure sports industry, track the dynamics of the industry's development, and monitor and solve the industry's current problems (Candia, Pirlone, & Spadaro, 2020).

2. Literature Review

The sports sector has become a cornerstone industry in several developed nations from a worldwide viewpoint. In industrialized nations such as the United Kingdom, France, Germany, Japan, and Australia, the production value of the sports business has reached approximately 3 percent of the national GDP. Many scholars in developed nations, such as those in Europe, Australia, Canada, and the United States, are intrigued by the fact that the relevant policies of the sports industry have increasingly become the primary tool for the national government to develop sports and promote the economic value of sports. Houlihan maintains a consistent focus on the relationship between sports development and sports policies in numerous nations, and he attempts to evaluate the instrumentality and nature of sports policies from multiple vantage points. Through research on youth sports, community sports, and elite sports development, Bloyce and Smith highlight the effects of sports policy. By elucidating the historical development of Australian sports policy, Stewart, Nicholson, Smith, and others propose an Australian sport due to the government's "top design" (better by design) Growing toward a potent concept. Hove and Houlihan analyze the experience between Australian sports policy and sports development to determine the utility of sports policy. With the dawn of the era of China's wonderful health, the development of my country's leisure sports industry has entered a stage of

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maturity, and domestic scholars have also paid attention to and addressed relevant topics. Presently, they are mostly concerned with the debate on existing issues and policy optimization.

Regarding the topic of policy instrument selection, Cai Baoiia feels that the leisure sports business in the eastern region is experiencing imbalanced and uncoordinated growth. To encourage the orderly growth of the sports industry, it is required to comprehend the development law of the tertiary industry and identify priority development regions and industrial sectors. Zhang Sen wrote two scholarly articles on the policy of the leisure sports business. He underlined that the development of my country's leisure sports business must be directed by the needs of the public's leisure sports, based on market research, and that the relevant government agencies should formulate long-term, even forward-looking plans. Implement an industrial operation mechanism that combines state control and market regulation, establish a solid public platform for the development of the leisure sports industry, provide the industry with comprehensive planning and operational guidance, and achieve a positive coupling between the government and the market. Li (2020); Yu (2010) feel, based on their research on the limiting aspects of policy tool selection, that the implementation and implementation of my country's leisure sports industry policy have hit an unprecedented roadblock in establishing a prosperous society. First, conventional consumerism and leisure attitudes constrain citizens' leisure sports. Consumption willingness, and secondly, the insufficiency of inhabitants' leisure and sports consumption demand. Thirdly, the facilities of leisure sports venues cannot match the recreational and sporting consumption needs of locals (Ragheb, El-Wahab, & Ragheb, 2022).

3. Methodology

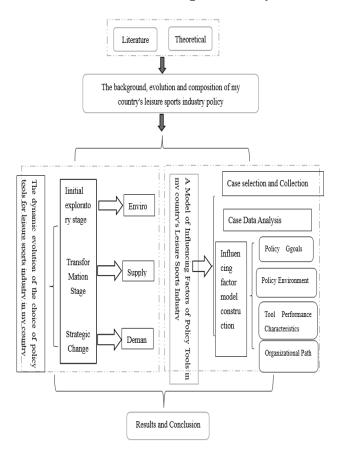
1. Text Analysis Method

Based on media reports and on-site inspections, give case support, draw on two ideas of text analysis and grounded theory, summarize relevant cases, and analyze text coding by extracting essential parts of the two approaches based on the current state of my country's leisure sports business. The selection case of leisure sports industry policy tools is used as the original data, and it is coded and analyzed several times to develop the influencing factor model of leisure sports industry policy tools in my nation.

2. Qualitative Comparative Analysis Method

In studying the choice of policy tools for my country's leisure sports industry, this paper sorts out. It summarizes the dynamic evolution of my country's leisure sports industry policy tools according to the three-dimensional framework of time, policy type and policy strength. Analysis and other methods have extracted valuable enlightenment for this research. The analysis results are compared with data and visualized, and the results are more precise, which has reference significance for optimizing the choice of policy tools for my country's leisure sports industry.

4. Structure of the Complete Study



5. Evolution of Policy Objective

5.1 Policy objective of the initial exploration phase: Building a national fitness system for the public

In 1995, China enacted the *Outline of National Fitness Program*, kicking off the era of national fitness in the country's sports history. The *Outline* promises to promote national fitness among all Chinese as a systematic project. In August that year, the National People's Congress promulgated the first sports law in China: The *Sports Law of the People's Republic of China*. For the first time, the actual state of mass sports was affirmed by laws. In 1996, the *Outline of the Ninth Five-year Plan for National Economic and Social Development and the Long-Rang Objectives for 2010 of the People's Republic of*

China explicitly cites the aim to "implement a national fitness program, popularize mass sports, and improve people's health" for the first time in the national economic and social development plan, marking the debut of national fitness Yu (2010). In the years that followed, several policies were issued to assist the growth of the national fitness system. Outline of Sports Reform and Development in 2001-2010 was published in 2000. My The Outline suggests, for the first time, "building a diverse sports service system for the public" and further clarifies the goal of setting up "a fitness service practice system that cares for, brings convenience to, and benefits the people." The policies mentioned above aim to expeditiously increase the social recognition of national fitness,

investigate the implementation of national fitness in various fields, and establish standards for the industries and projects related to national fitness, thereby forming a relatively comprehensive framework for national fitness.

5.2 Policy objective of the transformation phase: Promoting sports consumption and popular fitness

With the expansion of the national economy, the rise in living standards, and the enhancement of the popular fitness system, the Chinese began to invest more money in fitness and sports. China rolled forth appropriate measures to promote the growth of popular fitness and increase sports consumption.

In 2006, China published The Eleventh Five-Year Plan for Sports, which states that the objective of sports industry development during the Eleventh Five-Year Plan period is to create a sports industry that is compatible with the consumption level of the public Zhu et al. (2018). The State Council adopted the National Fitness Regulations in 2009 and designated August 8 as National Fitness Day. The sports consumption of the masses was accorded a high level of social respect. The General Office of the State Council issued the Guidelines on Accelerating the Development of Sports Industry in 2010, mandating that, by 2020, the added value of the sports industry must account for a much larger proportion of the gross domestic product (GDP); sports public services and market services must be fully integrated, and sports and sports industry must develop in a coordinated manner Liu (2018). In 2011, the Twelfth Five-Year Plan for the Sports Industry established the goals of establishing a leading sports nation and achieving new development and new leaps in the sports industry. Several Opinions on Accelerating the Development of the Sports Industry and Stimulating Sports Consumption advocated in 2014 that the simulation of sports consumption be incorporated into the national economic and social development plan (Ren, Zhao, & Li, 2006).

5.3 Policy objective of the strategic change phase: Realizing all-range, all-dimensional high-quality development

In 2016, the *National Fitness Program* (2016-2020) and the *Guidelines of Healthy China* 2030 were released. The two policies regard health for all as an essential manifestation of national comprehensive national strength and the implementation of a national fitness program as an effective development strategy for China (Yang, 2019). In 2021, the General Administration of Sport published the *Fourteenth Five Year Plan for Sports Development*, with a pledge to build a higher-level public service system for national fitness. To meet the basic needs of society members to participate in sports fitness, the government provided the society with a systematic and complete institutional arrangement composed of public welfare

sports services/products. During the Fourteenth Five-Year Plan period, the relevant departments supported, guided, and strengthened the construction of national fitness venues and facilities and made up for the shortage of public fitness facilities. Besides, the central government supported local areas by building public service facilities, such as sports parks, national fitness centers (small sports complexes), public stadiums, social football fields, fitness trails, and outdoor sports facilities. Centering on the building of a leading sports nation, the *Fourteenth Five Year Plan for Sports Development* makes a comprehensive deployment of the sport's reform in the Fourteenth Five-Year Plan period and pursues the high-quality development of key sports fields in that period.

6. Dynamic Evolution of Policy Instrument Selection

This section examines the policy instruments for China's leisure sports business, classifying them according to their supply type, demand-type, and environment type. The theories of policy tool theory and industrial policy serve as the theoretical foundation for this work. The major body of public policy, particularly the ruling party and government departments, selects policy instruments to implement public policies, achieve policy objectives, and address policy challenges. Industrial policy refers to a government's extensive use of economic, legal, and administrative means, under the objective requirements of the law of industrial development, to adjust the industrial organization structure, industrial structure, industrial technology, and industrial distribution structure to maximize the utilization of social resources. It is a system of policies that encourages the entire industry's sustainable, steady, and healthy growth.

6.1 Policy instrument selection in different phases

6.1.1 Policy instrument selection in the initial exploration phase

In the initial exploration phase of the leisure sports industry in China, the main task is to inform the public of national fitness and leisure concepts. Back then, the people had never heard of the national fitness system and rarely spent time exercising. China gradually released various policies to promote the construction of the national fitness system, aiming to improve the physical fitness of the Chinese people and boost national health while pursuing economic development. Table 1 summarizes the relevant policy documents and their policy instruments and the number of each type of instrument used in each document.

Table 1Summary of policy instruments in the initial exploration phase

G		•			Instrument typ	e
Serial number	Policy name	Year	Issuer(s)	Supply	Environment	Demand
Hullibel				tvne	type	tvne

5	Circular on Further Strengthening the	1996	National Sports	0	5	0
5	Circular on Further Strengthening the Management of Sports Business	1996	National Sports Commission	0	5	0
	Activities					
6	Measures for Evaluating National	1998	National Sports	1	1	0
	Advanced Urban Sports Communities (Trial)		Commission			
7	Opinions on Accelerating the	1999	General	1	2	0
	Development of Sports Clubs and		Administration of			
	Strengthening the Management of Sports Clubs		Sport			
8	Circular on Strengthening Physical	1999	General	5	6	0
	Work for the Elderly		Administration of Sport			
9	Outline of Sports Reform and	2000	General	18	24	4
	Development in 2001-2010		Administration of Sport			
10	Opinions on Further Strengthening	2002	State Council	10	13	1
	and Improving Physical Work in the					
	New Era					
Total				72	155	10

^{*}Policy documents are sourced from government websites, such as the official website of the State Sports Administration, the State Council News Network

In the early exploration phase, the majority of policy instruments are of the environment type (65%), followed by those of the supply type (31%) and those of the demand type (5%). (4 percent). By dividing the number of various types of policy tools at this stage by the overall number of policy tools, the proportion of various policy tools can be determined. According to Table 1, there are 72 supply-type policy tools out of 237. Therefore, the supply-type ratio is 31%. This method is also used to construct and examine Tables 2 and 3.

Table 2 Summary of policy instruments in the transformation phase

6.1.2 Policy instrument selection in the transformation phase

After development, many Chinese began to participate in sports, and the popular fitness system gradually took shape. Since 1995, the number of participants in national fitness events has expanded dramatically. China launched a new phase of sports growth in 2005, known as the transformation period. This phase aims to increase sports participation and general fitness. Table 2 below summarises pertinent national sports policies and their respective policy tools.

Contol					Instrument typ	e
Serial number	Policy name	Year	Issuer(s)	Supply	Environment	Demand
number				type	type	type
1	Measures for the Administration of	2005	General	0	2	0
	Sports Service Certification		Administration of			
			Sport			
2	The Eleventh Five-Year Plan for Sports	2006	General	22	37	4
			Administration of			
			Sport			
3	Regulations on National Fitness	2009	State Council	6	25	1

4	Guidelines on Accelerating the Development of Sports Industry	2010	State Council	2	12	1
5	National Fitness Program (2011-2015)	2011	State Council	14	19	2
6	The Twelfth Five-Year Plan for Sports Industry	2011	General Administration of Sport	3	12	3
7	Reform Plan of Separation of Management and Operation of Chinese Professional Football League	2012	Chinese Football Association	0	11	1
8	The Twelfth Five-Year Plan for the Construction of Public Sports Facilities	2012	General Administration of Sport	6	13	2
9	Implementation Opinions on Encouraging and Guiding Nongovernmental Capital Investment in Sports Industry	2012	General Administration of Sport	4	12	2
10	Opinions on Strengthening the Operation and Management Reform and Innovation, and Improving the Public Service Level of Large Sports Venues	2013	General Administration of Sport	5	18	0
11	Several Opinions on Promoting the Integrated Development Between Cultural Creativity and Design Services and Related Industries	2014	State Council	1	8	1
12	Accelerating the Development of Sports Industry, Stimulating Sports Consumption, and Promoting Popular Fitness	2014	State Council	2	4	0
13	Several Opinions on Accelerating the Development of Sports Industry, and Stimulating Sports Consumption	2014	State Council	1	14	0
Total				66	187	17

^{*}Policy documents are sourced from government websites, such as the official website of the State Sports Administration, the State Council News Network

The transformation phase witnessed a reduction in the proportion of supply-type policy instruments (from 31% to 24%), an increase in the proportion of environment-type policy instruments (from 65% to 70%), and a small increase (+6%) in the proportion of demand-type policy instruments, which remained low. Environmental type tools increased, and institutions and policies were standardized.

$6.1.3\,Policy$ instrument selection in the strategic change phase

As a result of the transformation phase's expansion of the leisure sports business, the number of Chinese people engaged in physical fitness and exercise increased dramatically. People were becoming increasingly conscious of the significance of physical fitness and exercise. In addition, the success of the 2008 Olympics in Beijing spurred the growth of China's sports industry significantly. China has entered a new phase of sports growth since 2015: the strategic transition phase. This phase aims to achieve comprehensive, multidimensional high-quality development. Table 3 provides a summary of pertinent national sports policies and policy tools.

 Table 3

 Summary of policy instruments in the strategic change phase

Serial					Instrument type	!
number	Policy name	Year	Issuer(s)	Supply	Environment type	Demand type
Humber				type		
1	Detailed Plan for Football Reform in China	2015	State Council	6	38	1
2	Guidelines on Accelerating the	2016	State Council	3	24	0
	Development of Fitness and Leisure					
	Industry					
3	Guidelines of Healthy China 2030	2016	State Council	4	52	1
4	The Thirteenth Five-Year Plan for Sports	2016	General Administration	3	39	2
	Development		of Sport			
5	National Fitness Program (2016-2020)	2016	State Council	4	12	1
6	Development Plan for Ice and Snow Sports	2016	Multiple departments /	1	12	0
	(2016-2025)		ministries			

Serial				Instrument type		
number	Policy name	Year	Issuer(s)	Supply type	Environment type	Demand type
7	Development Plan for Water Sports	2016	Multiple departments / ministries	0	10	0
8	Development Plan for Aviation Sports	2016	Multiple departments / ministries	2	9	0
9	Development Plan for Mountain Outdoor Sports	2016	Multiple departments / ministries	0	12	0
10	Action Plan for Sports Tourism Development along the Belt and Road	2017	General Administration of Sport	0	9	0
11	Development Plan for Cycling	2018	Multiple departments / ministries	4	8	0
12	Development Plan for Marathon	2018	Multiple departments / ministries	4	5	1
13	Development Plan for Fencing	2018	Multiple departments / ministries	4	4	3
14	Outline for Building a Leading Sports Nation	2019	State Council	12	13	6
15	Opinions on Promoting National Fitness and Sports Consumption and Boosting High-Quality Development of Sports Industry	2019	State Council	7	9	1
16	Healthy China Action (2019-2030)	2019	National Health Commission	4	4	0
17	Guidelines on Accelerating the Development of Sports Competition and Performance Industry	2019	General Administration of Sport	0	3	1
18	Opinions on Promoting and Standardizing the Development of Social Sports Clubs	2020	General Administration of Sport	6	25	1
19	Fourteenth Five Year Plan for Sports Development	2021	General Administration of Sport	4	42	1
20	Code of Conduct for Extracurricular Physical Training	2021	General Administration of Sport	2	20	0
21	National Fitness Program (2021-2025)	2021	State Council	8	6	3
22	Opinions on Strengthening the Management of Equipment Allocation and Construction for National Fitness in Public Places	2022	General Administration of Sport	0	11	0
Total	jo. Tientone i minosi mi i mono i mico			78	367	22

^{*}Policy documents are sourced from government websites, such as the official website of the State Sports Administration, the State Council News Network

The figures mentioned above demonstrate that most policy instruments deployed in this phase are of the environment type (367, 78 percent). The proportion of this type increased further. The second most prevalent instrument type is supply (78, 17 percent). The percentage in this category continued to decrease. The demand type instruments have the lowest adoption rate (22, 5 percent). This proportion was essentially identical to that of the previous phase.

During the time of strategic transition, China adjusted its policies. Diverse, supportive policies for the leisure sports industry were established to foster its growth. In addition, the General Administration of Sport was no longer the only entity that issued pertinent policies. During this time, most policies were released collaboratively by numerous departments/ministries Guo (2020). These revised policies substantially boosted the growth of recreational sports.

6.2 Policy intensity in each phase

Table 4

In a limited sense, policy intensity, a measure of a policy's vigor, displays the country's emphasis on and level of support for a particular industry. It is feasible to comprehend China's significance in recreational sports by evaluating the three phases of China's sports sector policy.

6.2.1 Scoring standards for policy intensity

As a fundamental element of the policy, policy intensity measures the importance and authenticity of the policy document. Referring to the scoring of policy intensity by He Jixin in Supply Features and Composite Evaluation of Innovation and Entrepreneurship Policies for Chinese Colleges and Universities: Quantitative Analysis under A Three-Dimensional Framework, this paper proposes quantification and scoring standards for policies in the leisure sports industry, in the light of the features of the relevant policies (Table 4).

Quantification and scoring standards

Standards	Score
Laws promulgated by the National People's Congress and its Standing Committee	5
Regulations, directives, and regulations promulgated by the State Council (including the General Office); Orders	4
of various ministries	
Interim regulations and stipulations, plans, decisions, opinions, measures, and standards promulgated by the	3
State Council (including the General Office); Rules, regulations, and decisions promulgated by all bureaus,	
ministries, and commissions (including the General Office) under the State Council	
Opinions, measures, guidelines, interim regulations, detailed rules, standards, outlines, plans, systems, and	2
articles of association promulgated by all bureaus, ministries, and commissions (including the General Office)	
under the State Council	
Circulars	1

^{*}Refer to Zhang J.M. Quantitative table of China's policy efforts (Zhang et al., 2022).

6.2.2 Quantitative analysis of policy intensity

Following the above scoring standards, 45 national policy documents in the three phases were scored, with year as the unit. Figure 1 shows the number of policies released each year and the total policy intensity score.

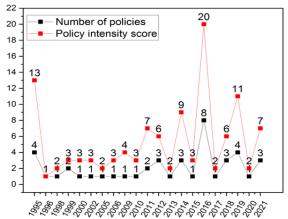


Figure 1. Number of policies and policy intensity in each year

*Policy documents are sourced from government websites, such as the official website of the State Sports Administration, the State Council News Network

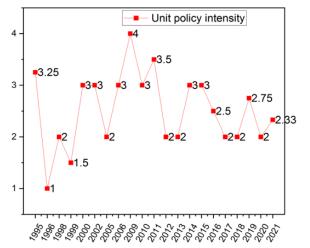


Figure 2. Unit policy intensity in each year *Policy documents are sourced from government websites, such as the official website of the State Sports

Administration, the State Council News Network

As shown in Figure 1, the policy intensity fluctuated significantly in 1995, 2011, 2014, 2016, and 2019. In these five years, China issued multiple policies on different levels, including the Sports Law of the People's Republic of China, the National Fitness Program (2011-2015), The Twelfth Five-Year Plan for Sports Industry, and Several Opinions on Promoting the Integrated Development Between Cultural Creativity and Design Services and Related Industries. Some of these policies are national, while numerous departments/ministries in collaboration released others. Consequently, China would increase policymaking for the leisure sports industry every few years and publish rules that are more in line with the current societal development to accelerate the industry's growth.

The intensity of leisure sports policies can also be quantified by unit policy intensity, the ratio of annual policy intensity to annual policy count. Each year's unit policy intensity is depicted in Figure 2. As shown in Figure 2, the peak years of unit policy intensity are the milestones of leisure sports development: 1995, 1999, 2000, 2009, 2011, 2014, and 2019. The peak years largely overlap the time nodes with strong fluctuations of policy intensity. This means China has attached great importance to leisure sports development. Excluding the years already analyzed above, in 1999, the General Administration of Sport issued the Outline of Sports Reform and Development in 2001-2010; in 2000, the State Council promulgated the Opinions on Further Strengthening and Improving Physical Work in the New Era; in 2009, the State Council released the Regulations on National Fitness. In each of these years, the unit policy intensity was high because policy documents of high intensity were released, despite the relatively few numbers of new policies.

7. Modeling of Influencing Factors

The accompanying sections examine the dynamic evolution of policy instrument selection for the leisure sports business, classify the national policies about leisure sports by phase, and assess the discovered policies. This section explores the factors that influence the selection of policy instruments for the leisure sports business and

develops a model for the influencing elements.

7.1 Analysis of influencing factors

By reviewing pertinent literature and analyzing the policy instruments for China's leisure sports, four factors that influence the selection of effective policy instruments for China's leisure sports industry were identified: policy objective, policy environment, instrument performance, and organizational path (Han, 2019).

The policy objective is the effect that policymakers anticipate the policy instrument will have.

The selection of policy instruments for the leisure sports business is influenced by three components of the policy environment: government capacity, societal capacity, and social heterogeneity. Government capacity refers to the government's "ability to make its own will a reality." Social capacity refers to the "self-organization and active involvement capabilities of the society and its organizations and individuals relative to the state in social advancement and development." Social heterogeneity refers to "the degree to which a society is differentiated." Social heterogeneity is strongly connected with the number, variety, and interest gap across groups and organizations.

The performance of an instrument refers to the effectiveness of a policy instrument. Effective selection of policy instruments necessitates a comprehensive evaluation of each instrument's strengths and weaknesses. The performance of an instrument is a reflection of the instrument's inherent qualities. It influences three facets of instrument selection: instrument performance characteristic, item kind, and department task.

When selecting new policy instruments, the government will be constrained by the organizational culture and operating mechanism. The organizational route influences instrument choice in three ways: organizational culture, operation mechanism's impact, and old instruments' impact.

7.2 Case selection and data collection7.2.1 Case Selection

After evaluating the leisure sports business and the recent hot events in China's sports development (especially the impending Beijing 2022 Winter Olympics), this section examines the ice and snow industry development policies. Ice and snow sports, and recreational activities, are popular in northern China.

The ice and snow sports business encompasses all economic, cultural, and social activities dependent on ice and snow resources. Weber, De Bosscher, and Kempf (2018) China is widely promoting local culture and maximizing the use of ice and snow resources to construct a distinctive ice and snow system based on ice and snow consumption, tourism, and sports (Li, 2020).

7.2.2 Data collection

Considering the uniqueness of leisure sports policies, the research team queried the relevant data on authoritative government websites, such as the official website of the General Administration of Sport, the news websites of the Chinese government, and the official websites of the people's government of each province and municipality. Apart from that, the team members searched for the records of relevant policies in our university library and browsed through numerous domestic and foreign journals and books on ice and snow before identifying the necessary data. In addition, the authors summed up all the national and provincial policies on the ice and snow industry released between the joint issuance of the Development Plan for Ice and Snow Sports (2016-2025) and the end of 2021. The literature survey obtained 12 qualified policies on the ice and snow industry (Table 5).

Table 5

Recent policies on snow and ice sports in China

Serial number	Policy name	Year	Issuer(s)
1	Development Plan for Ice and Snow Sports (2016-2025)	2016	General Administration of Sport and other departments
2	National Construction Plan for Snow and Ice Venues and Facilities (2016-2022)	2016	General Administration of Sport and other departments
3	Plan for the Promotion and Popularization of Winter Sports for the Masses (2016-2020)	2016	General Administration of Sport and other departments
4	Opinions on Vigorously Developing Snow and Ice Sports by Taking the Opportunity of Beijing 2022 Winter Olympics	2019	State Council
5	Action Plan for the Development of Ice and Snow Tourism (2021-2023)	2021	General Administration of Sport and other departments
6	Development Plan of Heilongjiang Province for Snow and Ice Equipment Industry (2017-2022)	2017	Development and Reform Commission of Heilongjiang Province
7	Implementation Opinions on Making Ice and Snow Industry Bigger and Stronger	2016	Party Committee and People's Government of Jilin Province
8	Implementation Opinions on Vigorously Developing Ice and Snow Sports and Ice and Snow Economy by Taking the Opportunity of Beijing 2022 Winter Olympics	2019	Party Committee General Office and People's Government of Jilin Province

Serial number	Policy name	Year	Issuer(s)
9	Implementation Opinions on Accelerating the Development of	2020	People's Government of Liaoning
	Snow and Ice Sports	2020	Province
10	Implementation Opinions of Beijing Municipality on Implementing		Beijing Municipal Sports Bureau
	the "Opinions on Vigorously Developing Snow and Ice Sports by	2020	
	Taking the Opportunity of Beijing 2022 Winter Olympics"		
11	Circular on Measures for Vigorously Developing Snow and Ice		People's Government of Yunnan
	Sports by Taking the Opportunity of Beijing 2022 Winter	2020	Province
	Olympics		
12	Implementation Opinions on Supporting the Development of Ice	2017	People's Government of Hebei
	and Snow Sports and Industry (2017-2022)	2017	Province

^{*}Policy documents are sourced from government websites, such as the official website of the State Sports Administration, the State Council News Network

7.3 Case analysis

Table 6

Drawing on the grounded theory, a common method for data analysis, the factors affecting the selection between ice and snow industry policy instruments were deeply mined through three layers of coding: open coding, axial coding, and selective coding.

Before coding, each policy document was numbered. The national documents were numbered before provincial ones. Then, all documents were numbered chronologically. Furthermore, the sections and clauses of each numbered policy were coded sequentially (Table 6).

Codes of policies in the ice and snow industry

Serial number	Policy name	Contents being analyzed	Code
1	Development Plan for Ice and Snow Sports (2016-2025)	Focusing on teenagers, fully guide the masses to participate in ice and snow sports, promote fitness and leisure projects of ice and snow, organize diverse ice and snow events, to meet the multilevel, diversified needs for participating in ice and snow sports	1-2-2-1
2	National Construction Plan for Snow and Ice Venues and Facilities (2016-2022)	Focusing on the popularization of ice and snow sports and the development of fitness and leisure projects for ice and snow, actively construct various ice and snow venues and facilities to meet the growing and upgrading demand of the people for ice and snow sports	2-2-2-1
3	Plan for the Promotion and Popularization of Winter Sports for the Masses (2016-2020)	Under the leadership of the Beijing-Tianjin-Hebei region, promote the development in the three northeastern provinces, play the latermover advantage of Xinjiang and Inner Mongolia, and drive the collaborative development in southern China. Deploy the ecosphere (ecological zone) of winter sports among the masses in all dimensions	3-2-1
12	Implementation Opinions on Supporting the Development of Ice and Snow Sports and Industry (2017-2022)	Adhere to innovation and development, accelerate administration streamlining and power delegation, and combine power delegation with regulation. Optimize the service reform, provide supporting policies, and improve the quality and level of ice and snow sports	 12-1-1- 1

^{*}Policy documents are sourced from government websites, such as the official website of the State Sports Administration, the State Council News Network

7.3.1 Open coding

Open coding conceptualizes and categorizes the collected data. Specifically, the data are decomposed and recombined to extract the intrinsic meaning. Open coding aims to recognize the phenomenon, define the concept, and discover the category.

The relevant documents were numbered from 1 to 12 in the

order of time and the level of issuers. The numbered texts were analyzed word by word and sentence by sentence. The relevant concepts were extracted: "promoting fitness and leisure projects of ice and snow" and "forming a complete ice and snow sports service system". The initial concepts were drawn from the ice and snow policies through repeated text comparison, completing open coding (Table 7).

Table 7

Results of open coding

Code	Opening codes	Basic facts
1-2-2-1	Multiple levels and	(II) Basic principles
	diversification	Universal popularization, optimization, and improvement: Focusing on
		teenagers, fully guide the masses to participate in ice and snow sports,
		promote fitness and leisure projects of ice and snow, organize diverse ice
		and snow events, to meet the multi-level, diversified needs for
		participating in ice and snow sports
1-2-2-2	Government	Market leadership plus government guidance: Advance the structural
		supply-side reform of ice and snow sports by expanding increment,
		enhancing quality, and improving market mechanism. Give full play to the
		role of the government, develop planning policies, provide public services,
		and create a social atmosphere that values, supports, and encourages
		participation in ice and snow sports
•••		
12-1-1-1	Institution and mechanism	Adhere to innovation and development, accelerate administration
		streamlining and power delegation, and combine power delegation with
		regulation. Optimize the service reform, provide supporting policies, and
		improve the quality and level of ice and snow sports

^{*}Policy documents are sourced from government websites, such as the official website of the State Sports Administration, the State Council News Network

7.3.2 Axial coding

Table 8 *Results of axial coding*

Code	Axial codes	Open codes
1-2-2-1	Social heterogeneity	Multiple levels and diversification
1-2-2-2	Government capacity	Government
12-1-1-1	Impact of operation mechanism	Institution and mechanism

^{*}Policy documents are sourced from government websites, such as the official website of the State Sports Administration, the State Council News Network

Through open coding, the programs are already abstracted and imagined. Nonetheless, the resulting concepts and categories are logically distributed, making identifying a more general core category challenging. Consequently, axial coding followed open coding. The objective is to investigate the logical relationship between categories **7.3.3 Selective coding**

further, collect information on the features and dimensions of each category, and improve the coherence of the codes. In the analysis of ice and snow policies, the findings of open coding were sorted, modified, and summarized to produce axial codes with better logical linkages. Table 8 lists some of the results of axial coding.

Table 9

Results of selective coding

Results of selective coung		
Selective codes	Axial codes	Open codes
Policy objective	Objective	Objective and responsibility
Instrument performance	Instrument performance feature	Fairness and effectiveness
	Item type	Public service
	Department task	Department and task
Organizational path	Organizational culture	Concept and culture
	Impact of operation mechanism	Institution and mechanism

	Impact of old instruments	Old instrument
Policy environment	Government capacity	Government and agency
	Social capacity	Market and society
	Social heterogeneity	Diversity and difference

^{*}Policy documents are sourced from government websites, such as the official website of the State Sports Administration, the State Council News Network

As the last stage of the three-layer coding, selective coding intends to integrate and identify the most important research theme and correlate the theme with other concepts. The strategy is to select a core category out of multiple primary categories. The core category is associated with different primary categories and can explain the other primary categories. The core category connects all primary categories into a storyline, which briefly explains the relationship between primary categories (Table 9).

7.3.4 Category testing

To verify the accuracy and objectiveness of the code analysis, the categories and primary categories were subject to the validity and reliability test and theoretical saturation test.

(1) Validity and reliability test

The policy texts were all excerpted from the full text on the official websites of the State Council and local governments and the websites of mainstream official media. The scientific nature and effectiveness of the original data are undisputed, eliminating the need for validity and reliability test.

The consistency between encoding and decoding personnel determines our research results' scientific level and credibility. The Kappa coefficient was employed to test the validity of the codes. Two people familiar with the coding rules were invited to encode three policy instruments. The calculated K-value was 0.88, indicating a high consistency between the encoding personnel.

(2) Theoretical saturation test

Two students familiar with the grounded theory carried out open coding, axial coding, and selective coding of 12 policy documents. No new category was discovered, suggesting that the codes passed the theoretical saturation test.

7.3.5 Code analysis

Encoding personnel, familiar with the grounded theory's coding rules, carried out the three-level encoding of the 12 policies on the ice and snow leisure industry. In this way, 214 effective codes were obtained. These codes fall into four categories of selective coding: policy objective (36), instrument performance (46), organizational path (57), and policy environment (75). The coding results were summarized and displayed as a bar chart (Figure 3). Figure 3 is derived from a summary of the coding results.

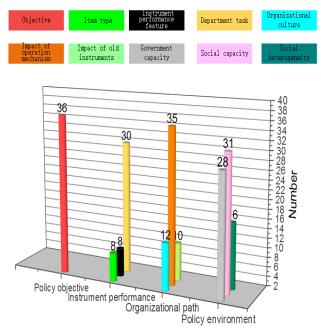


Figure 3. Coding results of grounded theory *The data comes from a summary of the coding results

Policy purpose frequently occurred among the axial times). Item category, instrument performance characteristic, and department task each featured eight times. Note that the department task frequently appears in the instrument performance feature, including 65% of instrument performance codes. Organizational culture, operating mechanism impact, and the impact of ancient instruments were mentioned 12 times, 35 times, and 10 times, respectively. The influence of operating mechanisms frequently appears in the organizational path, comprising 61% of organizational path codes. Government capacity, social capacity, and social heterogeneity featured 28 times, 31 times, and 16 times. and 41% of policy environment codes, respectively, were dedicated to government and social capacity.

7.4 Modeling of influencing factors

According to the above analysis case study results and the case study results, it was concluded that the ten factors affecting the policy instrument selection of the leisure sports industry in China could be divided into four core factors and six secondary factors. The four core factors are policy objective, government capacity, social capacity, and social heterogeneity. Among them, social heterogeneity has the weakest effect on selecting policy instruments. The six secondary factors include item type, instrument performance

feature, department task, organizational culture, the impact of operation mechanism, and the impact of old instruments. Among them, department tasks and the impact of operation

mechanisms have relatively strong effects on the selection of policy instruments. On this basis, this paper establishes a model of these influencing factors (Figure 4).

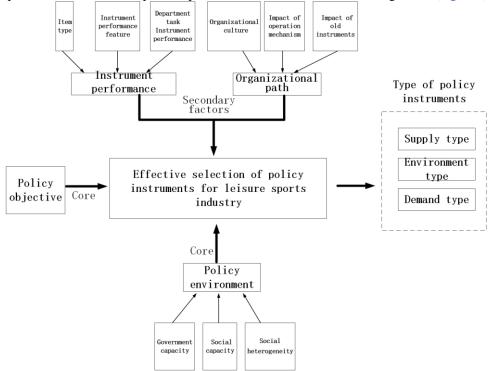


Figure 4. Model of influencing factors

*The model is organized and drawn by myself. Policy documents are sourced from government websites, such as the official website of the State Sports Administration, the State Council News Network

7.4.1 Core factor: Policy objective

The selection of policy instruments is guided by the policy objective or the desired impact or purpose of a policy. The policy objective was coded 36 times in our case study, accounting for 17 percent of all codes. The percentage is bigger than any of the other nine criteria.

Regarding the impact of policy objectives on policy instrument selection, a single policy aim is distinct from many objectives. Government agencies would choose diverse policy instruments in response to varying policy aims. For example, the Opinions on Vigorously Developing Snow and Ice Sports by Taking the Opportunity of Beijing 2022 Winter Olympics sets such an objective: striving to make the overall development of ice and snow sports in China more balanced and significantly increase the popularity of the sports. To realize this policy objective, supply type policy instruments were utilized, such as the construction of sports facilities, training of sports talents, and support of sports information. Likewise, the Development Plan for Ice and Snow Sports (2016-2025) mentions the following policy objective: "forming a development pattern of ice and snow sports with immense popularity, strong competitive power, and complete industrial system." Environmental policy instruments, such as the strategic measure of sports fitness and leisure activities and the tactical measure of sports competition and performance activities, were chosen to attain this purpose.

7.4.2 Core factor: Policy environment

The policy environment can be broken down into government capacity, social capacity, and social heterogeneity. The policy environment accounts for 35% of all codes in our code analysis on ice and snow policies. The government capacity, social capacity, and social heterogeneity were 13%, 14%, and 7%.

The choice of applicable policy instruments is influenced by the government's capacity to regulate the leisure sports business and resolve its policy issues. When government capacity is strong, supply-type policy instruments are favoured, but environment-type policy instruments are chosen when government capacity is poor. For instance, the instruments related to government capacity in the *Guidelines for Accelerating the Development of the Fitness and Leisure Industry* include both environment type and supply type. The supply type devices provide public services (government-organized sports fitness and leisure activities) and scientific support for sports (the government's sports media and information services). The environmental instrument is monetary assistance.

Social capacity influences the selection of policy instruments for recreational sports. The primary manifestation of the effect is the capacity of social organizations to engage in the growth of the leisure sports industry. In the Guidelines on Accelerating the Development of the Fitness and Leisure Industry, the government selects various policy instruments based on the social force, such as the environment-type instrument of strategic measure (promoting transformation and

upgrading) and the supply-type instrument of providing scientific support for sports.

Social heterogeneity accounts for 7% of the total codes and is a weak influencing factor in the policy environment. The people's demand for diverse and multi-level leisure sports impacts the utilization of policy instruments. When there is a huge demand for infrastructure and leisure sports venues, the government tends to choose supply-type instruments, such as constructing sports venues. The government supports the construction of ice and snow venues, and national fitness venues appear in some of the collected policies, namely, the Guidelines on Accelerating the Development of Fitness and Leisure Industry and the Development Plan for Ice and Snow Sports (2016-2025). When the people demand a single kind of leisure sports (e.g., the athletes need to participate in foreign competitions or learn advanced sports knowledge), the government often adopts demand-type instruments. For example, the demand type instrument of sports communication is employed in the Reform Plan of Separation of Management and Operation of the Chinese Professional Football League (Wang et al., 2022).

7.4.3 Secondary factor: Instrument performance

Instrument performance involves three sub-factors: instrument performance feature, item type, and department task. In the above code analysis on ice and snow policies, instrument performance feature, item type, and department task take up 4%, 4%, and 14% of all codes, respectively. The government is likely to use a policy instrument that is favorable and highly effective. Specifically, supply-type instruments require the government to offer direct external funding and talent development for sports sector development. Demand-type instruments provide marginally more support than supply-type instruments. With a greater regulatory influence, tools of the demand type reduce the consequences of market uncertainty on the leisure sports business primarily through purchase or control. Atmosphere-type instruments have a subtle effect on the sports industry: by providing a favorable environment, they foster the growth of the sports sector. The selection of the policy instrument is legitimate only if the item type corresponds to instrument performance. Generally, supply-type instruments are chosen in the public welfare sector, which encompasses the governmentfunded outdoor fitness parks and outdoor basketball courts, which are all open to the public at no cost. The government prefers environment-type instruments for charged sports items such as sports venues constructed by sports clubs, outdoor ice and snow venues, and enterprise-manufactured sports equipment, basketball, badminton, and football. The government would encourage the growth of these businesses through policy assistance and legal regulation. Each government agency has its unique mission. For example, the Ministry of Education provides necessary rules for campus-based talent development in the leisure sports industry. The development of athletic talent is a tool of supply. The Ministry of Finance encourages the growth of the leisure sports business through fiscal assistance and tax preference. This pertains to the financial assistance mechanism for the environment. In addition, sports bureaus enable athletes to participate in international exchanges and tournaments, a demand-based device. The selection of policy instruments for the leisure sports business relies heavily on departmental duties.

7.4.4 Secondary factor: Organizational path

The organizational path includes three dimensions: organizational culture, operation mechanism's impact, and old instruments' impact. The above code analysis on ice and snow policies, organizational culture, operation mechanism impact, and old instruments take up 6%, 16%, and 5% of all codes, respectively.

As a kind of organizational path, organizational culture affects the selection between policy instruments. Some organizations provide sports competition services, such as organizing sports activities held by various nongovernment departments and discovering excellent players for multiple competitions. These organizations are committed to serving the masses by organizing competitions. The government departments prefer environment-type instruments like legal regulation, policy support, and financial support for these organizations. The entertainment organizations aim to enrich people's sports life. Typical examples include community fitness teams, night runs, and square dance teams. The government prefers supply-type instruments for these organizations, namely, providing venues and technical support.

The impact of the operation mechanism frequently emerged in the initial analysis, including 16 percent of all codes. If the original operation mechanism is not abandoned during the selection of policy instruments, the use of demand type and supply type instruments would be negatively impacted. The operating mechanism can be viewed as the entirety of a recreational sports activity in which government departments, businesses, and the general public play their respective responsibilities and collaborate. If the original institution and system remain in place, the government frequently chooses environmenttype tools, such as strategic support and legal control, to influence businesses or social organizations. Following the government's recommendations, businesses will offer the public the appropriate recreational sports. For example, the Development Plan for Cycling adopts the environment type instrument of strategic support. If people's demand dominates the operation mechanism, demand type instruments are more likely to be employed. For instance, The Thirteenth Five-Year Plan for Sports Development recommends the demand type instrument of sports service outsourcing.

The presence of outdated instruments impedes the application of new ones. Any new policy instrument chosen must be able to handle problems that the old instruments could not. During the building of a popular fitness system, for instance, government departments employ supply-type instruments such as the construction of sports infrastructure and the investment of special money to hasten system development. After a few years, many additional issues will emerge, including the underutilization of sports facilities and the difficulty of equipment upkeep. Then, environment-type instruments are typically employed to involve social organizations in

the problem-solving procedure. Social groups are provided with strategic support that encourages them to grow a popular fitness business by establishing chargeable sports venues and gyms. Thus, people will spend more money on popular fitness, and more individuals will be drawn to the fitness system.

8. Results

According to the model analysis and data analysis of influential factors, the primary influencing elements, namely policy aims and policy environment, should be examined first when selecting policy tools for the leisure and sports industry. The policy tool is picked by beginning with the policy objective, incorporating the current policy environment, and taking into account the secondary variables of the organization route and the characteristics of the tool itself.

With the development of the leisure sports industry, the government's functions in the process of industrial development must be further transformed, with a focus on cultivating and expanding the market, optimizing the current policy environment, assuming the leisure sports industry market as the leading role, and satisfying the needs of the people as the ultimate objective. At the same time, government departments should consider the leisure and sports business features and the locational characteristics of different regions when selecting policy tools and coordinate the selection of supply-type, environment-type, and demand-type policy tools.

9. Conclusions

The leisure sports sector is a prominent variable and cultural component of economic output and an essential component of contemporary productivity. Under strong support policies and pertinent regulatory rules, the leisure sports business can develop fast and healthily to meet the masses' demand. The government uses policy instruments to implement its policies. To achieve the policy objective of establishing a top sports nation, it is vital to select

media-appropriate policy tools. The selection and optimization of policy instruments directly impact the indepth growth of the sports business and the integration of national fitness and health for everyone. This paper summarizes the dynamic evolution of policy tool selection for the leisure sports industry in China, develops a composite model for the factors influencing the policy tool selection, and conducts empirical and comparative analyses on the selection and intensity of various policy instruments by policy implementers. The research findings offer China an empirical basis for developing and implementing policies for the leisure sports industry and enhancing the scientific rigor of these policies.

The analysis of leisure sports industry policy tools at different stages and the establishment of relevant leisure sports industry policy tool selection models are necessary. In the selection of policy tools in the past, supply-type and environment-type policy tools account for a large proportion, and demand-type policy tools are very few; the main factors affecting the choice of policy tools are policy objectives and policy environment.

It is suggested that government departments consider more demand-based policy tools in combination with policy objectives when selecting policy tools, gradually reduce the supply-based policy tools with excessive government participation, and increase demand-based policy tools. In the policy implementation stage, all departments cooperate closely to promote policies, improve policy implementation efficiency, and optimize the environment for policy implementation.

Recommendations for further research:

- 1. The ice and snow sector was chosen to represent the leisure sports industry for data collection and analysis during the model-building phase of the data collection procedure. In the subsequent research, other leisure sports industries may be chosen for further investigation;
- 2. Research foreign leisure sports industry policy tools and influencing factors, and combine foreign experience to provide suggestions more in line with the development of my nation's leisure sports industry.

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