Development Status of Swimming Venues in China: An Analysis Based on Shaoyang City

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Abstract: In this paper, through the literature data method, questionnaire survey method, mathematical statistics method, and field interview method, the current statistical analysis of the swimming pools in Shaoyang City was conducted. According to the statistical results, the swimming pools in the urban area of Shaoyang are mainly small. The hardware facilities in the stadiums are mainly semi-standard pools (small pools). The safety management of the swimming pools is good, and the life-saving equipment facilities of each swimming pool are also complete. The safety management of on-site personnel has been done well to ensure the safety of personnel. The management personnel in the swimming pool are mainly middle-aged people, and the age structure of lifeguards is relatively balanced. They are mainly young people with good physical strength and experienced middle-aged people. Due to the nature of work, female lifeguards are relatively rare. There has been a phenomenon in which lifeguards went to work without a license. The coaches are mostly young men. After the investigation, there are many part-time coaches. The business nature of the swimming club is private or cooperative. The main content of the service is open to the outside world and swimming teaching. The content is different, and the price is different. In the survey of consumers, it was found that a large proportion of consumers are children who are attending primary and secondary schools. Most of them learn to swim because of the wishes of their parents. Many young consumers want to exercise or have personal interests in participating in swimming. Regardless of whether they participate in swimming training or are mass consumers, the majority of consumers who spend 1,000-2,000 yuan on swimming have a moderate level of swimming consumption in Shaoyang City. The operating conditions of these five companies are not very good. Only one swimming club said it was profitable, and all said that the operating status was flat or loss-making.

Keywords: Shaoyang City; Swimming Pool; Current Situation

1 Introduction

In recent years, with the impressive performance of the Chinese national swimming team in international competitions, swimming has transitioned from the competitive stage to the public sphere, becoming a “star project” in the national fitness wave. As a sport that combines fitness and enjoyment, swimming not only activates muscle groups and improves body coordination through water resistance but also strengthens cardiovascular function and minimizes joint injuries, making it an ideal choice for people of all ages. According to data, the number of people in China who regularly participate in swimming has exceeded 30 million, with 65% of them being young and middle-aged individuals aged 25-45. Keywords such as “swimming for body shaping” and “parent-child water education” have seen an annual search volume increase of over 40%, reflecting the strong public demand for swimming. Shaoyang City, located in the central part of Hunan Province, has a summer lasting for four months, with an average annual temperature exceeding 30°C for 52 days. The hot and humid climate has given rise to a dual demand among citizens for “water-based cooling” and “fitness,” making swimming pools an essential part of the city's public spaces during the summer.

Under the promotion of the national fitness strategy, swimming facilities in Shaoyang's urban area have undergone rapid development. By the end of 2024, there were 23 registered commercial swimming pools, an increase of 118% compared to 2019. These facilities have formed a diversified supply pattern: large

swimming pools such as the Olympic Sports Center swimming pool (50-meter standard pool + diving platform) that hosts provincial games, commercial complexes with heated fitness pools (such as the Four Seasons Spa at Youa Chuangqi), university swimming pools (Shaoyang College), star hotel swimming pools (Huatian Hotel), and community embedded pools (Zhicheng Xin World Community), among other types. However, as the industry expands, regulatory lag has become evident. In the summer of 2023, two drowning incidents due to lifeguard absence were reported, exposing security management loopholes at these facilities. A random inspection by an evaluation agency revealed that 28.6% of swimming pools had excessive urea levels in the water, and 15.2% had blind spots in the lifeguard observation areas. These issues reflect a shift in the public's core demands for swimming venues from "whether they exist" to "how good they are." Standardized management and quality improvement have become urgent tasks for the industry.

Based on the above background, this study focuses on the sustainable development of swimming pools in Shaoyang's urban area. It selects five representative venues with different operational models (chain brands, local enterprises, and community-based facilities) and service orientations (high-end personal training, public fitness, and training centers), such as Weishikang and Youa Chuangqi, as research samples. Through a six-month field investigation, including facility inspections, staff interviews, and consumer questionnaires, the study systematically analyzes various dimensions such as hardware configuration (e.g., pool specifications, water circulation systems), human resources (distribution of lifeguard and coach qualifications), consumer characteristics (age distribution, consumption frequency), and operational models (off-season and peak-season strategies, profit structure). The study aims to achieve two goals: first, to outline a "panoramic view" of the development of swimming venues in Shaoyang, presenting regional characteristics and industry commonalities; and second, to identify safety hazards, service shortcomings, and operational bottlenecks. This will provide empirical evidence to help government departments establish local standards for "Swimming Venue Service Norms" and assist enterprises in optimizing operational strategies, contributing to the creation of a "safe, high-quality, and efficient" urban swimming and fitness ecosystem.

2 Research Objects and Methods

2.1 Research Objects

This study focuses on the current development status of swimming venues in the urban area of Shaoyang City. Specifically, five relatively stable and representative swimming fitness clubs in the urban area were selected as field survey samples: Weishikang Swimming Fitness Club, Youa Chuangqi Swimming Fitness Club, Smart Swimming Fitness Club, Jiahao Swimming Fitness Club, and Youchen Swimming Fitness Club.

2.2 Research Methods

This study employs a combination of various research methods to ensure the comprehensiveness of the data and the reliability of the conclusions:

Literature Review Method: A systematic search of academic literature, policy documents, and industry reports related to "swimming," "swimming venue management," and "sports industry operation" was conducted through platforms such as the school library and China National Knowledge Infrastructure (CNKI). This provided the theoretical foundation for the study and clarified the research direction and framework.

Questionnaire Survey Method: Three types of questionnaires were specifically designed: Manager/Instructor/Lifeguard Questionnaire: A total of 37 questionnaires were distributed to the instructors and lifeguards of the five venues (22 to instructors and 15 to lifeguards), and all 37 questionnaires were returned, resulting in a 100% response rate. The questionnaire covered personal information (age, gender, education, qualifications, job nature, years of employment, etc.), job responsibilities, and opinions on venue operations. Consumer Questionnaire: A total of 50 questionnaires were distributed to customers who frequented the five venues, and 49 valid responses were returned, resulting in a 98% response rate. This questionnaire focused on consumers' age, gender, education, reasons for swimming, spending, and satisfaction.

Statistical Analysis Method: Microsoft Excel software was used to enter, organize, classify, and statistically analyze the returned valid questionnaire data. Descriptive statistics, such as

frequency and percentage, were mainly used to quantify and visualize the survey results, providing solid data support for the study's conclusions.

Field Interview Method: The researcher personally visited the five swimming venues to conduct field investigations. Semi-structured interviews were held with venue managers, instructors, lifeguards, and some consumers (interview guides were prepared in advance, covering topics such as venue operational difficulties, safety management measures, and changes in consumer demand). This helped gain a deeper understanding of the actual operational conditions of the venues, the difficulties they faced, and the demands of various stakeholders, providing insights that were not covered by the questionnaire, making the research more comprehensive and in-depth.

3 Results and Analysis

3.1 Venue Environment and Facility Status

3.1.1 Hardware Facilities

Table 1: The five swimming and fitness clubs surveyed are all small-sized venues. Their core facility—the swimming pool—is generally small in scale: two clubs use “substandard pools” (smaller than 25 meters by 15 meters), two use “semi-standard pools” (25 meters by 15 meters), and only Weishikang has a 50-meter pool that meets competition standards. Currently, there are only a few large venues in the urban area of Shaoyang (such as the Royal Mountain School and the Sports New Town outdoor pool) that feature standard pools. In terms of supporting equipment, the surveyed venues are generally well-equipped with necessary facilities, including pool circulation filtration systems, disinfection equipment, water quality monitoring instruments, and underwater lighting, all of which adequately meet the daily operational and sanitation requirements.

Table 1. Swimming Pool Conditions of Swimming Venues in Shaoyang City Urban Area

Venue Name	Pool Condition
Weishikang Swimming & Fitness Club	Substandard Pool
Youa Chuangqi Swimming & Fitness Club	Substandard Pool
Smart Swimming & Fitness Club	Semi-standard Pool
Jiahao Swimming & Fitness Club	Substandard Pool
Youchen Swimming & Fitness Club	Semi-standard Pool

3.1.2 Safety Management

The safety management at the venues is quite commendable. Lifesaving equipment is adequately provided, with each venue ensuring that life rings, lifeguard poles, lifeguard chairs (or stretchers), first-aid kits, oxygen cylinders, and resuscitation devices are in place as required. Critical areas are marked with clear safety warning signs, notices, and depth markings. The walkways around the pools are generally treated with anti-slip materials. Regarding personnel management, health checks or reminders are generally enforced at the entrances to ensure that prohibited items are not brought in. Overall, the safety management systems at the venues are well-implemented, ensuring a foundational level of safety for consumers.

3.2 Venue Personnel Structure Analysis

3.2.1 Managers

Table 2: The five venues have a total of 10 managers. The age structure is predominantly middle-aged (35-50 years old accounts for 70%), which generally signifies a wealth of experience and a steady demeanor. The educational background is relatively high, with 60% holding bachelor’s degrees, 20% holding master’s or higher degrees, and only 20% having diplomas or lower qualifications. The professional background of these managers is well-matched to their roles, with 60% coming from management-related fields and 30% from sports-related backgrounds, indicating that the management team possesses a certain level of professional competence.

Table 2. Age of Managers

Age	20-35 years old	35-50 years old	Over 50 years old
Number of People	2	7	1
Proportion	20%	70%	10%

3.2.2 Lifeguards

Table 3: Among the 15 lifeguards surveyed, the gender distribution is extremely imbalanced, with males making up a significant 93.3% (14 people), and only one female. This imbalance can be attributed to the physical demands of lifeguarding. **Table 4**: The age structure is relatively reasonable, with the majority of lifeguards aged between 35-50 years old (46.7%, 7 people), followed by a group of younger lifeguards aged 20-35 years old (40%, 6 people),

and two individuals under 20 years old (13.3%). A major issue observed is in the certification management: two lifeguards are working without a valid certification (13.3%), and among the certified lifeguards, the majority hold a basic-level certificate (60%, 9 people), while only 4 possess an intermediate-level certificate (26.7%), and none hold an advanced certificate. This certification structure is concerning, as the proportion of unqualified and minimally certified personnel is too high, leading to insufficient professional rescue capabilities.

Table 3. Lifeguard Gender Distribution

Gender	Man	Women
Number of People	14	1
Proportion	93.3%	6.7%

Table 4. Lifeguard Age Distribution

Age	Under 20 years old	20-35 years old	35-50 years old	over50 years old
Number of People	2	6	7	0
Proportion	13.3%	40%	46.7%	0

3.2.3 Coaches

Table 5: Among the 22 coaches surveyed, males dominate the group (77.3%, 17 people), with females comprising only 22.7% (5 people). This disparity is likely due to the physical requirements of coaching, though it also suggests potential inadequacies in catering to the needs of specific groups of clients, such as female swimmers. **Table 6**: The coaching team is notably young, with the 20–30-year-old group accounting for the majority (54.5%, 12 people), while 20 years or younger and 30–40-year-olds each account for 13.6% (3 people) and 22.7% (5 people), respectively. Only 2 individuals (9.2%) are over 40 years old. **Table 7**: The educational background is predominantly at the diploma (50%, 11 people) and bachelor's degree (31.8%, 7 people) levels, with 18.2% (4 people) holding a high school education or lower. **Table 8**: A striking characteristic of this group is the high proportion of part-time coaches (59.1%, 13 people), with only 40.1% (9 people) working full-time. The part-time coaches are mainly university students majoring in sports, who coach during their spare time. While this structure reduces costs, it can also affect teaching stability and quality due to the high turnover rate and lack of experience, as over half of the coaches (54.5%) have only 1-3 years of experience in the field. Only 18.2% (4 people) have more than 5 years of experience.

Table 5. Coaches' Gender Distribution

Gender	Man	Women
Number of People	17	5
Proportion	77.3%	22.7%

Table 6. Coaches' Age Distribution

Age	Under 20 years old	20—30 years old	30—40 years old	Over40years old
Number of People	3	12	5	2
Proportion	13.6%	54.5%	22.7%	9.2%

Table 7. The Educational Background

educational background	High school education or lower	Associate Degree	Bachelor's degree	Graduate or above
Number of People	4	11	7	0
Proportion	18.2%	50%	31.8%	0

Table 8. A Striking Characteristic

Working	Full-time	Part-time
Number of People	9	13
Proportion	40.1%	59.1%

3.3 Consumer Characteristics Analysis

3.3.1 Age and Gender

Table 9: The age distribution of consumers shows a diverse range, but with a notable proportion of minors. The largest group is the 18-year-old and younger group (40.8%, 20 people), primarily attending swimming training courses. The second-largest group is young adults aged 18-30 years (26.5%, 13 people), followed by middle-aged adults aged 31-45 years (18.4%, 9 people) and those over 45 years old (14.3%, 7 people). This finding aligns with Wang Ting's research in Linyi City, which suggests that swimming attracts active participation from both adolescents (for learning skills or by parental arrangement) and older adults (for leisure and fitness). In terms of gender, male consumers slightly outnumber females (59.2%, 29 people vs. 40.8%, 20 people), indicating that swimming is popular among both genders.

Table 9. Consumers' Age Distribution

Age	Under 18 years old	18—30 years old	31—45 years old	Over45years old
Number of People	20	13	9	7
Proportion	40.8%	26.5%	18.4%	14.3%

3.3.2 Education Level

The educational backgrounds of consumers vary widely. Those with high school or lower education make up 38.7% (19 people), most of whom are middle or high school students. Consumers with a college diploma or bachelor's degree form the core group, comprising 42.9% (21 people). Those with a degree higher than a bachelor's make up 18.4% (9 people).

Table 10. Consumers' Education Distribution

educational background	High school education or lower	college diploma or bachelor's degree	Bachelor's degree or higher
Number of People	19	21	9
Proportion	38.7%	42.9%	18.4%

3.3.3 Consumption Purpose

Consumers have a variety of reasons for participating in swimming, with most indicating a clear and diverse set of motivations. The majority (34.7%, 17 people) cite "physical exercise and health enhancement" as their primary reason. Notably, a significant portion (28.6%, 14 people) of underage consumers report swimming as something they do to comply with their parents' wishes, reflecting the current societal emphasis on skill development for children, though it also suggests a possible lack of interest-based guidance. A smaller portion (24.5%, 12 people) participate purely out of "personal interest," while another 12.2% (6 people) participate for "other reasons" such as socializing or stress relief.

Table 11. Purpose of Consumption

Purpose	Exercise	Personal Interest	Parental Will	Others
Number of People	17	12	14	6
Proportion	34.7%	24.5%	28.6%	12.2%

3.4 Venue Operating Status

3.4.1 Business Nature

The five venues surveyed operate mainly under private ownership (Youa Chuangqi, Smart) or partnership/cooperative models (Weishikang, Jiahao, Youchen).

3.4.2 Service Content

The core business models of the venues are highly similar, offering both public swimming access (pay-per-visit or membership) and swimming teaching services (including group classes and one-on-one personal coaching). The pricing structure varies significantly based on the type of service (open swimming vs. teaching) and the teaching format (group classes vs. personal training). The operations also exhibit significant time imbalances, with low traffic during weekdays and peaks in the evening, weekends, and summer vacation periods.

3.4.3 Consumer Spending

For training consumers, the annual spending of 20 students (all middle and primary school students) is most concentrated in the range of 1,000-2,000 RMB (50%, 10 people), which is typical for regular training classes. About 30% (6 people) spend less than 1,000 RMB annually, which likely corresponds to short-term classes or small-scale institutions. Around 10% (2 people) spend between 2,000-3,000 RMB, and 10% (2 people) spend over 3,000 RMB, usually corresponding to more expensive private lessons. For general fitness consumers, 29 individuals were surveyed, with 72.4% (21 people) spending under 1,000 RMB annually, mainly students or young workers with limited purchasing power. Another 24.1% (7 people) spend between 1,000-2,000 RMB, while only 3.5% (1 person) spend between 2,000-3,000 RMB, indicating that most customers are low-spending but regular.

3.4.4 Profitability

The overall operational status of the five venues is not optimistic. During the survey period, only Weishikang Swimming and Fitness Club explicitly reported making a profit. Youa Chuangqi and Youchen reported breaking even (with revenues and expenditures essentially balanced), while Smart and Jiahao stated they were operating at a loss. This widespread profitability challenge, as also noted in Zhang Minhui's research on community swimming pools in Chengdu, stems from the significant seasonal fluctuations (summer revenue peaks with sharp declines in other months) and the pressure of fixed costs (such as venue rent, staff salaries, high utility bills, water treatment chemicals, equipment maintenance, etc.). With relatively single income sources (primarily from entry fees, membership cards, and training fees), it is difficult to cover the year-round operating costs, leading to financial difficulties for most venues.

4. Conclusion and Recommendations

4.1 Conclusion

The venue size is small, but the safety facilities meet the standards. Most swimming venues in Shaoyang's urban area are relatively small, with pools primarily being semi-standard or smaller, and there is a scarcity of full-size standard pools. The supporting infrastructure, including water treatment and disinfection systems, is generally adequate. Safety management stands out as a strength, with complete lifesaving equipment in place and effective enforcement of on-site safety protocols.

The staffing structure has both advantages and drawbacks. The management team is experienced and well-educated, with a good match of qualifications. The lifeguard team is reasonably well-balanced in terms of age, though there is a significant gender imbalance, and the issue of unqualified staff on duty is prevalent (13.3%). Among certified lifeguards, the majority hold entry-level certifications (60%), raising concerns about their professional rescue capabilities. The coaching staff is young, predominantly male, with a high percentage working part-time (59.1%). Additionally, over half (54.5%) have limited teaching experience of 1-3 years, which raises challenges in terms of both staff stability and teaching quality.

Consumers are primarily students, with moderate spending. Minor children, especially those in primary and secondary school, constitute the largest consumer group (40.8%), with many being influenced by their parents' desire for them to learn swimming. The gender distribution of consumers is relatively balanced, with slightly more males than females. The primary motivation for swimming is physical exercise. Whether for training or fitness purposes, the most common annual expenditure is between 1,000 and 2,000 RMB, placing the overall consumer spending in the middle range.

The business model is simple, and profitability is generally difficult. The venues are mostly privately owned or in partnership. The services offered are largely homogeneous (open swim sessions and lessons), and they are heavily affected by seasonality. Among the five venues, only one is profitable, two break even, and two incur losses, reflecting the industry's overall struggle between unstable customer flow and rigid operational costs, signaling a need for innovative profit models.

4.2 Recommendations

First, strengthen the safety supervision system and consolidate the industry's foundational standards. Safety is the lifeblood of swimming venue operations, and it is crucial to establish a "government oversight + corporate self-regulation + social supervision" three-dimensional regulatory system. Government authorities should create a dynamic qualification verification system for lifeguards and employ digital monitoring platforms (e.g., "Smart Health Monitoring" system) to ensure certification information is cross-checked. Cases of unqualified lifeguards should be subject to a "dual investigation" (punishing both the venue and the responsible individual), with violators' names made public to deter further breaches. Venues should establish a comprehensive "recruitment - training - evaluation" cycle: recruit staff with "dual certifications" (lifeguard certification + health certificate), integrate practical assessments like CPR and emergency drowning response in pre-service training, and conduct cross-venue emergency drills quarterly (e.g., joint drills with local hospitals and communities). Additionally, venues should implement a special recruitment channel for female lifeguards and aim to increase their proportion to 30% within three years to better meet the needs of family and female swimmers. It is also recommended to introduce third-party safety evaluation agencies to conduct professional assessments of lifesaving facilities (such as Automated External Defibrillators, AEDs, and lifeguard observation tower setups), incorporating these results into the venue's star-rating system.

Second, focus on cultivating a segmented market and activate the consumption potential across all age groups. To address the current issue of a single consumer group, it is necessary to create a "comprehensive marketing system" combining "educational guidance + scenario innovation + channel expansion." In terms of promotion, partnering with sports medicine experts to create a series of educational videos titled "Swimming and Health" will help promote targeted benefits such as "spinal protection for adolescents," "joint rehabilitation for the elderly," and "body shaping and fat reduction for women." These videos can be distributed on platforms like Douyin and WeChat Moments to accurately reach the

intended audience. Schools should pilot "Swimming Skill Certification Plans," incorporating swimming into after-school services, with government subsidies of 200 RMB per student annually to transition from “student consumption” to “family consumption” (e.g., offering parent-child annual membership packages). In terms of product offerings, a "full-day service solution" should be developed: morning classes such as "water Tai Chi for seniors" (6:30-8:00), noon "quick fat-burning sessions for office workers" (12:00-14:00), and evening "family water park activities" (18:00-21:00). Additional services such as swimming-themed birthday parties and underwater photography could further enhance value, transforming the venue from a "seasonal swimming pool" into an "all-day sports and social space."

Third, break through the traditional profit model and build a multi-dimensional value ecosystem. In response to the simple business model, three strategies are recommended: "deepening the core business, cross-industry integration, and digital empowerment." In terms of core business development, a "training pyramid" structure should be established: an entry-level "20-session standard exam preparation class," intermediate "lifeguard qualification certification courses," and advanced "competitive swimming training camps," covering a price range from 500 to 5,000 RMB. The service chain should be extended by partnering with medical institutions to offer "post-surgery water rehabilitation programs" and introducing professional rehabilitation therapists to tailor exercise plans, creating a differentiated competitive advantage. For cross-industry integration, consider establishing "swimming+" consumption scenarios: set up temporary stores around the swimming pool that sell sports equipment in partnership with brands like Decathlon, or open a sports nutrition bar offering protein meals and electrolyte drinks. In the off-season, the venues can host corporate team-building "fun water sports events" (charging 5,000 to 10,000 RMB per session), raising facility usage by over 30%. In terms of digital empowerment, a dedicated mobile app should be developed for each venue, integrating features such as "intelligent reservations (real-time pool capacity information)," a "membership growth system (accumulated swimming hours exchanged for equipment vouchers)," and "social sharing (posting workout data on social media)." Geolocation services could push offers like "indoor swimming vouchers during rainy weather" to nearby residents, achieving a 25% increase in online customer conversion.

Fourth, strengthen policy collaboration to foster a positive developmental ecosystem. For the industry to thrive, it must leverage "policy guidance, industry self-regulation, and public services" in a three-pronged approach. At the government level, it is recommended to establish a "National Fitness Venue Fund" to provide 0.5 RMB per kWh electricity subsidies to venues receiving over 200 visitors daily (saving each venue 80,000 to 120,000 RMB annually), and offer a 15% tax reduction for venues equipped with temperature-controlled facilities. Additionally, urban planning should mandate that new communities include one standard swimming pool for every 10,000 residents, with priority given to schools and parks for site selection, helping to resolve "location difficulties." From an industry perspective, it is recommended to establish the Shaoyang Swimming Venue Association, which would implement three mechanisms: first, a shared talent pool system, collaborating with sports colleges to offer "advanced lifeguard training," issuing regional certification certificates; second, a joint procurement system, allowing more than five venues to bulk purchase consumables like disinfectants and filter cartridges, reducing costs by 18-25%; third, a staggered business model, designating venues by region as "training-focused," "fitness-focused," or "competition-focused" to avoid homogenous competition. At the public service level, swimming venues should be incorporated into the "15-minute fitness circle" plan, and the "Shaoyang Sports Welfare Platform" should issue 50 RMB discounts for every 200 RMB spent at these venues, potentially increasing annual consumption by over 15%. Furthermore, a "sports and education integration" pilot program should be explored, designating 3-5 venues as swimming training bases for primary and secondary school students, with the government offering subsidies of 100 RMB per student. This would not only enhance youth skills but also provide a steady flow of customers for the venues.

By solidifying the safety baseline, unlocking consumption potential, innovating the business model, and leveraging policy advantages,

swimming venues in Shaoyang urban area are expected to undergo "three major transformations" within 3-5 years: from "single pool" to "comprehensive sports health complex," from "seasonal operations" to "year-round operations," and from "scattered operations" to "industry collaboration." This will not only provide citizens with a safer, more professional, and richer swimming experience but also contribute to the construction of a healthier Shaoyang, making "clear waters and waves" a shining symbol of the city's national fitness program.

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