



The Strategies for Marine Sports Tourism Resource Management to Promote Tourist Attractions in Weihai City

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Abstract

Background and Aim: With China's sustained economic growth and the upgrading of tourism consumption, marine sports tourism has become a key direction for the high-quality development of coastal tourism. Weihai, located at the eastern end of the Shandong Peninsula, boasts abundant marine resources (excellent beaches, Class II water quality) and unique geographical advantages, but its marine sports tourism resources are underutilized, with problems such as homogenized products and low tourist revisit rates. This study aims to (1) analyze the current situation of marine sports tourism in Weihai; (2) develop resource management strategies to enhance the attractiveness of Weihai's tourist attractions; (3) verify the feasibility of these strategies.

Methodology: The study employs a research and development (R&D) methodology, integrating quantitative and qualitative research approaches. Quantitative data were collected through simple random sampling via questionnaire distribution, targeting 400 visitors across Weihai's four core marine sports tourism sites (International Seawater Bathing Beach, Grape Beach, Half Moon Bay, and Naxianghai). (Population: Weihai City received 59.07 million tourist visits in 2023, with marine sports tourism accounting for 2.9%—approximately 1.71 million visits; Sample: Actual participants in Weihai's marine sports tourism; sample size determined as 400 based on Krejcie and Morgan's sampling error formula). Qualitative data were obtained through interviews with 10 key informants using purposive sampling, including 2 staff members from the Weihai Municipal Bureau of Culture and Tourism, 4 scenic area managers, and 4 tourism enterprise managers. Data analysis methods included: descriptive statistical analysis for questionnaire data; content analysis for interview data; integration of internal and external factors via SWOT analysis; development of targeted strategies using a TOWS matrix; and assessment of strategy feasibility through expert review (involving 9 experts).





Results: (1) Weihai's marine sports tourism has 12 strengths (e.g., rich marine resources, convenient in-scenic transportation), 15 weaknesses (e.g., low revisit intention, insufficient cultural integration), 7 opportunities (e.g., short-distance travel demand, China-Korea Free Trade Zone policy), and 7 threats (e.g., extreme weather, homogeneous competition). (2) Based on SWOT-TOWS analysis, 27 initial strategies were proposed, and after expert evaluation, 17 feasible strategies were finalized (5 SO, 6 WO, 3 ST, 3 WT), including developing "sailing + camping" weekend packages, building the "Weihai Smart Ocean Sports Metaverse", and constructing a "Weihai-Japan-Korea Marine Culture, Sports and Tourism Community". (3) Experts unanimously confirmed the high feasibility of the strategies, noting they align with Weihai's development needs, with priority recommended for strategies improving traffic conversion and ecological branding.

Conclusion: Weihai has significant potential for marine sports tourism development. The proposed resource management strategies can effectively address current bottlenecks (homogenization, low revisit rates), enhance the attractiveness of tourist attractions, and promote the sustainable development of Weihai's marine sports tourism industry.

Keywords: Marine Sports Tourism; Resource Management; Tourist Attraction; Weihai City; Strategy

Introduction

With China's economic growth and the improvement of residents' living standards, tourism consumption has shifted from traditional sightseeing to experience-oriented formats, and marine sports tourism—integrating sports, leisure, and marine ecology—has emerged as a new growth point (Sun Wei, 2024). In 2023, the General Office of the State Council issued Several Measures on Unleashing the Potential of Tourism Consumption, emphasizing the need to "enrich marine tourism products and develop marine sports such as sailing and surfing". Shandong Province also released the Implementation Plan for Promoting the High-Quality Development of Marine Tourism (2024-2026) (General Office of the State Council, 2023), targeting Weihai as a key city for marine sports tourism development.

Weihai, my hometown, with a 985-kilometer coastline and Class II coastal water quality, possesses unique conditions for marine sports tourism (e.g., 12 standardized tourist terminals, 8 large sea baths). However, current development faces challenges: (1) Resource utilization is uneven—eastern scenic spots (e.g., Half Moon Bay) are overdeveloped, while western resources (e.g., Rushan Silver Beach) are underutilized; (2) Products are homogenized—traditional projects (sailing, beach motorcycles) account for over 70%, lacking niche or cultural integration products; (3) Service systems are imperfect—issues such as opaque pricing, insufficient foreign language services, and low revisit rates (mean 2.36) hinder market expansion.





Compared to coastal cities like Qingdao and Sanya, Weihai's marine sports tourism presents distinct challenges: Qingdao has established mature, high-end tourism IPs through events like the Beer Festival and Olympic Sailing Competition, while Sanya leverages its tropical climate for year-round operations. Weihai, however, faces a core contradiction between its premium ecological resources (Class II water quality, cool summers) and uneven development—with projects concentrated in eastern Huancui District and Rongcheng City, while western areas like Rushan and Wendeng District have underutilized resources), the disconnect between cultural heritage (the red culture of the First Sino-Japanese War at sea and fishing village culture) and shallow product integration (most projects merely display cultural symbols without immersive experience design), and the gap between the location advantage of the China-Korea Free Trade Zone and insufficient international service capabilities (significant potential demand from Japanese and Korean tourists, but multilingual services and cross-border cooperation mechanisms remain underdeveloped). These unique challenges, distinct from traditional coastal hotspots, reflect common resource conversion dilemmas faced by mid-tier coastal cities while highlighting Weihai's distinctive value in leveraging its “ecology + culture + location” combination to break through constraints. This renders the study particularly relevant for comparable cities like Yantai and Rizhao, further solidifying Weihai's significance as a case study. Against this backdrop, transforming Weihai's marine resource advantages into competitive strengths is crucial for meeting tourism demands and driving regional economic upgrading. Therefore, this study focuses on Weihai's marine sports tourism, integrating research methods to formulate feasible resource management strategies that provide practical references for similar coastal cities.

Objectives

1. To study and analyze the current situation of marine sports tourism in Weihai City.
2. To develop strategies for marine sports tourism resource management to promote tourist attractions in Weihai City.
3. To validate the feasibility of the strategies for marine sports tourism resource management to promote tourist attractions in Weihai City.

Literature review

This study draws on four core theories and synthesizes domestic and international research to lay a theoretical foundation.

1. Theory of Marine Sports Tourism

Marine sports tourism is defined as a composite tourism form that relies on marine natural resources (seas, beaches, islands) and integrates sports activities to meet tourists' needs for leisure





and experience (Zhang Zecheng, 2016). Foreign research focuses on ecological protection (Darmawan et al., 2022) and market demand (Song & Kang, 2023), while domestic studies emphasize industrial integration

(Xu Pengzhan, 2021) And policy-driven development (Yao Yunhao, 2024). However, existing research lacks targeted strategies for medium-sized coastal cities like Weihai, especially in balancing ecological protection and product innovation.

This theory establishes the core logic of “resource-based activity integration and demand fulfillment” for the research. It not only guides this study to focus on analyzing the current integration of resources such as Weihai's Class II water quality and fishing culture with s Need Satisfaction“ as its core logic. This framework not only guides the present study to focus on analyzing the current integration of resources such as Weihai's Class II water quality and fishing culture with sports activities during the research phase, but also provides direction for addressing Weihai's challenge of ” imbalance between ecological conservation and product innovation.“ Specifically, it centers on designing strategies for ‘ecological’ and ”cultural” marine sports products, filling a gap in research on such topics in medium-sized coastal cities.

2. Theory of Strategy

Strategy refers to a systematic plan for achieving long-term goals by configuring resources to adapt to the external environment (Henry, 2021). In tourism research, strategies often focus on differentiation (Martínez et al., 2021) and risk mitigation (Freedman, 2015). For Weihai, strategies must address regional competition (e.g., from Qingdao, Sanya) and seasonal constraints (winter project suspension).

This theory establishes a “Goal-Resource-Environment” strategic framework for this study. Methodologically, it guides subsequent research to use the TOWS matrix to match Weihai's resources (such as its location within the China-Korea Free Trade Zone) with external environments (such as demand for short-distance travel). Simultaneously, it directly addresses Weihai's specific challenges of “intense regional competitive pressure” and " winter season underutilization" by defining strategic directions for differentiation (avoiding Qingdao's premium IP and Sanya's climatic advantages) and risk mitigation (developing winter tourism offerings).

3. Theory of SWOT Analysis and TOWS Matrix

SWOT analysis evaluates internal strengths (S) and weaknesses (W), as well as external opportunities (O) and threats (T) (Wyrick, 1980). The TOWS matrix further combines these factors to form four strategy types (SO, WO, ST, WT), which have been widely applied in coastal tourism research (Chen et al, 2024). This study uses this framework to align Weihai's resources with market opportunities.





This theory serves as the direct basis for the core analytical tool of this study. SWOT analysis systematically organizes Weihai's internal and external contradictions, such as “Eastern Resource-Dense - Western Underutilized” and " TOWS matrix further translates these contradictions into actionable strategies (e.g., the SO strategy “Sailing + Camping” integrates resources with short-trip tourism demand), creating a closed-loop process from status analysis to strategy formulation. This precisely addresses the challenge of misalignment between Weihai's resource allocation and market demand.

4. Theory of Tourism Resource Management

Tourism resource management emphasizes the balanced development of protection and utilization (Zang Min, 2010). For marine sports tourism, this includes facility maintenance (Fu, 2014), ecological

protection (Xiang, 2024), and service standardization (Dongping, 2015). Weihai's current management lacks unified standards for marine sports equipment and ecological monitoring.

This theory provides a three-dimensional assessment framework of “conservation-utilization-management” for research. Methodologically, it guides the investigation phase to focus on examining the current status of facility maintenance (e.g., aging equipment), ecological management (e.g., beach litter), and service standards (e.g., instructor qualifications) in Weihai. Simultaneously, addressing the challenge of “lack of management standards” in Weihai, it identifies management-level solutions such as “establishing a marine sports quality certification system” and " improving ecological protection regulations." This approach strengthens the role of resource management in supporting industry development.

5. Previous Studies

Domestically, highlighted the role of big data in optimizing marine sports resource allocation, while proposing SWOT-AHP strategies for Dalian's coastal tourism. Internationally, found that beach cleanliness and infrastructure are key to attracting tourists.

And emphasized community participation in marine tourism management. However, few studies focus on Weihai's unique resource endowment (e.g., China-Korea Free Trade Zone, Liugongdao red culture).

Conceptual Framework

The conceptual framework of this study integrates four core theories, R&D research methodology, and practical tools to ensure systematic strategy development (Figure 1):



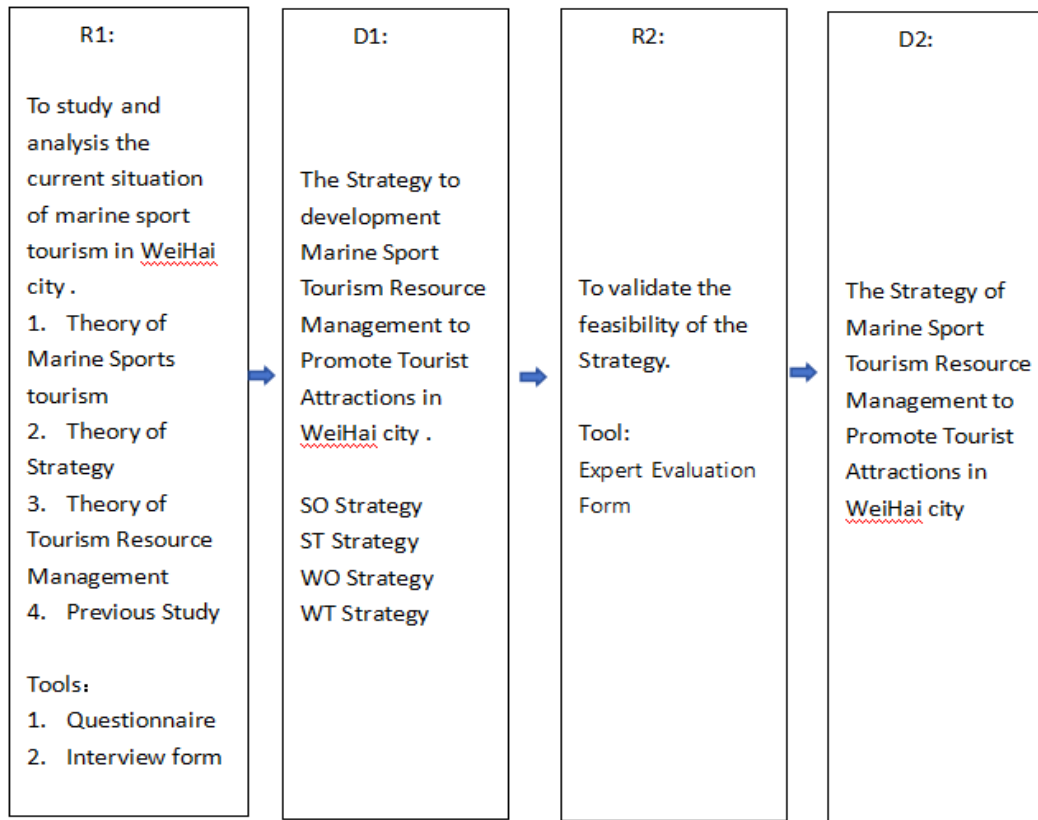


Figure 1 Conceptual Framework

Theoretical Foundation:

Theory of Marine Sports Tourism

Theory of Strategy

Theory of SWOT Analysis and TOWS Matrix

Theory of Tourism Resource Management

Research Process:

R1 (Research): Analyze the current situation of marine sports tourism in Weihai via questionnaires and interviews.

D1 (Development): Propose initial strategies using the SWOT-TOWS matrix.

R2 (Research): Evaluate strategy feasibility through expert Expert Evaluation.

D2 (Development): Revise strategies based on expert feedback to form final plans.

Methodology

1. Research methods



This study uses the research methodology of R&D, in which qualitative data are mainly collected through the documentary analysis method and interview method, and quantitative data are mainly collected through the inquiry method.

(1) Documentary Analysis: Review national/provincial policies (e.g., Implementation Plan for Marine Tourism Development) and academic literature to clarify research gaps.

(2) Inquiry Method: A structured questionnaire was designed to collect tourist data (basic information, satisfaction, consumption behavior). The questionnaire's IOC (Index of Item-Objective Congruence) was 0.66-1.00 (validated by 3 experts), and Cronbach's α was 0.93 (pre-survey of 30 tourists), ensuring reliability and validity.

(3) Interview Method: Semi-structured interviews were conducted with 10 key informants to explore practical challenges (e.g., resource allocation, policy implementation).

2. Population and Sample

Population: Tourists to Weihai's four core marine sports scenic spots (2023: ~1.71 million marine sports tourists) and local tourism stakeholders.

Sample:

Questionnaires: 400 tourists selected via convenience sampling (Krejcie & Morgan Table, 1970).

Interviews: 10 key informants (2 from Weihai Tourism Bureau, 4 from scenic spots, 4 from tourism companies) selected via purposive sampling.

3. Data analysis

Quantitative Data: Descriptive statistics (frequency, mean, SD) to analyze tourist demographics and satisfaction.

Qualitative Data: Content analysis to code interview transcripts and extract themes (e.g., "resource imbalance", "policy support").

Strategy Development: SWOT analysis to summarize internal/external factors, TOWS matrix to propose strategies, and expert Expert Evaluation (9 experts: 3 tourism scholars, Possess 10 or more years of academic experience in tourism management, sports economics, or marine resource studies, ensuring deep expertise in marine sports tourism theory and research methodologies.2 government officials, Both are from the Weihai Municipal Bureau of Culture and Tourism, serving in the "Marine Tourism Division" and "Industrial Development Division," respectively. They possess in-depth knowledge of the policy landscape and practical operational challenges within Weihai's marine sports tourism sector.4 industry managers, Hold positions such as General Manager or Operations Director at core entities encompassing scenic area





operations, tourism enterprise management, or high-end sports project operations; or possess expertise in visitor needs and channel operations, capable of providing practical recommendations for high-end product design and safety assurance strategies) to validate feasibility.

Results

In the part of basic information of tourists, the research focuses on the gender, tourism origin, age, occupation, education level, monthly income, and other aspects of tourists. The details are as follows (Table 1).

Table 1 n=400 Basic tourists' information

Content	Choice	f	Percentage
Gender	Male	189	47.25%
	Female	211	52.75%
Tourist Origin	Wei Hai City	49	12.25%
	Inside Shandong Province (except Wei Hai City)	90	22.5%
	Outside Shandong Province	255	63.75%
	Abroad	6	1.5%
Age	18-25 years old	125	31.25%
	26-35 years old	156	39%
	36-50 years old	119	29.75%
	Other	0	0%
Occupation	Enterprise employees	231	57.75%
	Freelancers	101	25.25%
	Civil servants / public institution personnel	50	12.5%
	Other	18	4.5%
Education level	High school and below	83	20.75%
	Junior college/senior college	122	30.5%
	Bachelor's degree	155	38.75%
	Master's degree and above	40	10%
Monthly income	0-4000 CNY	107	26.7%
	4001- 8000 CNY	163	40.75%
	8001-12000 CNY	87	21.75%
	More than 12000 CNY	43	10.75%
Main purpose of	Relaxation	316	79%





Content	Choice	f	Percentage
marine sports tourism (optional)	Experience novelty	354	88.5%
	Pursuing stimulation	363	90.75%
	Other	8	2%
	Channels obtain information on marine sports tourism (optional)	Social media	312
	Travel agencies	194	48.5%
	Friend recommendation	350	87.5%
	Other	4	1%
	The most important factors (optional)	Richness of tourism resources	368
	Traffic convenience	200	50%
	Price rationality	245	61.25%
	Other	19	4.75%
	Stay in Weihai City for marine sports tourism	Within 1 day	133
	2-3 days	222	55.5%
	4-5 days	37	9.25%
	Other	8	2%
	Accommodation options	Hotels	183
	Homestay	115	28.75%
	Camping	89	22.25%
	Other	13	3.25%
	Catering	Local food	195





Content	Choice	f	Percentage
consumption (optional)	Seafood	369	92.25%
	Fast food snacks	191	47.75%
	Other	8	2%
Per capita consumption budget	501-1000 CNY	88	22%
	1001-2000 CNY	194	48.5%
	2001-3000 CNY	67	16.75%
	More than 3000 CNY	51	12.75%
Main consumption items (optional)	Tourism program	322	80.5%
	Accommodation	334	83.5%
	Catering	193	48.25%
	Other	34	8.5%

In the part of the current situation of marine sports tourism in Weihai City, the research mainly investigates the preferences of tourists, including tourism purpose, understanding channels, tourism forms, tourism residence time, consumption habits, and other aspects. The details are as follows (Table 2).

Table 2 n=400 Marine sports tourism situation in WeiHai City

For the Weihai marine sports tourism related tourist satisfaction part. The research mainly investigates the adaptability of tourists to the core resources of Weihai marine sports tourism, the richness and selectivity of Weihai marine sports tourism projects, the rationality and convenience of the layout of marine sports facilities (docks, equipment rental points) in the scenic spot, the maintenance status of scenic facilities, safety and security reliability, service professionalism, environmental cleanliness, the rationality of the development of Weihai marine sports tourism resources, the protection of biodiversity by the design of marine sports projects, the transparency and rationality of the pricing of marine sports tourism projects, the uniqueness of cultural experience with local marine cultural characteristics, the personalized service for different tourists ' needs, the traffic convenience in the scenic spot, and the tourists ' expectation for the future development of the scenic spot. The details are as follows (Table 3).





Table 3 Tourist satisfaction

Content	n	Mean	S.D.
The Marine sports resources are very much	400	3.72	1.07
Programs are interesting	400	3.59	1.23
Many kinds of activities	400	3.56	1.30
Facilities are reasonable and convenient	400	3.53	1.29
The scenic facilities have high quality	400	3.59	1.23
The activities are high security	400	3.54	1.28
The level of marine sports tourism service	400	3.54	1.23
Environmental sanitation	400	2.43	1.33
Development reasonable	400	2.39	1.33
Biodiversity protection in mind	400	2.46	1.29
Marine ecosystem conservation	400	2.39	1.31
Pricing is transparent and reasonable	400	2.37	1.33
Integrating local Marine cultural characteristics	400	2.40	1.34
Provides differentiated services	400	2.37	1.32
Transportation connections at the attraction are convenient	400	3.60	1.18
Promotion with travel agencies and sports associations	400	2.40	1.30
Introduction of technology (VR experience, intelligent tour)	400	2.45	1.30
Strengthen policy support	400	2.47	1.27
The publicity work	400	2.43	1.28
Visit Weihai again	400	2.36	1.33

Based on these aspects of the interview results, the author summarizes the advantages, disadvantages, opportunities, and challenges of the interview results. The results are shown in the table:

Strengths	Weaknesses
1. Marine sports resources are rich, and tourists are highly recognized	1. Lack of transparency and rationality in project pricing, and tourists ' perception of cost performance is weak.
2. The project is interesting	2. Lack of differentiated services, no family/business / elderly exclusive products.
3. Items are rich in variety, covering traditional and niche items	3. The rationality of resource development is insufficient, and the regional distribution is uneven.
4. Reliable safety measures	
5. Good industrial synergy	
6. Strong policy support (for scenic spots)	





Strengths	Weaknesses
7. Mature brand activities	4. Insufficient ecological protection in operation
8. The location advantage is significant, which can expand the source of Japanese and Korean tourists.	5. Insufficient cultural integration, fisherman / red culture, and project combination is shallow.
	6. Weak cooperation and promotion, less linkage between scenic spots and travel agencies.
	7. Poor sanitation
	8. Less introduction of science and technology
	9. General effectiveness of publicity. It is difficult for young customers to reach.
	10. Seasonal idle resources
	11. The talent gap is big
Opportunity	Threat
1. Increased demand for short-distance travel.	1. Extreme weather effects.
2. Eco-tourism policy support.	2. Similar city competition
3. The potential of customer segmentation is great.	3. Project homogenization and low-cost competition
4. Promotion of smart tourism.	4. Improper market management
5. Sports + new business needs.	5. The suction effect of other cities on talents
6. China-Korea Free Trade Zone Development.	6. Eco-environmental pressure.
7. Exploration of cultural and creative products.	

Based on the results of the questionnaire survey and interviews, the following conclusions are summarized: (Due to space limitations, the SWOT analysis table has not been uploaded for display.)

1. Current Situation of Marine Sports Tourism in Weihai

In general, Weihai is a city with very rich marine sports tourism resources, and the development potential of leisure tourism is great, but at present, these resources have not been fully utilized, or there are many problems in the development and utilization of these marine





sports tourism resources. Weihai's marine sports tourism attractions still need to be further improved and developed. Mainly in the following aspects:

(1) The situation of recreational tourism tourists

The tourist characteristics and consumption behavior of Weihai marine sports tourism show distinct rules: from the perspective of subjective factors, the proportion of female tourists is slightly higher and the gender difference is small, the young and middle-aged are the core customer group and the whole is younger, 63.75 % are foreign and domestic tourists in Shandong Province, the proportion of highly educated and enterprise employees is high, and the middle-income group is mainly middle-income group. The market has both mass consumption attributes and high-end upgrade potential; the purpose of tourism is mainly based on the compound demand of 'pursuing stimulation + trying novel experience + relaxing and entertaining '.

' Stimulation ' and ' novelty ' are the key attractions, and ' relaxation ' is an important supplement. Information acquisition takes ' trust-driven (friend recommendation) + content-driven (social media) ' as the core, travel agency promotion as a professional supplement, word-of-mouth and social media influence are significant; the choice of destination follows the logic of ' experience value first, taking into account cost and convenience ', ' rich tourism resources ' as the absolute core, ' reasonable price ' and ' convenient transportation as the important support; the residence time is mainly 2-3 days of short-distance experience, and the medium-and long-term stay market has not formed a scale, and the whole is characterized by ' short-distance and experience '; The choice of accommodation is a ' three pillars ' pattern, the hotel is the first.

Choice, and the homestay and camping are diverted by nearly 50 % of the guest group with the characteristic experience; food and beverage consumption takes seafood as the absolute core, supplemented by ' local specialties ' and ' fast food or snacks ', which not only highlights regional characteristics but also takes into account convenient needs; per capita consumption is centered on mass consumption, and the distribution of consumption levels is reasonable. The consumption items are mainly based on ' basic experience ' consumption, the structure is biased towards basic rigid demand, and value-added consumption needs to be further explored.

(2) Strengths of marine sports tourism in WeiHai City

The strengths of marine sports tourism that currently exist in WeiHai City are mainly expressed in 12 aspects: S1. Marine sports resources are rich, tourists are highly recognized, have excellent beaches, second-class water quality, and a cool summer climate; S2.The transportation in the scenic spot is convenient, and the facilities such as ferry cars and shared bicycles are perfect; S3. The project is interesting, which meets the needs of tourists ' pursuit of stimulation; S4.Scenic facilities are well maintained, and there are no obvious aging and safety hazards; S5.The project is rich in variety, covering traditional and niche projects; S6 .Reliable safety measures,





equipped with first aid personnel and high accident insurance; S7.High professional level of service personnel, service specification; S8 .The layout of facilities is reasonable, and the wharf and equipment rental points are easy to use; S9 :Good industrial synergy; S10 :Strong policy support (for scenic spots); S11:Mature brand activities; S12:The location advantage is significant, which can expand the source of Japanese and Korean tourists.

(3) Weaknesses of marine sports tourism in WeiHai City

The weaknesses of marine sports tourism that currently exist in WeiHai City are mainly expressed in 15 aspects: W1 . Low willingness of tourists to revisit, lack of experience stickiness; W2 . Lack of transparency and rationality in project pricing, and tourists ' perception of cost performance is weak. W3 . Lack of differentiated services, no family/business / elderly exclusive products; W4 . The rationality of resource development is insufficient, and the regional distribution is uneven; W5 . Insufficient ecological protection in operation; W6 . Insufficient cultural integration, fisherman / red culture, and project combination is shallow; W7 . Weak cooperation and promotion, less linkage between scenic spots and travel agencies; W8 . Poor sanitation; W9 . General effectiveness of publicity; W10 . Less introduction of science and technology; W11 .Insufficient biodiversity conservation; W12 .Subsidies are slow to arrive; W13 . Lack of high-end products; W14.The talent gap is big. W15.Seasonal idle resources.

(4) Opportunities of marine sports tourism in Weihai City

The opportunities of marine sports tourism that currently exist in Weihai City are mainly expressed in 7 aspects: O1 . Increased demand for short-distance travel; O2 . Eco-tourism policy support; O3 . The potential of customer segmentation is great; O4 . Promotion of smart tourism; O5 . ' Sports + ' new business needs; O6 . China-Korea Free Trade Zone Development; O7 . Exploration of cultural and creative products

(5) Threats to marine sports tourism in Weihai City

The opportunities of marine sports tourism that currently exist in Weihai City are mainly expressed in 7 aspects: T1 . Extreme weather effects; T2 . Similar city competition; T3 . Project homogenization and low-cost competition; T4 . Market disorder; T5 . The risk of brain drain: T6 . Eco-environmental pressure; T7 . It is difficult for young customers to reach.

2. Conclusion of the evaluation of strategies for marine sports tourism resource management to promote tourist attractions in Weihai city

After proposing strategies based on the SWOT analysis method, all 9 experts agreed that the strategies as a whole have high feasibility, which is in line with the current situation of the development of marine sports tourism in Weihai city and can also meet the future development needs of Weihai city's marine sports tourism tourism, especially the SO strategy has the highest feasibility, but some of the strategies need to be slightly adjusted and improved. The final





strategies after adjustment and modification according to the expert suggestions in Expert Evaluation are 5 SO strategies, 6 WO strategies, 3 ST strategies, and 3 WT strategies, as follows:

SO, Strategies:

SO1: Integrate the core resources of ' sailing + camping ', create short-distance high-end packages on weekends, and accurately explore the tourist market in Northeast China and North China.

SO2: Aiming at the customer group of young enterprise employees, a niche project of " kayaking expedition + unmanned island observation " is added to meet the needs of a " novel experience. "

SO3: Connect with the smart tourism policy, build a ' facility early warning platform ' (real-time display of equipment status, wharf flow), and improve operational efficiency.

SO4: Combined with brand activities, develop ' sports + ice and snow ' (winter beach ice and snow carnival), ' sports + health ' (paddle board yoga) to fill the winter gap.

SO5: Link up local cultural and creative enterprises, develop ' fisherman culture + sports ' cultural and creative (warship modeling souvenirs), set up sales areas in scenic spots, and extend the consumption chain.

WO Strategy:

WO1: Joint cultural and tourism bureaus and travel agencies to jointly promote ' east-west linkage ' short-distance travel routes and tickets.

WO2: Construct Weihai ' ecological marine sports ' brand system and sustainable operation mode. The ' ecological marine sports ' will be built as the core tourism IP of Weihai, and the high differentiation of products and the significant improvement of brand competitiveness will be realized by providing unique ecological value.

WO3: Create exclusive experiences for different customer groups and deeply bind through the membership system.

WO4: Establish consumer trust with ' transparent pricing ', expand market volume with ' content matrix ', and promote price transparency and publicity through smart platforms.

WO5: The construction plan for the "Weihai-Japan-Korea Marine Culture, Sports and Tourism Community" aims to restructure the product system: to create exclusive products that deeply integrate "culture, sports, and ecology"; upgrade service standards: to establish an "international reception service standard system".

WO6: Activate cultural IP with ' technology empowerment ', broaden consumption scenarios with ' experience extension ', and overcome the problems of cultural transformation and product innovation.

ST strategies:





ST1: Joint meteorological departments to build an extreme weather warning system, formulate a 'suspension emergency plan' (typhoon day switching indoor science exhibition), and reduce losses.

ST2: Highlight the advantages of 'high-quality resources + niche projects', promote differentiated products of 'canoeing + Liugongdao research', and avoid high-end competition in Qingdao / Sanya.

ST3: High-end and customized talent strategy. Implement the "Weihai Marine Sports Talent Rock Foundation Program". "High-end and cutting-edge" introduction: Utilize subsidies and other policies to precisely introduce top talents in fields such as commercial yacht operation, high-end health care, and

International study tours; "Standardized" training: Establish a complete "mentorship by veterans" system and standardized training.

WT Strategy:

WT1: Digital technology empowerment strategy. Developing the "Weihai Smart Ocean Sports Metaverse" project.

WT2: "Weihai Marine Sports Quality Certification Program". Establish unified standards: Led by the cultural and tourism bureau, with the participation of industry associations and enterprises, a comprehensive quality standard system covering service hygiene, clear pricing, service procedures, and personnel and equipment qualifications will be formulated.

WT3: Ecological and sustainable brand strategy. Initiate the "Guarding the Blue of Weihai" sustainable tourism initiative.

Discussion

This study focuses on the current situation of marine sports tourism in Weihai City, constructs a resource management strategy system to enhance the attractiveness of scenic spots, and verifies the feasibility of the strategies. Although limited by research scope and time, there are still certain shortcomings in the study (such as the lack of long-term tracking of strategy implementation effects), the research results can provide reference for the high-quality development of marine sports tourism in coastal cities similar to Weihai in China, and also offer targeted ideas for solving the practical problems of Weihai's marine sports tourism industry.

By comparing with previous studies, Weihai's marine sports tourism shows both "industry commonality" and "local uniqueness":

Consistency: Tourist market characteristics (young workplace groups, short-distance travel) align with the conclusion of "post-epidemic short-distance/high-frequency coastal tourism";





consumption structure (80% basic experience-oriented) is consistent with the finding of "coastal tourism focusing on rigid needs".

Conflicts & Causes: 1. Female tourists (52.75%) are slightly more than males, conflicting with (Yao Yunhao, 2024)'s "over 60% male marine sports tourists"—caused by Weihai's focus on low-intensity ecological leisure projects (e.g., paddle board yoga); 2. High satisfaction (e.g., ecological experience mean 3.48) but low revisit intention (mean 2.36), conflicting with "satisfaction-revisit intention positive correlation"—caused by product homogenization (70% sailing/kayaking) and shallow cultural integration (sign-based fisherman/red culture).

Implications: Consolidate short-distance market and young customer group advantages, and address homogenization and cultural experience shortcomings to build differentiation.

To ensure the scientific rigor and transparency of the strategy feasibility assessment, this study established clear evaluation criteria during the expert review phase, focusing on three key dimensions: economic viability, stakeholder alignment, and environmental sustainability. The specific criteria are as follows: Economic Feasibility: Focuses on examining the strategy's input-output ratio (e.g., government subsidy coverage rate for metaverse projects, marginal profit of cultural and creative products), potential to boost corporate revenue (e.g., room for increasing the average transaction value of "sailing + camping" packages), and the intensity of policy funding support (e.g., the amount of special subsidies for ecological projects). Stakeholder Alignment: Assesses multi-party coordination across three levels: government (policy compliance, interdepartmental coordination difficulty), enterprises (operational cost controllability, technical implementation barriers), and tourists (demand match, experience innovation). For instance, the "China-Korea-Japan Marine Tourism Community" requires evaluating cultural acceptance among Japanese and Korean tourists and the international service capabilities of local enterprises. Environmental Sustainability: Focus on the strategy's impact on marine ecosystems, such as the energy consumption of non-motorized water sports equipment, the ecological footprint of beach snow festivals, and the long-term environmental benefits of the "Guardian of Weihai Blue" initiative. Ensure the strategy aligns with Weihai's policy direction for Class II water quality protection and eco-tourism development. After expert evaluation and stakeholder interviews, the final 17 strategies (5 SO + 6 WO + 3 ST + 3 WT) were confirmed to have high feasibility. By comparing with previous studies, this feasibility evaluation is consistent with the mainstream views of the industry, further verifying the scientific validity of the strategies. The strategies' high feasibility is consistent with industry mainstream views:

Aligns with (Yao Yunhao, 2024)'s sustainable tourism requirements (avoid over-commercialization, strengthen ecological protection); Customer-centric positioning (e.g., SO3's young group projects, WO3's membership system) is consistent with (ZangMin, 2010)'s





segmentation, which improves competitiveness; Smart/talent-driven strategies (e.g., SO3's platform, ST3's talent plan) echo (Zhang Weike, 2015)'s "intelligence improves efficiency, talents guarantee quality".

This study employed convenience sampling for the tourist sample collection. Although the sample size (400 respondents) meets Krejcie and Morgan's sampling error criteria, this non-probability sampling method has certain limitations. Convenience sampling primarily targeted immediate visitors at Weihai's four core areas.

Marine sports attractions (such as the International Seawater Bathing Beach and Grape Beach) potentially fail to fully represent the overall visitor structure of Weihai's marine sports tourism. For instance, it may underrepresent infrequent elderly travelers and cross-border visitors from Japan and South Korea, or over-sample younger tourists due to their higher participation rates. This could introduce bias in analyzing visitor characteristics (e.g., age distribution, consumption preferences), thereby affecting the universality of resource management strategies proposed based on visitor needs.

Although this study mitigated bias through multi-scenic area coverage and stratified statistics by gender and age (e.g., 39% of visitors aged 26-35 were corporate employees, 63.75% were non-local visitors), it remains crucial to note: conclusions should be supplemented with verification from other sampling methods (such as stratified sampling) when extrapolating to the broader marine sports tourism market in Weihai. Future research should broaden sample sources (e.g., include county-level scenic areas and cross-border tourists) and adopt mixed sampling techniques to more comprehensively reflect market realities and enhance the universality of these strategies.

Conclusion

This study focuses on the development of marine sports tourism in Weihai City. Through questionnaire survey (400 valid samples) and in-depth interviews (10 key respondents), combined with SWOT-TOWS matrix and expert review, it systematically sorts out its development status, constructs resource management strategies, and verifies feasibility. The following conclusions are drawn: In terms of development status, Weihai has significant advantages: it has rich marine resources, such as high-quality beaches and second-class water quality, convenient transportation to scenic spots, diverse projects, and a perfect safety guarantee, superimposed on the location and policy support of the China-South Korea Free Trade Zone, and outstanding development potential. However, at the same time, there are shortcomings such as uneven resource

development, product homogenization, shallow cultural integration, seasonal idleness, etc., and face competition and extreme weather threats in Qingdao and Sanya; tourists with 26-35 years old enterprise employees outside the province as the core, preference 2-3 days short-





distance experience, consumption focused on accommodation and basic projects, value-added consumption to be excavated. In terms of feasibility, nine experts unanimously recognized the suitability of the strategy with Weihai's current situation and future needs. The feasibility stems from three aspects: the resource side makes full use of ecological, red culture, and location advantages; the policy end is in line with the national smart tourism and eco-tourism orientation; the market side accurately matches the trend of short-distance travel and young customers. In summary, Weihai marine sports tourism needs to take the optimized strategy as the starting point, consolidate the short-distance market and ecological advantages, and break the homogenization and cultural shortcomings, to transform the resource advantages into competitiveness, provide reference for similar coastal cities, and promote the high-quality and sustainable development of the industry.

Research Recommendations

Suggestions in this research

The resource management strategies and current situation analysis conclusions proposed in this study involve multiple subjects, such as government departments, scenic spot operators, and tourism-related enterprises. To ensure that the research results are effectively applied to practice and truly promote the upgrading of Weihai's marine sports tourism, targeted recommendations are put forward for different subjects:

Weihai Municipal Bureau of Culture and Tourism: 1. Apply for ecological/digital project special subsidies (e.g., "Weihai Marine Sports Ecological Fund") and establish a supervision group to avoid fund idleness; 2. Lead the formulation of "Marine Sports Quality Certification Standards" and set up a Sino-Korea-Japan cooperation office for visa facilitation and event co-hosting; 3. Build an evaluation index system (ecological protection, satisfaction, income) for quarterly data statistics and annual adjustments.

Scenic Spot Operators: 1. Design scenario-based niche products (e.g., "kayaking + Jiawu Naval Battle simulation"); 2. Integrate culture and technology (e.g., fisherman culture, cultural and creative experience

zones, metaverse pre-experience offline discounts); 3. Strengthen ecological protection (e.g., sea fishing participant limits) and activate winter resources (e.g., beach ice and snow carnival).

Tourism Enterprises: 1. Develop combined products (e.g., "Liugongdao research + Chengshantou observation" routes, "sailing + homestay" packages); 2. Conduct precise digital marketing (e.g., travel blogger project vlogs, enterprise team building package promotion via workplace platforms).





Recommendations for further research:

To make up for the shortcomings of this study and further deepen the research on Weihai's marine sports tourism, the following suggestions are put forward for future research directions:

Expand Scope & Optimize Methods: Expand surveys to county-level scenic spots (e.g., Rushan Silver Beach) and conduct 1 – 2 -year tourist tracking; add in-depth interviews (e.g., Japanese/Korean tourists) and participant observation (e.g., metaverse project operation).

Strengthen Interdisciplinary & Emerging Theme Research: 1. Interdisciplinary research (marine ecology: project impact on coastal ecosystems; cultural anthropology: fisherman culture inheritance; tourism economics: strategy input-output ratio); 2. Emerging themes (post-pandemic "sports + health care" products, low-carbon travel routes, Japanese/Korean market consumption habit analysis).

Empirical Strategy Research: Conduct pilot tests of key strategies (e.g., metaverse, ecological brand) in core scenic spots, and optimize based on implementation effects (e.g., tourist flow, income changes).

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