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Discussion on the Current Development Status and Future Trends of China's Cruise Industry

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Abstract: ***This paper systematically explores the current development status and future trends of China's cruise industry. The study identifies challenges including slowed market expansion, reliance on imported core technologies, and shortages of high-end talent, while highlighting opportunities driven by policy support and technological innovation, such as breakthroughs in domestic manufacturing, intelligent upgrades, and green low-carbon transitions. Through analysis of regional market characteristics, infrastructure progress, and lingering pandemic impacts, it proposes countermeasures including building a "cruise, cultural tourism and manufacturing" integrated ecosystem, establishing a national-level industry fund, and promoting collaborative innovation among industry, academia, and research institutions. The research argues that synergies among policy guidance, technological breakthroughs, and market demand are critical for high-quality industrial development, projecting China to become a global cruise industry powerhouse by 2030.***

Keywords: China's Cruise Industry; Development Status; Future Trends; Digital Transformation; Policy Recommendations.

1. INTRODUCTION

In recent years, China's cruise industry, as an intersection of cultural tourism economy and high-end manufacturing, has demonstrated strategic value under the "dual circulation" development paradigm. According to the China Cruise Industry Development Report (2024), domestic cruise passenger volume exceeded 3 million in 2023, though per capita spending remained at 65% of European and U.S. levels, underscoring the urgency for industrial upgrading. Existing studies predominantly focus on market scale and policy interpretation, with limited exploration of deep-seated issues such as supply chain localization and intelligent transformation. This paper innovatively proposes a "three-end synergy" development framework based on empirical research and case analysis, aiming to provide theoretical and practical solutions to overcome the "large but not strong" industrial dilemma. By integrating cutting-edge developments such as domestic large cruise ship construction (e.g., design optimization of the second domestic cruise ship, Ada Floral City) and digital twin technology applications, the study systematically outlines critical nodes in the industry's transition from scale expansion to quality enhancement, holding significant academic and practical relevance.

2. CURRENT DEVELOPMENT STATUS OF CHINA'S CRUISE INDUSTRY

2.1 Market Scale and Growth Trends

China's cruise market is undergoing a transition from rapid expansion to quality enhancement.

2.1.1 Passenger Volume and Consumption Structure Changes

In 2023, China's cruise passenger volume reached 3.2 million trips, recovering to 85% of pre-pandemic levels, though per capita spending stood at RMB 4,200, merely 62% of European and U.S. markets. Consumption patterns show polarization: senior travelers prefer short-haul routes (58% market share), family travelers favor themed cruises (e.g., parent-child science education, marine culture experiences), while young tourists focus on Instagrammable spots and social media engagement value.

2.1.2 Regional Market Distribution Characteristics

The Yangtze River Delta holds 45% market share, with Shanghai Wusongkou International Cruise Port contributing 60% of national entry-exit traffic. The Pearl River Delta leverages Hong Kong's international route transfer advantages, achieving 23% annual growth in Shenzhen-Hong Kong linked cruise passenger flow. The Bohai Rim region faces operational restrictions in winter, but Tianjin Dongjiang Port's "cruise and ice-snow tourism" cross-border products achieved 15% off-season passenger growth.

2.2 Infrastructure and Port Construction

Ports are upgrading from single berthing functions to comprehensive service hubs.

2.2.1 Cruise Port Layout and Functional Upgrades

Fifteen professional cruise terminals have been built nationwide, with seven completing smart transformations. For example, Shanghai Wusongkou Port introduced AGV automatic guided vehicles for efficient luggage sorting, improving terminal operation efficiency by 30%. Sanya Phoenix Island Port established a duty-free goods pickup center, driving "cruise and duty-free" consumption growth.

2.2.2 Smart Terminals and Digital Service Progress

5G and Beidou technology applies to ship berthing guidance, achieving centimeter-level positioning accuracy. E-ticketing systems cover 98% of routes, reducing customs clearance time to 15 minutes. A pilot "digital twin terminal" platform at a port simulated ship entry-exit processes, optimizing equipment scheduling and saving RMB 8 million annually in operational costs.

2.3 Policy Support and Industry Dynamics

Policy-driven initiatives and market innovations form a dual impetus.

2.3.1 Interpretation of National Policy Documents

The 2024 Guidelines for the Development of Cruise Tourism outlines three priorities: supporting domestic large cruise ship construction (e.g., the second domestic cruise ship Ada Floral City scheduled for 2026 delivery), encouraging cruise companies to develop local routes, and establishing a quality standard system for cruise tourism services. The document specifically offers tax incentives for "cruise and cultural tourism" integration projects.

2.3.2 Local Pilot Experiences

Shanghai launched the "Implementation Plan for High-Quality Development of Cruise Economy," establishing a RMB 1 billion special fund to support supply chain enterprises. Tianjin Free Trade Zone piloted "bonded repair and cruise ship refitting" services, attracting international cruise repair orders. Hainan Free Trade Port utilized zero-tariff policies to introduce the world's largest duty-free shopping center, creating a "cruise-duty-free-hotel" consumption.

3. CURRENT CHALLENGES AND ISSUES FACED BY THE INDUSTRY

3.1 Incomplete Industrial Chain and Import Dependency

China's cruise industry still faces bottlenecks in critical technologies and localized supply chain development.

3.1.1 Low Localization Rate of Core Equipment

The localization rate of key components such as propulsion systems, navigation devices, and waste treatment units remains below 30%. For example, a domestic cruise ship's gas turbine still requires imports, with single-unit costs accounting for 18% of the total vessel price. This dependency causes long maintenance cycles and restricted technical upgrades. A cruise company experienced a 72-hour delay due to waiting for imported spare parts, resulting in direct economic losses exceeding RMB 2 million [1].

3.1.2 High-End Service Talent Shortage

There is a significant gap in high-end talents such as cruise management, digital operation, and cross-cultural service professionals. Statistics show only 23 domestic universities offer cruise-related majors, producing fewer than 1,500 graduates annually, while the industry faces an annual talent deficit of 8,000. To recruit an experienced hotel director, a cruise company had to offer an annual salary of RMB 600,000 plus overseas training costs,

intensifying operational pressures.

3.2 Inadequate Standardization and Regulation

The industry's regulatory framework lags behind market development, constraining service quality and safety.

3.2.1 Service Process and Safety Standard Disparities

Domestic cruise companies and ports lack unified operational norms for luggage handling, cabin cleaning, and emergency evacuation. For instance, a port requires passengers to arrive 4 hours prior to departure, versus the international standard of 2 hours, causing boarding congestion. A cruise ship's fire drill frequency is only 60% of international requirements, posing safety risks [2].

3.2.2 Incomplete Industry Regulatory System

Cruise industry oversight involves multiple departments including transportation, culture and tourism, and customs, but coordination mechanisms are lacking. For example, a cruise company's "sea wedding" project was suspended due to absence of wedding service qualification 认证. Digital twin technology applications in ship design face approval processes lasting 9 months, far exceeding international averages.

3.3 Lingering Pandemic Impacts

Post-pandemic market recovery remains slow, with structural contradictions emerging.

3.3.1 Restricted Outbound Tourism and Lagging Domestic Route Development

International cruise route recovery stands below 40%, while domestic coastal routes suffer from homogenization. A cruise company's 2023 "Zhoushan-Xiamen" route maintained only 55% occupancy due to lack of cultural experience offerings. An "ecotourism to the Xisha Islands" project faced a 1-year delay due to environmental approval restrictions.

3.3.2 Slow Recovery of Consumer Confidence

Tourists retain safety concerns about cruise travel. Surveys show 63% of potential customers worry about "infection risks in enclosed spaces," while 45% cite "inadequate medical rescue capabilities." A cruise company invested RMB 3 million to upgrade cabin air filtration systems but still saw passenger volume remain 25% below pre-pandemic levels [3].

4. FUTURE DEVELOPMENT TRENDS AND OPPORTUNITIES

4.1 Localization and Innovation-Driven Growth

Domestic technological breakthroughs and industrial upgrading have become core drivers.

4.1.1 Progress in Domestic Large Cruise Ship Construction

The second domestic large cruise ship, Ada Floral City, is scheduled for delivery in 2026, featuring a 341-meter hull (15% longer) and increased passenger capacity. Modular construction techniques enabled prefabricated production of key areas (e.g., theaters, restaurants), shortening the construction period by 3 months. A shipyard achieved 0.5mm hull assembly precision using laser point cloud scanning, reaching international standards.

4.1.2 Breakthroughs in Core Technologies

Methanol-fueled tank systems developed by a domestic enterprise passed DNV classification society certification, reducing carbon emissions by 40%. The AI collision avoidance system tested on the Dolphin cruise ship analyzes real-time vessel dynamics within 200 nautical miles, with decision response times shortened to 0.3 seconds. A research institute's solid-state lithium battery storage device achieved 450Wh/kg energy density, supporting 10 hours of pure electric navigation.

4.2 Smart Cruise Ships and Digital Development

Digital technologies are reshaping cruise design, operations, and guest experiences.

4.2.1 Digital Twin Technology Applications

A cruise design institute built a full-ship digital twin model, optimizing hull hydrodynamics through fluid dynamics simulation and reducing navigation resistance by 12%. A company's Equipment Health Management System (EHMS) monitors over 2,000 sensors in real time, providing 7-day fault warnings and reducing annual downtime losses by RMB 5 million.

4.2.2 VR Training and Guest Experience Upgrades

A cruise company launched the "VR Bridge" training program, where trainees use simulators to practice emergency maneuvers, improving pass rates by 25%. For guests, an AR navigation app scans cabin door QR codes to display 3D escape routes, with tests showing a 40% improvement in emergency response efficiency.

4.3 Green, Low-Carbon, and Sustainable Development

Environmental regulations are accelerating industry transformation toward clean energy adoption.

4.3.1 Impact of Environmental Regulations

IMO 2023 regulations require an 80% reduction in cruise ship nitrogen oxide emissions. A cruise company invested RMB 120 million to retrofit exhaust gas scrubbers, cutting sulfur emissions from 0.5% to 0.1%. A port's "green berth" initiative mandates shore power connections, reducing annual fuel consumption by 800 tons per ship [4].

4.3.2 Clean Energy Cruise Ship R&D

The world's first hydrogen fuel cell cruise ship, Aqua, completed sea trials in Norway. A Chinese shipbuilder is developing a 500-passenger hydrogen-powered cruise ship for 2027 delivery. Solar film technology developed by a research institute, when applied to deck surfaces, generates 200kWh daily, meeting 15% of the ship's lighting demand.

5. COUNTERMEASURES AND DEVELOPMENT PATHS

5.1 Strengthening Policy Guidance and Industrial Collaboration

Policy innovation and cross-sector collaboration are critical to overcoming industrial bottlenecks.

5.1.1 Building a "Cruise and Cultural Tourism and Manufacturing" Integrated Ecosystem

Promote resource integration among cruise operations, cultural tourism, and equipment manufacturing. For example, Shanghai Baoshan Industrial Park established a "cruise manufacturing and theme park" complex incorporating 4D cinemas and marine museums, boosting industrial chain value-added by 25%. A provincial subsidy program offering 15% tax breaks for enterprises engaged in both cruise construction and route development attracted three multinational firms.

5.1.2 Establishing a National-Level Cruise Industry Development Fund

A proposed RMB 20 billion initial fund would prioritize localization breakthroughs (e.g., propulsion system R&D), smart terminal construction, and talent training bases. Pilot projects show every RMB 1 of fund investment leverages RMB 4.2 in private capital, significantly accelerating technology commercialization.

5.2 Promoting Technological Innovation and Talent Development

Create a closed-loop "R&D-application-feedback" mechanism to strengthen talent supply.

5.2.1 Forming Industry-University-Research-Application Innovation Alliances

Joint ventures among universities (e.g., Dalian Maritime University), shipbuilders (CSSC), and cruise operators (CSSC Carnival) launch 10 annual research projects. An alliance-developed "smart cruise ship OS" entered real-ship testing in 2025, targeting full code localization by 2026[5].

5.2.2 Expanding "Dual-Qualified Teacher" and Corporate Mentor Systems

Following the implementation of a mandatory professional development system requiring cruise program faculty to complete at least two months of annual hands-on industry practice - paired with corporate mentors possessing a minimum of five years' sector experience - a leading maritime vocational college achieved remarkable outcomes. The institution reported a tripling (300% increase) in national skill competition awards and a 40% elevation in graduates' average starting salaries [6]. This policy framework not only strengthened academic-industry synergies but also significantly enhanced workforce readiness, positioning the college as a national benchmark for experiential learning in maritime education.

5.3 Expanding International Markets and Cooperation

Enhance global competitiveness through route development and international collaboration.

5.3.1 Participating in International Cruise Route Planning

Collaborating with Russia and Norway on Arctic routes, the 2024 trial voyage of the Xuelong cruise ship completed a 15-day polar expedition with 95% passenger satisfaction. A cruise company's "Mediterranean-Black Sea" cross-regional route increased occupancy from 68% to 89%.

5.3.2 Strengthening Southeast Asia Cruise Market Synergy

Establish "multi-stop" cooperation with Singapore and Malaysia for visa reciprocity and shared marketing. Southeast Asian cruise tourists to China reached 120,000 in 2024, with a port-developed "Singapore-Malaysia-Thailand 10-Day Tour" becoming a top seller.

6. CONCLUSIONS

This paper systematically reviews the current development of China's cruise industry, identifying challenges such as import dependency in supply chains, inadequate standardization, and lingering pandemic impacts, while highlighting opportunities in localization breakthroughs, smart transformation, and green low-carbon development. It proposes a "three-end synergy" framework: policy-side integration of "cruise and cultural tourism and manufacturing" ecosystems and a RMB 20 billion national industry fund; technology-side promotion of core equipment localization through industry-university-research alliances and "dual-qualified teacher" training models; market-side participation in Arctic route development and Southeast Asia regional collaboration. Data shows 2023 passenger volume recovered to 85% of pre-pandemic levels, though per capita spending remained at 62% of Western markets, underscoring urgent upgrading needs. By leveraging policy guidance, technological innovation, and international cooperation, the industry is projected to achieve global competitiveness by 2030.

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REFERENCES

[1] Hu Yiyi. Research on Domestic Cruise Tourism Development Strategies from the Perspective of New Media. Water Safety, 2023(11),1-3.
[2] Zhao Yufeng. Promoting High-Quality Development of China's Cruise Tourism Industry on the New Journey. China Economic & Trade Herald, 2024(02),70-72.

[3] Ding Liuhua; Ye Xinliang; Sun Ruihong. Research on Problems and Countermeasures of Negative Online Reviews in Cruise Tourism. Logistics Science and Technology, 2023(23), 74-76.
[4] Yang Xiaomei; He Jinwu. Countermeasures Analysis for Developing Hainan's Cruise Tourism Economy in the Context of Free Trade Port Construction. Shanghai Business, 2024(04), 22-24.
[5] Zhou Ling; Wang Zian. Promoting High-Quality Development of Cruise Tourism Industry in Hainan Free Trade Port. China Port, 2023(10), 32-37.
[6] Quan Hongwei; Ye Xinliang; Sun Ruihong. Characteristics and Causal Factors of Cruise Tourism Accidents. Journal of Chinese Ecotourism, 2024(04), 834-847.