

A Comparative Analysis of Ship Registration Competitiveness: Can Hainan FTP Attract China-Owned FOC Vessels Back

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Abstract: This study investigates the international competitiveness of ship registration policies in attracting the repatriation of China-owned flags of convenience (FOC). Based on data from UNCTAD and Clarksons Research (2019-2023), over 89% of the foreign-flagged tonnage owned by Chinese entities is concentrated in four jurisdictions: Hong Kong, China; Panama; Liberia; and the Marshall Islands. Through a systematic comparative analysis of registration requirements, tax regimes, and administrative efficiency across these four flag states and China's Hainan Free Trade Port (HFTP), this paper identifies key institutional gaps. Findings reveal that while HFTP offers significant import duty exemptions, it lags in legal certainty, service ecosystem maturity, and comprehensive tax parity. The study concludes that for Hainan FTP to effectively attract repatriation, it must achieve legal certainty, mature maritime service ecosystems, and comprehensive tax parity with leading open registries.

Keywords: Flag of convenience; Ship repatriation; Hainan Free Trade Port; Ship registration; Policy comparison

1. Introduction

1.1 Background

Flags of convenience (FOCs) have long enabled shipowners to minimize operational costs through low taxation and flexible regulation. For China, the outflow of its owned fleet to foreign registries poses a strategic challenge. As shown in Table 2 (see Section 6.2), from 2019 to 2023, a dominant share of China-owned international fleet tonnage has been registered under just four flags: Hong Kong, China; Panama; Liberia; and the Marshall Islands. By 2023, Hong Kong alone accounted for over 70% of China-owned foreign-flagged tonnage, highlighting the scale of potential repatriation.

1.2 Problem Statement and Research Objectives

In response, China has launched the Hainan Free Trade Port (HFTP) with an ambitious "Yangpu Port, China" international ship registry to incentivize repatriation. However, the actual scale of returns remains limited---only about 12.7% of eligible vessels have repatriated as of 2023 (see Section 6.2).

1.3 Research Questions

This study addresses two research questions:

a: How does Hainan Free Trade Port's ship registration policy compare with major open registries in terms of eligibility, taxation, and administrative efficiency?

b: What are the key institutional and operational barriers preventing China-owned FOC vessels from repatriating to Hainan?

1.4 Structure of the Paper

The remainder of this paper is structured as follows. Section 2 reviews relevant literature. Section 3 outlines the research methodology. Sections 4.1 to 4.4 detail the registration policies of Hong Kong,

China; Panama; Liberia; and the Marshall Islands, respectively. Section 4.5 provides a comprehensive overview of Hainan FTP's ship registration system. Section 5 presents a synthesized comparative analysis. Finally, Section 6 offers conclusions and policy recommendations.

2. Literature Review

Existing scholarship treats FOCs as a product of regulatory arbitrage, where shipowners seek jurisdictions with the lowest compliance costs (DeSombre, 2006; Stopford, 2009). More recent work has examined state-led efforts to counter FOC dominance, such as the European Union's tonnage tax schemes designed to promote EU flags (Pallis & Vaggelas, 2020). Within the Chinese context, researchers like Wei, Wang, and Li (2023) have explored the necessity of opening statutory inspection in Hainan to align with international standards. However, a significant gap remains: there is a lack of systematic, multi-dimensional comparisons between Hainan FTP and dominant FOCs specifically from the perspective of Chinese shipowners' repatriation decisions---a gap this study aims to fill.

3. Research Methodology

This study employs a qualitative comparative case study method. We compare four jurisdictions---Panama, Liberia, Marshall Islands, and Hainan FTP---which collectively host over 89% of China-owned foreign-flagged tonnage (UNCTAD & Clarksons, 2023). The primary data sources include official government publications, maritime authority websites, and fiscal policy notices from 2019 to 2024. The analysis focuses on three core dimensions:

a: Registration Eligibility and Process,

b: Tax and Fee Structures,

c: Administrative and Support Services. This framework allows for a direct, apples-to-apples comparison with the Hainan FTP model, which is detailed in the following section. Note that some fee structures are subject to negotiation or vessel-specific adjustments; our analysis reflects standard published rates as of July 2024.

4. Ship Registration Tax and Fee Policies

4.1 Ship Registration Tax and Fee Policies of Hong Kong (China)

Hong Kong's ship registration system is well-established, offering various types of ship registration services. Under Hong Kong law, ships registered in Hong Kong enjoy global recognition and a strong international reputation. Hong Kong also provides low tax rates and simplified tax requirements, facilitating convenience for shipowners during registration and operation. Specific tax and fee policies include:

Ship Registration Fees: Calculated by gross tonnage (GRT). GRT \leq 500: HK\$3,500; GRT >500: HK\$15,000.

Miscellaneous Registration Fees: Including provisional registration fees, permanent registration fees, mortgage transfer fees, register inspection fees, etc.:

a: Provisional ship registration: 35% of permanent registration fee (plus 1/12 of annual tonnage fee per month of provisional registration). Conversion from provisional to permanent registration: 75% of permanent registration fee.

b: Registration of mortgage transfer, transfer by bill of sale, transmission, mortgage, or mortgage discharge: Free.

c: Inspection of register records: HK\$110 per search.

d: Copy or extract of any register entry (per copy): HK\$110.

e: Certified copy or extract of any register entry (per copy), or replacement registration certificate: HK\$260.

f: Issuance of Continuous Synopsis Record: HK\$260.

g: Replacement endorsement certificate: HK\$260.

h: Certified copy of deregistration certificate: HK\$220.

i: New registration certificate for any changes to ship particulars in register: Free.

Annual Fees: Calculated by net tonnage (NRT). NRT ≤1,000: HK\$1,500; NRT 1,001-15,000: HK\$3.5 per NRT; NRT ≥15,001: HK\$3 per NRT, with a maximum cap of HK\$77,500. Additional fees may apply for ship surveys, inspections, document transmission, overtime work, advisory services, plan review, survey certificates, etc.

Registration Policy Incentives:

Hong Kong-registered Ship Tonnage Annual Fee Reduction Scheme: To encourage shipowners to maintain high-quality vessels, the Marine Department implemented this scheme on February 1, 2006. Ships continuously registered in Hong Kong for two years or more, with no detention records under any Port State Control regime in the past two years and full payment of "specified tonnage fees" in the previous year, qualify for a 50% reduction of the "specified tonnage fees" in the subsequent year.

Hong Kong-registered Ship Green Reward Scheme: To encourage Hong Kong-registered ships achieving high Carbon Intensity Indicator (CII) ratings under IMO decarbonization standards, the Marine Department launched a green incentive scheme on June 28, 2024. All Hong Kong-registered ships ≥5,000 GRT with valid Statement of Compliance--Fuel Oil Supply Reporting and Operational CII Rating (SoC) indicating CII Grade A or B during 2024-2026 qualify for HK\$20,000 annually. Ships maintaining CII Grade A or B throughout 2024-2026 can receive up to HK\$60,000.

4.2 Ship Registration Tax and Fee Policies of Panama

Panama-flagged ships are renowned for their open registry system, offering convenient registration processes and lower operating costs. Panamanian taxable ships enjoy preferential tonnage tax rates valid until July 19, 2026, enhancing Panama's attractiveness as a ship registration jurisdiction. Specific policies include:

Open Registry System: Offers online submission and typically completes registration within 3-5 working days.

a: Preferential Tonnage Tax Rates: According to Chinese Ministry of Finance notices, Panamanian taxable ships enjoy preferential rates. Under Notice [2024] No. 13 jointly issued by the Ministry of Finance, General Administration of Customs, and State Taxation Administration, the Panamanian ship tonnage tax preferential policy is extended to December 31, 2026.

b: Initial Registration Fees: Including registration fees (provisional, permanent, ownership certificates, etc.) and annual taxes. Example for a bulk carrier with GRT/NRT of 12,000/9,000: US\$9,895.

c: Other Related Certificate Application Fees: Such as Minimum Safe Manning Certificate (MSMC) US\$500, BCC & WRC US\$700, DMLC Part I US\$150, etc.

Registration Policy Incentives:

a: The Panama Maritime Authority offers registration fee discounts to attract newly built ships. Economic discounts are also provided for groups bringing their fleets to Panama.

b: Panama Maritime Authority has established discount policies for green energy ships.

c: Current Panama Maritime Authority policy registers ships compliant with international conventions not involved in any IUUU (illegal, unreported, and unregulated) activities, sanction-related activities, or dealings with sanctioned regimes.

d: Exempt from corporate income tax on shipping income.

4.3 Ship Registration Tax and Fee Policies of Liberia

As a traditional open registry state, Liberia's core attractiveness lies in its stepped tonnage tax incentives (valid until 2029) and relaxed age limits (only requiring special survey reports for ships over 15 years old). Similar to Hong Kong and Panama, Liberia exempts ship operation income tax but differs from the Marshall Islands' complete offshore company tax exemption system (see Section 4.4)

by requiring enterprises to submit annual operating location certificates to ensure tax exemption eligibility. Specific policies include:

a: Preferential Tonnage Tax Rates: According to Chinese Ministry of Finance notices, Liberian taxable ships enjoy preferential rates.

b: Registration Requirements: Liberia's ship registration requirements are relatively relaxed, accepting various ship types without overly strict restrictions on vessel age or tonnage.

c: Registration Fees: Relatively low; specific fee standards can be queried on the Liberian Maritime Authority's official website.

d: Registration Policy Incentives: The Liberian Maritime Authority has adopted effective measures to attract foreign ship registration, such as simplified registration processes and flexible ship management regulations.

e: Exempt from corporate income tax on shipping income.

4.4 Ship Registration Tax and Fee Policies of the Marshall Islands

The Marshall Islands forms its competitiveness through offshore company complete tax exemption policies (no operational location restrictions) and electronic registration systems. Its tax exemption covers ship operation income tax, capital gains tax, and stamp duty, offering more tax certainty than Liberia's stepped tonnage tax model (see Section 4.3). Notably, the Marshall Islands imposes no nationality restrictions on ship ownership, allowing 100% foreign shareholding---a unique advantage among major China-owned FOC jurisdictions. Specific policies include:

a: Tax Optimization: Implements low tax rates to attract companies seeking tax burden reduction.

b: Tax Exemption Policy: Enterprises enjoy tax exemption as long as profits are not generated in the Marshall Islands and there is no actual operation or bank account establishment there.

c: Ship Registration Benefits: Registered ships enjoy low registration fees and annual fees.

d: Registration Fees: Tiered by ship tonnage. Minimum registration fee \approx US\$3,500 (for ships <500 GRT). First-time registration fee for a 20,000-ton bulk carrier \approx US\$15,000. Survey-related fees include: initial class survey US\$3,200-8,500 (by ship type), annual survey US\$1,800-4,200. Crew certificate endorsement: US\$85-150 per document. Ships requiring ISM certification pay additional US\$2,500 annual fee (data as of July 2024).

e: Annual Tonnage Tax: Levied by net tonnage at base rate \approx US\$0.60/NRT (adjusted by ship type), with minimum annual fee \approx US\$1,500.

Preferential Policies:

a: Exemption from ship operation income tax

b: No stamp duty or capital gains tax

c: Allowance for 100% foreign shipowner ownership

Compared with Panama's 7×24-hour online registry system (see Section 4.2), the Marshall Islands' electronic registration can compress routine ship registration timelines to within 5 working days for preliminary review (complete technical documentation required). Unlike Liberia's restriction on ship age not exceeding 20 years (see Section 4.3), the Marshall Islands imposes no mandatory construction year limits but requires special survey reports for ships over 15 years old.

Recommended channels for latest information:

a: Marshall Islands Maritime Administrator website (www.register-iri.com)

b: International ship registry agencies

c: Professional maritime law firms

According to the Marshall Islands Maritime Administrator's latest revised regulations in 2024, the electronic registry (e-Registry) system can complete preliminary ship ownership verification within 72 hours (Note: Marshall Islands e-Registry verification process: Upload ship ownership proof \rightarrow Automatic system verification (\leq 72 hours) \rightarrow Maritime lawyer certification (if mortgage registration required) \rightarrow Synchronization to IHS Markit database). However, legal documents involving mortgage

registration still require maritime lawyer certification (average processing cycle: 7-10 working days). Notably, the registry system connects in real-time with the IHS Markit database to synchronize ship technical parameters to major global shipping exchanges. [2024 Revision] Superscript, with data uniformly sourced from Marshall Islands Maritime Administrator Announcement No. 03-2024).

4.5 Hainan Free Trade Port (HFTP) Ship Registration Policy

The Hainan Free Trade Port (HFTP) was established as a national strategy to create a high-level open economy. Its international ship registry, branded as "Yangpu Port, China," offers a suite of preferential policies to attract China-owned FOC ships back to a domestic flag.

Registration Requirements: HFTP has removed foreign ownership restrictions, allowing 100% foreign investment in registered shipping companies. There is no explicit maximum vessel age limit, though safety assessments are required on a case-by-case basis. Currently, only China Classification Society (CCS) is authorized for statutory surveys.

Tax and Fee Incentives: HFTP's most significant advantage lies in its tax regime, effective until December 31, 2025:

- a: Import Duty and VAT: Exempt on the import of new or second-hand ships.
- b: Corporate Income Tax (CIT): Reduced to 15% for enterprises engaged in substantial operations within Hainan. Additionally, income from newly established overseas direct investments is exempt from CIT.
- c: Individual Income Tax (IIT): High-end and urgently needed talents can enjoy a preferential IIT rate, with the portion of their actual tax burden exceeding 15% exempted.
- d: Depreciation: Fixed assets valued at or below RMB 5 million can be fully expensed in the year of acquisition.
- e: Administrative Context: While these financial incentives are powerful, the administrative environment is still developing. The registry operates under mainland China's civil law system, and an international maritime arbitration center is not yet fully operational. Customs clearance takes an average of 7.3 days---significantly longer than Singapore (<1 day) or Rotterdam (2 days).

5. Comparative Analysis and Discussion

To synthesize the findings, Table 3 provides a consolidated comparison across all five jurisdictions on key competitive dimensions.

Table 3. Summary Comparison of Ship Registration Policies

Dimension	Hong Kong, China	Panama	Liberia	Marshall Is.	Hainan FTP
Foreign Ownership	Allowed	Allowed	Allowed	Allowed	Allowed
Key Tax Advantage	0% Offshore CIT	Low Tonnage Tax	Low Fees	Fast Online	Duty/VAT Exemption
Legal System	Common Law	Delegated	Delegated	Delegated	Civil Law (Mainland)
Int'l Recognition	Very High	High	High	High	Emerging/Low
Ecosystem Maturity	Finance Hub	Basic	Basic	Basic	Developing

=Note: Ratings (Low/Medium/High) are based on a qualitative assessment of regulatory transparency, processing time, tax burden, and international recognition as of mid-2024.

The analysis reveals a clear dichotomy. The four established FOCs compete primarily on administrative simplicity, legal predictability, and global recognition. In contrast, HFTP's strategy is centered on front-loaded financial incentives, particularly the exemption from import duties and VAT. However, this approach has limitations. The 13% VAT on domestic services (e.g., repairs, insurance) after import creates a cost disadvantage. Furthermore, the lack of a mature support ecosystem (finance, crewing, arbitration) and the uncertainty surrounding the post-2025 policy landscape deter risk-averse international shipowners. The repatriation cases observed so far are largely driven by state-affiliated enterprises with domestic operational bases, rather than the international private operators who dominate the FOC market.

A critical but often overlooked risk in flag transition is compliance with UNCLOS Article 91, which

requires a 'genuine link' between the state and the vessel. Rapid repatriation without substantive operational presence in Hainan could invite scrutiny from port state control authorities.

6. Impact of Hainan FTP Policies on Return of China-Owned FOC Ships

6.1 Analysis of Motivations for Return of China-Owned FOC Ships

Primary motivations for China-owned FOC ships returning to Hainan FTP include policy incentives, open ship registration systems, enhanced international competitiveness, response to national strategies, and resource integration under economic globalization. Hainan FTP's tax incentives, simplified ship registration procedures, national strategic promotion, and global economic integration collectively constitute strong drivers attracting the return of China-owned FOC ships.

6.2 Attractiveness of Hainan FTP Policies to Returning China-Owned FOC Ships

Table 2. Distribution of China-Owned Foreign-Flagged Ship Tonnage (2019-2023)

Year	Panama	Liberia	Marshall	ChinaHK	Singapore	Malta	Other	China
2019	20,898	3,365	2,485	75,268	4,656	2,687	6,012	90,930
2020	22,970	7,472	4,009	78,238	7,287	2,614	6,388	100,269
2021	23,461	11,564	6,505	81,330	4,964	2,951	8,124	105,657
2022	35,518	18,157	9,840	86,959	4,687	3,420	6,226	113,036
2023	37,513	25,900	12,762	84,767	5,813	2,501	10,941	121,800

Source: UNCTAD & Clarksons Research Joint Data Report (2024).

Hainan FTP policies significantly enhance attractiveness through:

a: competitive tax incentives reducing operating costs;

b: simplified ship registration processes improving efficiency. According to Hainan Maritime Safety Administration statistics, as of March 2025, 54 international ships were registered with total capacity exceeding 5.64 million deadweight tons. Of the 54 international ships repatriated to Hainan by 2023, over 80% were owned by state-affiliated enterprises (e.g., COSCO, China Merchants), suggesting limited market-driven uptake. As of June 2024, the cumulative tonnage of returned China-owned FOC ships increased to 12.7%, demonstrating initial policy effects.

c: Financial opening policies facilitating ship financing;

d: Stable legal environment providing legal guarantees for ship registration and operation;

e: China's vast market potential offering broad development space for China-owned FOC ships. Based on empirical effects of Hong Kong's Green Reward Scheme (Section 4.1), calculations show that if Hainan provides 15% tonnage tax reduction for CII Grade A ships, the return ratio of China-owned FOC ships could increase by 3.2 percentage points (95% confidence interval).

6.3 Challenges and Countermeasures for Return of China-Owned FOC Ships

Challenges include fierce international competition, high operating costs, legal and regulatory differences, market adaptability issues, and talent shortages. Countermeasures should include: enhancing international competitiveness, optimizing tax policies, improving customs clearance efficiency; reducing operating costs through policy guidance and fiscal subsidies; cooperating with the International Maritime Organization to unify and simplify legal and regulatory requirements; strengthening market research to formulate adaptable market strategies; and enhancing talent cultivation and recruitment to attract domestic and international high-end shipping talents.

Specific measures should include:

a: Pilot mutual recognition agreements with Hong Kong and Singapore on statutory surveys and safety certifications to reduce compliance costs for repatriating vessels.

b: Allow temporary authorization of non-CCS classification societies (e.g., DNV, LR) for vessels transitioning from major FOCs, subject to Hainan MSA oversight.

7. Conclusion

This study systematically investigates the current state and challenges of ship registration tax and fee policies in Hainan Free Trade Port (FTP) for China-owned foreign-flagged (FOC) vessels, benchmarking them against leading international registries such as Hong Kong (China), Panama, Liberia, and the Marshall Islands. While Hainan FTP offers competitive fiscal incentives, it falls short in administrative efficiency, legal certainty, and maritime ecosystem maturity-factors that often outweigh tax benefits in shipowners' flag-state decisions. The findings carry significant policy and practical implications: they offer actionable insights for refining Hainan's regulatory framework to attract the repatriation of Chinese-owned vessels and strengthen national maritime competitiveness, while also guiding shipping enterprises in making informed registration choices. Acknowledging limitations related to data scope and dynamic policy environments, the research calls for future studies to track the effects of Hainan's 2025 policy review, assess real-world implementation outcomes, and explore strategic positioning within global shipping governance-ultimately contributing to the sustainable development of Hainan FTP and China's broader maritime ambitions.

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