Marine Policy 83 (2017) 22–28

Contents lists available at ScienceDirect

Marine Policy

journal homepage: www.elsevier.com/locate/marpol

The development of ship registration policy in China: Response to flags of convenience

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ARTICLE INFO

Keywords:
Ship registration
Flag of convenience
International shipping
Shipping policy
China

ABSTRACT

In order to expand registered fleet tonnage and strengthen ship management, China began to introduce a special tax-free ship registration (STFSR) policy in July 2007. However, more than eight years following its implementation, the policy ended in complete failure at the end of 2015. This paper comprehensively evaluates the main content and implementation process of the Chinese STFSR policy, analyzes the effects of the policy, and summarizes the concrete reasons for the policy's failure and lessons to be learnt. A new governance framework is being designed and future directions are being developed to explore how the government can implement a successful ship registry policy. This research is intended to provide new ideas and information to the Chinese shipping industry's policymakers and stakeholders in order to handle the "flagging out" problem, thereby mitigating the current adverse situation of ship flagging overseas while strengthening the management of ship operation.

1. Introduction

A flag of convenience (FOC) or open registry is an idiosyncratic but ubiquitous phenomenon in the world shipping industry. FOC is a special shipping business practice whereby a merchant ship is registered in a country other than that of the ship's owners, and the ship flies that country's flag. The closely-related term open registry is used to describe an organization that will register ships owned by foreign entities. The two terms of the convenience flag and the open registry seem similar, but there are still subtle differences. International Transport Federation (ITF), an international trade union federation of transport workers' unions around the world, would sometimes declare a particular open registry a "flag of convenience" to signal member unions to boycott ships registered in those countries. However, some open registry systems, for example, Hong Kong, Singapore, which are known for relatively fair labour practices and high-quality ship management, have not been designated "flags of convenience" by the ITF. Therefore, the terms "open registry" and "flag of convenience" are not exactly synonymous from the point of view of organized labour and ship management.

About 71% deadweight tonnage (DWT) of the world's ships sails under foreign flags [1]. To save cost and ease business operations, the shipping industry widely adopts the practice of "flagging out", which means that they register ships in foreign countries other than the countries where their owners. As a result, most countries with maritime transportation suffer from this problem. China has a large shipping fleet, but most of its ships also are flagged in other states [2]. China's flagging out problem has become increasingly serious since the 1990s, as increasing numbers of ships owned by state-owned and private enterprises in China use foreign flags. About 20% DWT of ships owned by state-owned and private enterprises in China were registered overseas in 1990, rising to more than 50% in 2015 [1].

In order to alleviate the serious flagging out situation and improve control over the fleets, the Chinese government implemented a new ship registration policy in July 2007, known as the special tax-free ship registration (STFSR) policy. Under this policy, international oceangoing ships of shipping enterprises with Chinese investment, in which the Chinese state or private capital accounts for no less than 50% (herein after referred to "SECI"),which had already registered in other states could re-register under this new policy, and thereby enjoy the preferential government exemptions from import duties and value-added tax [3]. The policy was in effect for more than eight years, culminating in complete failure in December 2015.

The purpose of this paper is to comprehensively evaluate the special ship registration policy of China, summarize the reasons for the policy failure and advance China's future governance of ship registration

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http://dx.doi.org/10.1016/j.marpol.2017.05.020
Received 19 December 2016; Received in revised form 11 May 2017; Accepted 11 May 2017
Available online 19 May 2017

management by providing the government with references for policy-making decisions in the future. The specific objectives of this paper include:

- Analyzing the main content and implementation framework of China's STFSR policy and carrying out a comprehensive analysis of the policy's implications.
- Evaluating the effects of this policy by discussing the specific reasons for the policy's failure and lessons learned.
- Advising on possible future governance directions for China's ship registration policy and offering specific policy recommendations.

In this paper, the methods of case study and comparative analysis are used to evaluate STFSR policy and design new governance framework and future directions for China. Case study methodology is applied to analyze the background, framework, development, current conditions and lessons learned of the China's STFSR policy. Related data are collected and comparative studies conducted to discern patterns and formulate principles that might guide future ship registry policy action in China. The paper begins with a comprehensive literature review, followed by the policy background and framework analysis. The paper then identifies the specific lessons learned from the frustrations of China's STFSR policy and offers future governance directions and policy recommendations. Finally, the paper summarizes its principal conclusions.

2. Literature review

The ship registry and vessel flag problem in global maritime transportation has long been a focus of interest to the international shipping community. A number of previous studies have already addressed important aspects of ship registry policy in global maritime transportation. A summary of this academic work is presented below.

In the world shipping industry, the flagging out problem has been controversial for decades [4]. Especially following the Second World War, this problem became increasingly serious, causing widespread concern in the international community. Various doubts about the legitimacy of FOC have necessitated the exploration of reasonable governance mechanisms for this problem [5,6]. International conventions attempted to restrain FOC behavior using the concept of a "genuine link" and urged flag states to fulfill the responsibility of ship management. Unfortunately, this did not have any substantial effect [7,8]. Due to flag states' ineffective supervision, port state control was introduced to the international shipping supervision system [9,10].

There has been significant academic discussion of the reasons for, consequences of and legal governance of flagging out. Scholars have cited economic cost, seafarers, ship finance [11,12], and political factors as motives for flagging out [13]. Because of these advantages, some scholars believe that the escalating adoption of FOC or open registration will be a long-term trend [14,15]. However, the practice of flagging out has also been criticized by scholars, since they believe that the consequences of FOCs include a negative impact on ship safety [16], the marine environment [17], and fair market competition [18]. As for the legal governance of FOCs, scholars studied the problem from the basic legal framework of FOCs and the legal shipping problems caused by the flags. Boczek constructed the basic legal framework and legal countermeasures to study the flag of convenience in the world's shipping industry from the international perspective [19]. Tache analyzed the contradiction between the principle of "genuine link" and shipping operations under convenient flags [20]. Ademuni - Odeke re-examined the legal regime of bareboat charter ship registration and flags of convenience in international law with particular reference to the 1958 Geneva Convention and the 1982 Law of the Sea Convention [21]. Kabai discussed the dilemma of the Maritime Labour Convention faced with the problem of open registries [22].

In the context of the popularity of FOCs and open registries, the choice of a ship's flag is an important decision for shipping companies. Scholars have offered different considerations and methods to model this kind of decision making. Haralambides and Yang introduced fuzzy set theory to assess the economic effects of flagging out utilizing context-dependent economic and societal factors [23]. Kandakoglu et al. proposed a multi-methodological approach based on the strengths, weaknesses opportunities, threats (SWOT) analysis; the analytic hierarchy process (AHP); and the technique for order of preference by similarity to ideal solution (TOPSIS) methods to support the critical decision process of registry selection [24]. Luo et al. used individual ship registration data to analyze flag selection behavior, including flagging out decisions using a binary choice model, and final flag choice, which employs a nested logit model [25]. Yang and Chung developed the research of flag selection for Taiwanese shipping companies under the provisions of the Cross-strait Sea Transport (CST) Agreement, and the Fuzzy Analytic Hierarchy Process (FAHP) method was applied to find the preferred registry location among Taiwan, Hong Kong, and China [26]. Mitroussi and Arghyrou introduced a net flag-out ratio (in contrast to the standard flag-out ratio) and examined the potential contribution of metrics of corruption and institutional measures as decisive factors in explaining flag choice [27].

On the basis of their different interests, ship registry systems and related shipping policies established by the governments of various countries reflect distinctive characteristics or purposes. Chang et al. explored possible policy solutions for shipping directly across the Taiwan Straits and discussed the mode of negotiation for settling the discrepancies in viewpoints between the Mainland of China and Taiwan [28]. Chiu focused on how the liberalization measures were proposed and implemented behind the formulation of governmental shipping policies in Taiwan [29]. Yang developed a comparative analysis of the competitive advantages of the national fleets of Taiwan, Korea, and Japan, and explored the effect of shipping aid policies on a national fleet's competitive advantage, employing gray relational analysis (GRA) [30]. Some research has been carried out on the characteristics of ship registry systems on FOC problem. The main research achievements can be divided into three categories: first, the FOC ship registry systems in Panama [31], Liberia [32], etc.,; second, the studies concerning Norway, Denmark, and other international or secondary ship registration [33,34]; and third, Hong Kong and Singapore's open registration service [35,36].

Most previous academic research has focused on the macro-level of the ship registry system, the reasons and consequences of flagging out, and flag choice decision making. Research on China's ship registration has mainly focused on the problem of legal governance [37]. Little research has been conducted on the innovative reforms to China's specific policy on ship registration. In particular, academic discussion has rarely attempted to fully address the new STFSR policy in China. The contribution of this paper is to fill this research gap by focusing on the content framework and major lessons of China's STFSR policy, in the interest of advancing the future reform of China's ship registration policy.

3. The policy background and framework

3.1. Policy Background and Process

China has historically implemented a restrictive closed ship registry system, which requires that a registered ship shall be owned and constructed by the nation, along with several other restrictions. For example, ships must be owned by China; that is, the Chinese state's investment in a ship must not be less than 50%, the majority of the employed crew must be Chinese, and a mandatory ship survey by the China Classification Society (CCS) must be carried out for ships to be registered [38,39]. In addition, China maintains a high tax on the import of ships and their equipment. If Chinese state-owned or private shipping companies purchase newly built or second-hand ships over-

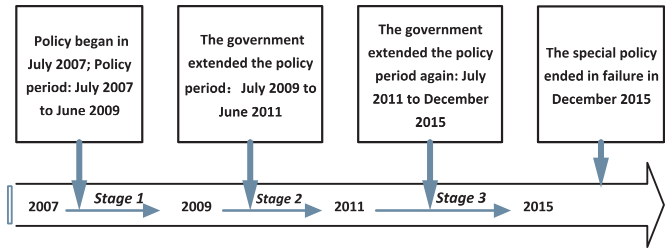

Fig. 1. Process of the special tax-free ship registration policy in China.

seas and subsequently register their ships in China, they need to pay 27.53% in import duties and value-added tax [40,41]. Therefore, Chinese state-owned or private shipping enterprises have strong incentives to use foreign flags to avoid the high tax when purchasing ships overseas.

As one of the world's major shipping countries, China owns about 9% DWT of the world's total fleets. However, more than 50% DWT of China's fleet uses foreign flags [1]. To alleviate the serious situation of flagging out, the Chinese government has been exploring governance policies that encourage ships to register in China, aiming to expand China's fleet tonnage and strengthen ship resources control. Therefore, the STFSR policy was introduced in July 2007. There were three stages of policy implementation (see Fig. 1):

- The first stage took place between July 2007 and June 2009. The STFSR policy was originally planned to last two years. The ship registration locations under the policy were limited to only three designated ports: Shanghai, Tianjin, and Dalian [42].
- The second stage lasted from July 2009 to June 2011. After two years of policy implementation, the effect of the policy was less substantial than anticipated. As a result, the government extended the policy period for an additional two years [43].
- The third stage lasted from July 2011 to December 2015. Due to the minimal effect of the policy for the past two stages, China's government had to further extend the policy implementation period to the end of 2015. During this period, any international maritime port in China could be chosen as the registration port [44].

3.2. Policy framework

The STFSR policy was designed as a preferential policy for Chinese-funded international shipping vessels that had flown foreign flags to return to China and use the Chinese flag instead. Under this policy, these vessels would be exempt from import duties and value-added tax in exchange for registering the vessels in China. According to the policy, the registered vessels also had to meet certain ship age restrictions and technical conditions.

The main framework of the STFSR policy is shown in Fig. 2. The policy made clear the provisions for ship registration on the vessels' ownership and age, policy implementation procedures, tax incentives, and shipping operation supervision.

4. Lessons from the unsuccessful policy

During the time period the policy was in effect, only 30 ships (about 80 million DWT) chose to be registered under this policy, a very insignificant portion of the overall fleet.* Due to the inconvenience of shipping operations following ship registration, shipping companies were very disappointed with this policy. Many ships that registered under this policy finally decided to return to flying foreign flags in 2015.

According to the data shown in Fig. 3, China's flagging out problem did not improve at all throughout the policy's duration. In 2007, the proportion of ships using foreign flags was 41%, whereas this number increased to 44% in 2015. Similarly, the proportion of the DWT of ships flagging out did not decrease either (Fig. 3). As a whole, during the policy period, the proportion of DWT of ships under foreign flags gradually increased. In simple terms, China's STFSR policy for controlling FOCs or open registries had no significant effect, resulting in the policy's complete failure and termination. From the perspective of the content framework and the actual effects of this policy, the main lessons learned from the failure of this policy are discussed in the following sections.

4.1. Unreasonable policy orientation and registration process

The policy's orientation was very unreasonable. In essence, the STFSR policy was a continuation of China's traditional closed ship registry system. The new policy improved upon some details of the existing ship registry system by exempting the ships' import duties and value-added tax on their registration (see Fig. 2); however, systematic reform was not carried out for this special policy. While flying foreign flags could already help Chinese shipping companies easily circumvent these taxes, ships returning to China to be registered under the new policy would be forced to conform to many operational restrictions on their shipping service. As a consequence, the policy did not successfully ameliorate the critical issues underlying China's flagging out problem.

According to the STFSR policy, ship registration service would be carried out in a manner similar to China's ship import management model. For example, if the Chinese ships surrendered the previously flown foreign flags and returned to the Chinese flag, the government would treat them as imported second-hand ships from foreign countries [45]. The registration procedure under this policy involved various government departments and different approval processes, and this policy also did not have a clear deadline for the completion of such approval requirements. In addition, the policy also required the postponement of shipping services during the registration procedure [40], which thus accumulated enormous downtime accruing significant costs to the shipping enterprises.

4.2. Excessively strict ship registration requirements

The STFSR policy also set various ship registration conditions such as the existing closed ship registry system in China, ship age restrictions, ownership restrictions, mandatory ship survey compliance, and crew employment restrictions, meaning that the policy inconvenienced or disqualified a large proportion of operating ships. The policy was thus not attractive to shipping companies.

The strict ship registration requirements of this policy were as follows. First, the applicable scope for ship registration under the STFSR policy was very narrow. This policy was mainly available to the ships of SECI that had already been registered overseas prior to December 31, 2005. The policy placed strict limits on ship age for different ship types in order to ensure the quality of the ships registered under the policy. Specific ship age conditions were 4–12 years for oil tankers or chemical tankers, 6–18 years for bulk carriers, and 9–20 years for container ships [3]. Meanwhile, the policy did not accept the registration of newly built ships, mainly to prevent Chinese shipping companies from purchasing new ships overseas and registering them under this policy in order to reduce new shipbuilding orders abroad, which would indirectly protect the development of China's shipbuilding industry. Second, ownership of a ship registered under the STFSR policy was severely restricted. The special policy required the proportion of state-owned or private capital investment for a ship to be no less than 50%, so the foreign ships were excluded from the applicable scope of the policy. Third, the mandatory ship registration survey was only developed by the CCS in order to protect its interests, thereby disregarding surveys from foreign classification societies. The CCS would reexamine ships for registration under the policy if their survey was carried out by other ship classification societies. Fourth, the STFSR policy did not relax restrictions on the

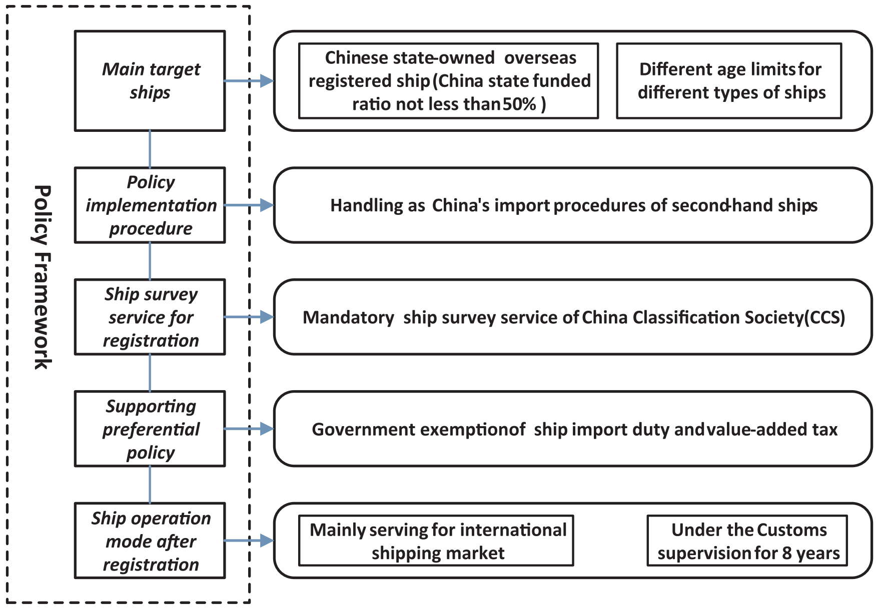

Fig. 2. Overall framework of the studied policy of China.

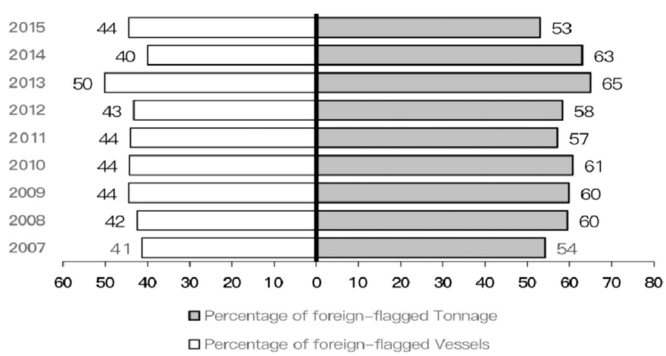

Fig. 3. Situation of flagging out problem in China's shipping industry. Source: UNCTAD. Review of maritime transport, 2007–2015.

employment of foreign crew members, which inconvenienced the operation of shipping enterprises in China.

4.3. Excessive shipping operation supervision

The ships registered under the STFSR policy could only serve the international shipping market (see Fig. 2). In accordance with China's regulation of international shipping services, these newly registered ships would have to reapply to the government and complete permit procedures and archival filing formalities in order to continue international shipping services. This would take about one month, thereby costing shipping companies' time and money [46]. In addition, future operations of the ships after registration were also subject to harsh customs supervision (see Fig. 2). As previously stated, the government regarded those ships registered under the STFSR policy as second-hand imported ships. These ships were supervised in accordance with the regulations on Chinese duty-free imported goods, which meant they were subject to customs supervision for eight years [47]. During this period, these ships could only serve the international shipping market. The lease, demolition, or sale of these ships were all forbidden. Companies in violation were subject to repay accumulated customs import duties and value-added tax from which they had been exempted. This kind of strict customs supervision severely reduced the flexibility of shipping enterprise operations.

4.4. Insufficient supporting policies

Related supporting policies for China's STFSR were insufficient and resulted in operational inconvenience after ship registration. First, China's domestic financing environment and legal application posed challenges to ship operations. For many years, Chinese shipping companies sought to finance ships with overseas investment, and therefore the mortgage contracts were governed by foreign laws. However, if the ships of SECI built with this foreign financing returned to China to be registered under the STFSR policy, the shipping companies would have to change their ship financing contracts. In addition, the finance activity governance should have been under the framework of China's law, forming a big barrier for the ship registration service under this special policy. That is to say, the Chinese state-owned or private shipping companies should negotiate with foreign banks to modify the mortgage contracts of ships under foreign flags. If the negotiation fails, the Chinese state-owned or private enterprises can only lift the ship mortgage contract by paying off the foreign bank loans in advance. These foreign bank loans which need to be paid off in advance will bring huge economic pressure for the enterprises, making the vessels registered in foreign states having to give up their return to China.

Second, the choice of marine insurance was limited. According to Chinese law, home-based ships were subject to insurance regulations in China, and the marine insurance of ships registered under the STFSR policy was exclusively covered by Chinese insurance companies [48]. The ships of SECI flying foreign flags generally arranged overseas insurance. Ships were required to give up the existing foreign insurance and reselect domestic insurance services if returning home and using the Chinese flag, which was obviously unreasonable and not economical for the carriers.

5. Future governance direction recommendations

This STFSR policy was a complete failure in the evolution of China's ship registry system. The failure of the policy clearly indicates that China's flagging out problem cannot be solved by relying on minor improvements to the original closed ship registry system. In 2016, the Chinese government has made a partial adjustment to the STFSR policy, the ship age limit was abolished [49]. However, this kind of partial adjustments to the STFSR policy simply cannot solve the FOC problem of China, which means the STFSR policy had no effect on the flagging out in China's international shipping industry. The government needs to eliminate the limitations of the existing ship registry system, set up a completely new ship registry system, and carry out the systematic reform of supporting policies. Although this STFSR policy of China was not successful, it provided a good experience for the systematic innovation of China's new ship registration policy framework and directions. We suggest China to explore and implement the international ship registration system.

In 2013 and 2015, during the official planning of Shanghai and Tianjin Free Trade Zones (FTZs), the Chinese government made it clear that China would test its international ship registry (CISR) system in the above-mentioned free trade zones [50,51]. However, lessons learned from the STFSR policy's failure can help to achieve breakthroughs in determining the optimal orientation of the registry policy and the systematic revision of supporting policies, which may ensure the effectiveness of the new CISR policy in FTZs. With the international shipping market globalization, China must learn from international experience to explore a more open, efficient and convenient international ship registration system to attract the ships of SECI to operate under China's flag. In particular, China should improve lots of related marine supporting policy to support this new registration system.

5.1. Reasonable orientation of CISR in FTZs

China's STFSR policy has not deviated from the framework of the existing registry system. The policy lacks independence and systematic supporting policies. Therefore, we should pay attention to the design of the new system's framework and compatible supporting policies for the new CISR in FTZs. The nature of the new CISR policy should adhere to the following principles.

The first principle is the independence of the system. Previous experience has shown that independence is very critical to the success of the international ship registry system and the secondary ship registry; in other words, the new international ship registry system cannot be subject to the conditions of the original one, but also cannot negatively impact the original [4]. There were no strict shipping service area distinctions in policy design between the traditional ship registry and Norway's new international registry (NIS) established in 1987. However, due to the preferential policies on taxes, seafarer employment, and other factors, shipping companies were inclined to choose the new NIS instead of the traditional one [4]. Therefore, we suggest that China's international ship registry system in FTZs maintain independence and minimize interactions between the systems. We can analyze some differences between the new system and the traditional registration system from the ship ownership and the shipping operating area (see Fig. 4) to ensure that the new CISR system can be implemented in conjunction with the traditional closed registration system and limit the policies' interference with each other.

- In terms of ship ownership, the traditional closed registry system is still in accordance with the existing system framework, which means that the ships registered in the traditional closed registry system should be owned by China (China's state funding to constitute not less than 50%), while there should be no limitation on ship ownership for the new CISR in FTZs.
- In terms of shipping service area, ships registered under the traditional ship registry system should serve both domestic and international shipping markets. The current ships under traditional registration mainly serve the domestic shipping market because most international ships already use foreign flags. However, the CISR in FTZs should be available for international oceangoing ships, but these ships would be limited only to the international market. Such a limitation does not interfere with the existing pattern of interests for the traditional ship registry system, which ensures the independence of the two registry systems.

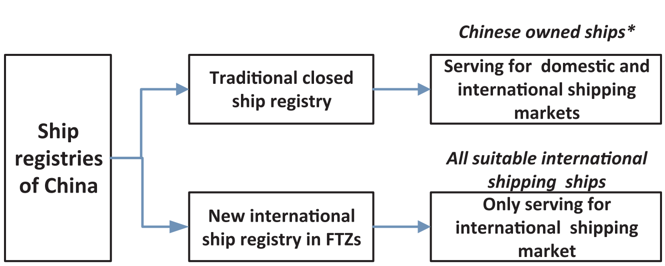

Fig. 4. Future framework design of China's ship registry system. *Note: The Chinese owned ships include both the Chinese state-owned ships and privately owned ships.

The second principle is the internationalization of the system, which China's STFSR lacked. That is, the government should formulate new regulations and policies to ensure that ships registered under this system in the future will be governed as foreign ships. The ships under the STFSR policy were supervised as domestic ships. Shipping operations were also restricted by the existing registry system framework. Internationalization means that the ships would not be subject to ship taxes and the various existing restrictions on ship insurance and finance, crew employment, ship survey compliance, and other factors, enhancing the core competitiveness of the new CISR in FTZs.

The third principle is a system of high quality. Excellent ship quality control and safety management are the key factors for Hong Kong and Singapore's open registry system, complete with international core competitiveness and a good reputation in the world shipping industry [35,36]. By contrast, the German International Ship Register (GIS) and the French International Ship Register (FIS) have been classified as FOC by the International Transport Workers Federation (ITF) due to their ship management problems [4]. The CISR in FTZs should incorporate the successful experiences of Hong Kong and Singapore's open registration and be devoted to fulfilling the responsibility of the flag state, including conscientiously meeting the international conventions' requirements for ship safety and operation management. The government should maintain meticulous records of the ships registered under the CISR in FTZs to guarantee that the quality and safety management of ships under this new system are commensurate with the traditional domestic registration system.

5.2. Systematic supporting policy modifications for CISR in FTZs

Judging from the lessons of China's STFSR policy failure, we propose a series of supporting policy innovations for the CISR in FTZs (see Table 1) to ensure the feasibility and effectiveness of the new international ship registration system. The first recommendation is to relax the requirements of crew employment so that crew nationality is not limited under the new system. The second suggestion is to remove the vessel age limit restrictions. New ships as well as second-hand ships should be registered in the new international ship register in FTZs, and the quality of the ship should be controlled by the ship survey conducted by the ship's classification societies. The third recommendation is a preferential taxation policy for the new CISR in FTZs. The ships under the new international ship registration system should not be governed as imported ships but rather as foreign ones. There should be no customs tariff or value-added tax for the ships under this new CISR in FTZs. The fourth policy change involves a greater choice of ship survey service. Learning from the practice of Hong Kong's open registration, ship survey registration under the new CISR should not be limited to specific ship classification societies. However, in order to guarantee the quality of ships, the ship's survey service should be carried out by a member of the International Association of Classification Societies (IACS), which is approved by the Chinese government. The fifth and final suggestion is the freedom of financial and insurance services. Shipping enterprises should be able to choose the ship's financial, insurance, and legal services freely in accordance with their business and market needs.

Table 1
Systematic supporting policy modifications for CISR in FTZs.

Policy factor	New policy design for CISR in FTZs	Existing policy under the closed registry
Crew employment	Free crew employment	A majority of Chinese crew members; the captain and senior crew must be of Chinese nationality
Ship age	No limitation	Strict limitations for different ship types
Customs duties and value-added tax	Zero tax policy	27.53% tax rate
Ship survey	Ship survey society not to be limited	Only CCS
Ship finance and insurance	Free choice of services and legal application	Under the framework of China's law

6. Conclusions

Flying foreign flags is a common phenomenon in the world shipping industry. In order to alleviate the serious flagging out problem, most countries introduced different ship registration policies according to their needs in order to encourage their ships to register locally. As one of the biggest shipping countries, China owns a large proportion of the world's ship tonnage even though most of these ships choose to fly foreign flags. The Chinese government tried its best to solve this problem through the implementation of the STFSR policy; however, the policy ended in complete failure after eight years.

This paper summarizes the specific reasons for the STFSR policy's failure and lessons to be learned from it, using these lessons to formulate directions for the future reform of China's new ship registration system. The results of this research show that the STFSR policy continued to conform to the framework of China's traditional closed registration system. There was no systematic reform of the existing system framework, and the policy itself had an excess of constraints. Due to the unreasonable policy orientation and insufficiency of the supporting policies, the failure of China's STFSR policy was inevitable. We believe that in the future, China should explore a new international ship registry system compatible with the policy framework of the FTZs. A reasonable orientation of the CISR in FTZs will be very important. The government should guarantee the independence, internationalization, and high quality of the proposed new registration system. Systematic supporting policy modifications should also be employed concerning ship ownership, crew employment, ship age restrictions, tax policy, ship survey service, and ship financing and insurance. Under the above-mentioned premises, the CISR in FTZs will likely be effective in mitigating the flagging out crisis in China's international shipping industry.

Acknowledgements

This research was partially funded by the National Natural Science Foundation of China (Grant No. 51409157), the Program of Humanities and Social Science of the Ministry of Education of China (14YJC630008), and Shanghai Science & Technology Committee Research Project (15590501700). The authors also gratefully acknowledges the support and help from Ministry of Transport of the People's Republic of China and Shanghai Maritime Safety Administration. The third author was partially funded by the Department of Civil and Environmental Engineering and the School of Engineering, both at Rutgers University. However, the authors are solely responsible for all the views and analyses in this paper.

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