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WORLD MARITIME UNIVERSITY

Dalian, China

**COMPARATIVE STUDY OF DIFFERENT SHIP
REGISTRIES AND REFLECTION ON CHINA'S
INNOVATION OF INTERNATIONAL SHIP
REGISTRATION SYSTEM**

By

XIAO YUANYUAN

The People's Republic of China

A research paper submitted to the World Maritime University in partial
Fulfillment of the requirements for the award of the degree of

MASTER OF SCIENCE

(MARITIME SAFETY AND ENVIRONMENTAL MANAGEMENT)

2021

DECLARATION

I certify that all the material in this research paper that is not my own work has been identified, and that no material is included for which a degree has previously been conferred on me.

The contents of this research paper reflect my own personal views, and are not necessarily endorsed by the University.

Signature:Xiao Yuanyuan.....

Date:June 28, 2021.....

Supervised by:Nin Jun.....

Supervisor's affiliation: Dalian Maritime University

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ABSTRACT

Title of Research paper: **Comparative Study of Different Ship Registries and Reflection on China's Innovation of International Ship Registration System**

Degree: **Msc**

The research paper is a study of different ship registries, comparing the different policies of ship registration systems in several typical countries and regions, then reflecting on the innovation of international ship registry in China and putting forward some suggestions for improvement.

A brief look is taken at the concept, history, significance and types of ship registry. The respective characteristics, advantages and disadvantages of the three different types of ship registries are examined, as well as the historical origins and development processes of open registry and second ship registry.

The different policies of ship registration systems in several typical countries and regions and their implementation effects are investigated. And the existing problems of China's ship registration system and the reasons for the flagging out of Chinese-funded ships are analyzed.

Additionally, the exploration of international ship registry in China is collated and evaluated. Then the concluding chapter puts forward some suggestions for the improvement and innovation of the international ship registration system in China.

KEY WORDS: Ship Registry, Nationalty, Registration, Innovation, Shipping

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LIST OF ABBREVIATIONS

CCS	China Classification Society
DWT	Dead Weight Tonnage
FOC	Flag of Convenience
FSQC	Flag State Quality Control
FTZ	Free Trade Zone
IACS	International Association of Classification Society
ILO	International Labor Organization
IMO	International Maritime Organization
ITF	International Transport Federation
MOT	Ministry of Transport
MSA	Maritime Safety Administration
NIS	Norwegian International Ship Register
NOS	Norwegian Ordinary Ship Register
PRQC	Pre-Registration Quality Control
SOLAS	Convention on the Safety of Life at Sea
STCW	Convention on Standards of Training, Certification, and Watchkeeping for Seafarers
STFSR	Special Tax-Free Ship Registration
UK	United Kingdom
UNCLOS	United Nations Convention on the Law of the Sea
UNCTAD	United Nations Conference on Trade and Development

Chapter 1 Introduction

1.1 Background

Ship registry, as an effective means to manage ships and maintain shipping safety, plays a positive role in the process of shipping development and is an important work of maritime administration. However, due to the differences in politics, economy and culture among countries and regions, the international conventions have not made uniform provisions on the conditions of ship registry, thus forming different ship registration systems with their own characteristics. Generally speaking, it can be divided into three types: open registry, close registry and second ship registry.

Compared with open registry, close registry has made more strict restrictions on the conditions of ship registry. Therefore, due to the looser policies and more favorable taxes, many ship owners choose to transfer their ships to register in countries and regions with open registry. As the rapid development of shipping industry, the traditional maritime countries with close registry are increasingly losing their fleets, thus the second ship registry has emerged in some countries. The same problem is faced by China, which has adopted the close registry for a long time. Therefore, this paper will start with the comparative analysis of different ship registration systems in different countries and regions and put forward some suggestions to modify China's ship registration system.

1.2 Research Status

Ship registry in developed countries has experienced long-term development, and foreign experts have conducted long-term and large amounts of research and achieved fruitful results. Since the reform and opening up, China's shipping industry has achieved rapid development and domestic experts have also put more emphasis

on the study of ship registry. In recent years, some success, such as China's international ship registration system in free trade zone (FTZ) has been realized, which has made positive contributions to the innovation of China's ship registration system.

1.2.1 Review of Foreign Research

The international research on ship registry mainly focuses on three periods. The first period was from 1930s to 1950s. During this period, countries with open registry began to appear. Especially after World War II, the flag of convenience (FOC) developed rapidly, which attracted the attention of relevant international organizations and they began to discuss about open registry. Thus, a flood of books and monographs on open registry had been published, which pushed forward the promulgation of the Geneva Convention on the High Seas in 1958.

The second period was from 1970s to 1990s, due to the frequent marine safety and pollution accidents, there appeared many articles on how to promote ships in accordance with international standards and discussions on the establishment of international conventions to effectively restrain the FOC ships. In 1986, the United Nations Convention on Registration Conditions for Ships was issued, which pushed the research to the peak (Wefers Bettink, 1987). However, this convention ended in failure and never came into force.

The third period is from the end of the 1990s till now. Compared with the previous two research periods, this one focuses on port States and other organizations. The open registry has become common in the international community, the term "flag of convenience" is deprecated, and the new period focuses on how to maintain shipping safety and prevent marine pollution.

1.2.2 Review of Domestic Research

Domestic research on ship registry started late, but gradually began to receive attention as the development of shipping economy. In the Chinese research, there are also three relatively concentrated periods. The first period is from 2000 to 2004. During this period, the Ship Registration Regulations of China (1994) had been implemented in practice for a period of time. The research at that time focused on the problems existing in the understanding and implementation of the Regulations. Then the second period began in 2007, when the promulgation of the Property Law of China aroused a boom in research on the “real right” of ships. And the third period began with the opening of the Shanghai FTZ in 2013, which led to the upsurge of the research on the establishment of an international ship registration system in the FTZ.

1.3 Research Methods

This paper will adopt the research methods including: literature research, historical research, and comparative analysis research. Firstly, by collecting and sorting out all kinds of international conventions, laws and regulations, it is easy to understand the development process of ship registry. By reading a lot of domestic and foreign research papers on ship registry, it is conducive to examining the shortcomings of the current ship registration system in China on the basis of previous studies, and discussing relevant countermeasures.

Secondly, through sorting out the development process of ship registry, the development and change process of ship registry under different historical and political backgrounds can be seen. The analysis of the characteristics of the ship registry systems in different periods and the reasons for the change is conducive to understanding the design purpose and implementation status of various ship registry

systems. Therefore, the analysis of the development process and future development trend of the ship registry system can provide references for the innovation of the ship registry system under the current situation.

Thirdly, by comparing the different ship registration systems in major shipping countries and regions, the paper will analyze the differences between different ship registration systems in detail, and summarize the good experience and practices from other countries and regions, so as to seek for possible references for improving the international ship registration system in China.

Chapter 2 Overview of Ship Registry

2.1 Concept of Ship Registry

Ship registry refers to the registration of the shipowner, the name of the ship, the technical data and performance parameter of the ship, and other contents carried out by the national ship registration authority according to the relevant international conventions and national laws. Ship registry is not only a necessary condition for a ship to acquire nationality and navigation right, but also an administrative means for the flag State to effectively manage ships engaged in related shipping trade. It is also a legal means to confirm the ownership, mortgage and lease of a ship.

Generally speaking, there are two understandings of the concept of ship registry or registration: one is that ship registry is the registration of the nationality of a ship. For example, Japanese scholar Mizukami believed that ship registry is a documentation program to prove the nationality of a ship, and is the fact that a State shows to the international community that it gives nationality to a ship; the role of which is to preserve the ship registration information and provide various data of ships, as a publicity system to supervise the relevant administrative management in public law. Another is that ship registry is divided into the nationality registration and the right registration of a ship. Ship registry is an administrative act that gives the ship a nationality and endows it with the rights and obligations. Therefore, ship registry can be divided into the public law and private law meaning of the ship registration. The former refers to the registration of the nationality of a ship, and the latter refers to the registration of the ownership, mortgage and lease of a ship (Li & Wang, 2007).

In China, a ship is immediately granted the nationality after registration. At the same

time, it also obtains the ownership. This is because the legal mode of ship registry in China is to unify the nationality registration and right registration of ships. However, in other countries, such as Japan, the registration of nationality and the registration of right of ships are stipulated in different laws and regulations respectively. The former is stipulated in the Shipping Law, while the latter is stipulated in the Shipping Registration Rules (Mizukami, 2000).

The dual nature of ship registry depends on the particularity of ships. Ship is a kind of objects, belonging to the category of movable property, and it is a publicity way to show the change of ownership by taking possession as its own. But due to the capital-intensive nature of ships, the maritime laws of various countries treat ships as immovable property and stipulate the registration as the publicity way of ownership change, and the maritime law of China is no exception. However, ships are different from general objects, so the law has made anthropomorphic treatment of ships. For example, a ship has its name, nationality, age and port of registry, just like a natural person has its name, nationality, age and domicile. Therefore, a ship also needs to carry out nationality registration. The nationality of a ship clarifies the territorial issue of the ship, forms a subordinate relationship with the flag State, thus enjoying the tax, foreign trade and other preferential policies of the State, and at the same time subject to the jurisdiction of the State's laws.

It can be said that ship registry has both public law and private law attributes. The public law attribute of ship registry, that is, the ship can acquire the nationality of the State through registration, is subject to the jurisdiction of the State, has the right to fly the flag of the State, and is under the diplomatic protection of the flag State. The private law attribute of ship registry, that is, the registration protects the legitimate rights and interests of the shipowner, and publicizes the establishment, alteration and

extinction of the ownership, mortgage and bareboat charter of the ship. The research of this paper will focus on the public law attribute of ship registry.

2.2 History of Ship Registry

Ship registry has a long history. The ship registration system can be traced back to the Roman law, and prevailed among the Italian city-states in the Middle Ages. At that time, ships' register included the name of the ship, the owner of the ship, the tonnage of the ship, and other matters that could lead to the confiscation of the ship. (Coles & Watt, 2009)

In the early days of Britain, the ship registration system was an auxiliary means for the State to levy taxes on ships. It originated from a tax imposed by the English government on imported liquor in the early 14th century. Because of the frequent fighting and piracy, the ships carrying wine from Europe to England had to be mandatorily escorted, then the cost of these escorting ships was compensated by taxes in the form of tunnage, which was the origin of the "tonnage tax" on ships. Ship registry in this period was only a subsidiary measure of tonnage measurement, more reflected as tax registration, but was not independent as an administrative act. (Ye, 2013)

Since the late 16th and the early 17th centuries, mercantilism had been set off in Europe. The development of overseas colonies and navigation had brought vast shipping markets and international trade opportunities to Europe. In order to ensure British trade companies and merchant fleet in a monopoly position in the competition with other countries, the British government began to legislate to prohibit ships flying foreign flags from carrying trade between Britain and its colonies. To be able to carry international trade, ships must obtain British nationality, flying British flags,

and the shipowner, the captain, and most of the crew members must be British, even the ship must be built in Britain. Accordingly, the Navigation Act was born in 1660, which for the first time stipulated that the British ships must be registered, which was also the origin of the worldwide ship registry laws.

Since the end of 18th century, the liberalism economics represented by Adam Smith replaced the mercantilism and began to become the mainstream ideological trend. The liberalism economics was also reflected in ship registry. All countries in the world gradually liberalized the control of the registered ships, and no longer restricted international trade through ship registry. At this time, ship registry had become a public service provided by the State in addition to the supervision of ships, and only a small amount of “service fee” for registration was charged, which was the developing concept of modern ship registry. During this period, the British Merchant Shipping Act gradually replaced the Navigation Act, which made a great contribution to the development of worldwide ship registry.

Due to the tide of globalization and free trade, some countries and regions had fully opened their own ship registry supervision; then the open registry begun to prevail. In response to this change, traditional maritime countries and ITF clamored for international supervision on these open registry countries and regions. Thus, ship registry was infused with the norms of international conventions. The first international convention stipulating the ship registry was the Geneva Convention on the High Seas in 1958. Then the UNCLOS in 1982 extended the provisions of the Geneva Convention and endowed the flag States with the obligation of jurisdiction and supervision on ships through the registration, the flag and the nationality of the ship.

Despite of the pressure from the responsibilities and obligations under the international conventions, the open registry has not disappeared. On the contrary, the practice has proved that the supervision of open registry countries and regions has been greatly improved through the restriction of relevant laws and conventions, and the vitality of open registry is still strong. Therefore, traditional maritime countries began to seek changes. Since the end of 20th century, a number of countries and regions have modified their ship registration systems, focusing on opening restrictions and seeking to change the role of ship registry.

At present, in the worldwide, this trend is developing and open registry countries are also increasing, but it is still too early to judge whether ship registry has moved towards openness. In the long run, open registry has broken the traditional mode of monopoly of maritime transportation by traditional shipping countries, promoted trade liberalization, but also brought many problems. Therefore, whether the function of ship registry will change or not has not been concluded now, and there is still a coexistence of different systems.

2.3 Significance of Ship Registry

Under international law, the registration of ships is an obligation conferred on States parties by international conventions, which indicates that the flag State has exclusive jurisdiction over ships flying its flag on the high seas. It is not only an international shipping practice that ships must fly the flag of a specific country, but also the important content of the current maritime administration systems in various countries. In order to obtain the nationality of a specific country, it is necessary to register with the ship registration authority of that country and obtain the nationality certificate of the ship. Therefore, ship registry is a necessary procedure to obtain the legal right of navigation. More importantly, ship registry represents the recognition and protection

of the ownership of the ship by the flag State, as well as the confirmation of the nationality of the ship (Ready, 1998). In a word, ship registry has a very obvious significance, summed up, mainly including the following aspects.

First, it is conducive to ensuring navigation safety. When the shipowner registers a ship, he/she shall submit various security certificates and technical certificates issued by recognized organizations as required, according to the type of the ship. Only when the ship's security certificates and technical certificates submitted are complete and valid, and the structure, equipment, seaworthiness and other conditions of the ship have reached certain technical requirements, will the ship registration authority approve the registration of the ship, and issue the corresponding nationality certificate in accordance with the legal procedures. Therefore, the ship registration procedure is equivalent to the establishment of the entry threshold before the ship operation, which provides a certain guarantee role for the maritime safety.

Second, it is convenient for the flag State to exercise jurisdiction and control. States exercise jurisdiction and control over ships flying their flags under the Geneva Convention on the High Seas (1958) and the UNCLOS (1982). When flag States conduct unified management of ships, it is necessary, of course, for them to have first-hand information on the quantity, tonnage, classification, shipowner, and operating conditions of the ships. Only through the ship registration procedures, can the flag States master these information of their own ships, so as to exercise effective jurisdiction and control over the ships in administrative, technical and social matters.

Third, it is convenient for ships to obtain the diplomatic protection or assistance of the flag State. When a ship sails among the world's sea areas, it is inevitable that it will encounter a maritime disaster or other accidents, or a criminal or civil dispute,

and need to seek the diplomatic protection or consular assistance of the flag State. In such cases, a ship flying the flag of its registered State may request the consulate of its flag State to provide protection or assistance.

Fourth, it is convenient to enjoy the preferential policies of the registered State. The maritime laws of various countries have stipulated certain differential treatment for domestic and foreign ships. Among them, some countries, mainly open registry countries, do not exclude foreign-built ships from being registered in their own countries, and allow them to obtain relatively preferential treatment. For example, according to the relevant provisions of the maritime laws of various countries, coastal transportation, coastal trade and fishing can only be operated by domestic vessels, and the tax and liability limits of maritime claims are more favorable for domestic ships. Consequently, any ship registered in the State is entitled to such preferential treatment by the registered State.

Fifth, it is conducive to protecting the legitimate rights and interests of the parties involved in the legal relationship between ships. The public credibility of ship registry can well prove the existence of the rights of the parties and protect them. The ship registration procedure also has the same effect. In a country where registration is a requirement for the validity of property rights, neither the ownership nor the mortgage of a ship without registration shall become effective. For example, Article 6 of the Greek Maritime Private Code stipulates that when the shipowner transfers the ownership of ship, the contract must be in written form and clearly indicate in the ship registration certificate. The ownership of the ship cannot be transferred without registration in accordance with the aforesaid provision. And Article 197 stipulates that the mortgage of a ship shall not be effective unless registered by the ship registration authority. (Feng, 2009)

According to Article 9 and Article 13 of the Maritime Law of China (1992), and Article 5 and Article 6 of the Ship Registration Regulations of China (1994), “the acquisition, transfer and disappearance of the ownership of a ship, and the establishment, transfer and termination of the mortgage and lease of a ship shall be registered with the ship registration authority, and any party without registration shall not be allowed to fight against a bona fide third party.” In addition, when two or more mortgage rights are established on the same ship, the order of priority of the mortgagee to be paid shall also be the order of the ship mortgage registration, according to Article 19 of the Maritime Law of China. The Merchant Shipping Act of UK has similar provisions. This makes it clear that ship registry has the role of confirming the legality of ownership and mortgage of a ship. Therefore, ship registry is of great significance to the protection of the legitimate rights and interests of the parties concerned.

In a word, if a State wants to supervise ships, ship registry is essential and indispensable. From the perspective of private law, in some countries, the validity of ownership and mortgage does not occur at all if the ship is not registered, and in other countries, it cannot be against the third party if the ship is not registered. The existence of ship registry has the necessity of private law. From the perspective of public law, ship registry is necessary in the aspect of domestic administrative law. The national administrative organizations need to manage ships through a statutory system of registration. As for international obligations, ship registry is even more necessary in international law, which involves a flag State’s jurisdiction over ships, a flag State’s diplomatic protection of its own fleet, and other issues in international law.

2.4 Types of Ship Registries

In the world, there are different types of ship registries, each of which has different characteristics. The type of ship registry adopted is the result of the comprehensive action of a country's social factors, and the government influences the choice and construction of the mode of ship registry through the law. Some scholars divided the worldwide ship registries into the following types (Toh & Phang, 1993), as shown in Figure 1. Ship registries can be divided into two types: closed registry and open registry, and open registry can be divided into national registry and international registry, then international registry can be divided into FOC and Quasi-FOC.

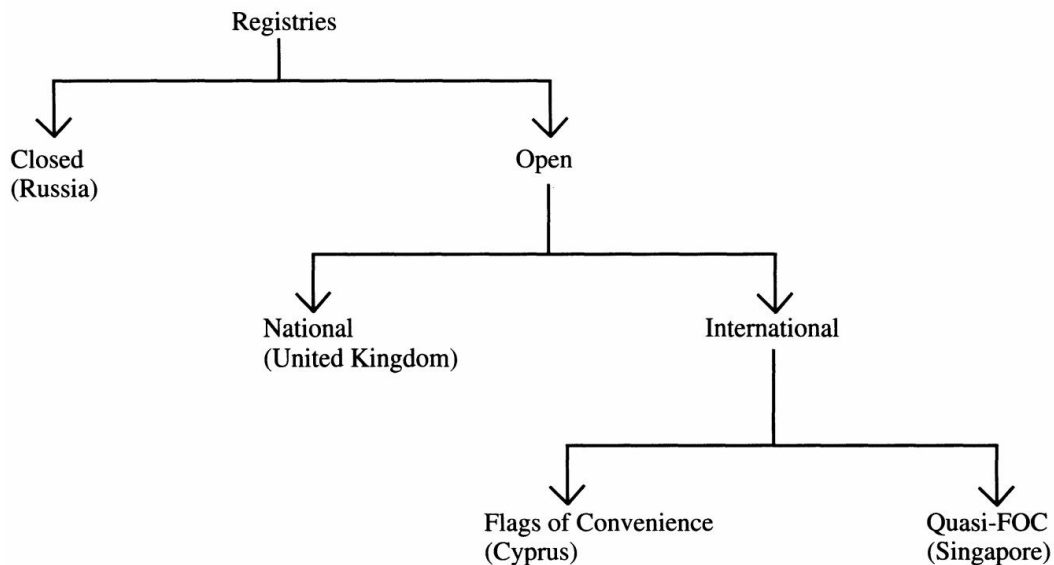


Figure 1 - Types of ship registries

Source: Toh, R.S. & Phang, S.Y. (1993). Quasi-Flag of Convenience Shipping: The Wave of the Future. *Transportation Journal*, 33(2), 31-39.

The distinction between open registry and closed registry is based on how open the ship registry is to domestic and foreign ships. Open registry allows foreign ships to be registered in the home country, while closed registry generally requires ships to be owned by their own nationals or the enterprises owned by their nationals, such as

Russia. International registry and national registry are distinguished according to the nationality requirements for the shipowner and the crew. The former allows the shipowner to be a foreigner and employ foreign crew, while the latter has some restrictions. FOC registry and Quasi-FOC registry are distinguished according to the requirements of the flag States on ships. The former has few requirements on ships and low charges, represented by Panama, Liberia and Cyprus. While the latter relatively has certain safety and quality requirements, represented by Hong Kong and Singapore.

However, although the academic classification of ship registries is very detailed, in practice there is no such clear distinction, and some concepts are mixed and blurred. As the form of ship registry continues to develop, the term “flag of convenience” is no longer a legitimate term in today’s international community, and the IMO has declared that the proper term should be “open registry”. “Open registry” is the term used by UNCTAD in documents, as opposed to the concept of closed registry, which mainly refers to the registry form of flag of convenience, as well as the registry form of relaxing the national registration conditions later.

In addition, in order to prevent the loss of their own fleets, some traditional shipping countries, such as Norway, Denmark, the UK and France, have evolved the second ship registry system from the closed registry system in practice. In this paper, the ship registry modes in today’s international society can be divided into three types: closed registry, open registry and second ship registry. This paper will mainly discuss the different characteristics, advantages and disadvantages of these three ship registry types.

2.4.1 Closed Registry

In terms of time, closed registry is the earliest concept of the ship registration mode, which requires that ships must be owned by its own nationals or enterprises conforming to national legal qualifications, but the strict degree of requirements in different countries varies. Some countries with closed registry systems only allow their national citizens or enterprises to be the owners of ships flying their flags, while some countries with more open closed registry systems allow non-citizens but permanent residents or others of similar status to be the registered owners of ships.

In other countries with more strict closed registry systems, it is stipulated that all persons, including the captain, the management personnel, the shareholders and the actual owners of the company, must be nationals of the flag State, or nationals of the flag State hold a majority of the shares of the company. Some flag States may even require that the ship must be built in a domestic shipyard and be classed by a domestic or approved classification society. Therefore, the typical feature of closed registry is that the flag State only allows its own nationals to register ships, but the definition of nationals varies from country to country. For the sake of economy and safety, many countries still adopt the closed registry system, which represents the traditional development pattern of the ship registration system.

However, with the development of economic globalization, shipping has become internationalized, and some countries with closed registry system have begun to allow foreign ownership or control of ships. Take the UK for example, it is argued that the ship registration system in the UK is already a hybrid registration system, because it allows foreign-owned or controlled ships to be registered in the UK, and is itself a closed registry country. In fact, in the case of the UK, although the registration system for ships is not open, the registration of companies is. The company to which the ship belongs only needs to be established and registered in the

UK, and has its principal place of business within the territory of the UK (Rogers, 2010). In addition, some closed registry countries, such as China, require that a certain percentage of the company's shares must be owned by their own nationals. Therefore, many countries with closed registry systems have the situation that domestic ships are actually owned by foreign citizens today.

Closed registry has both advantages and disadvantages. The advantages can be analyzed from the following two aspects. **First**, for the flag State, it can effectively supervise and manage its own fleet, restrict substandard ships from entering the shipping market, ensure maritime safety, thereby reduce possible casualties and property losses, and protect the marine environment from pollution. It can effectively protect the business interests of the domestic shipowners and prevent foreign ships from involving the domestic shipping market. It is conducive for the flag State to implement macro-control, ensure the supply and demand of transport capacity to reach an appropriate balance, prevent disorderly competition, and improve the utilization rate of ships. It is beneficial to improve the quality of the seafarers, promote employment and effectively safeguard the interests of the seafarers. **Second**, for shipowners, the main advantage is that they are familiar with the laws and shipping policies of their own countries. In case of accidents and disputes, it is conducive for them to protect their own interests and easy to get strong support from their own governments.

The disadvantages can also be analyzed from these two aspects. For shipowners, they cannot hire cheap crew from foreign countries, resulting in high operating costs and weak competitiveness of the fleet. For the flag State, in order to reduce operating costs and improve their competitiveness, the shipowners will inevitably transfer the nationality of their ships to other countries with open registry, which may lead to the

loss of domestic tax revenue, the reduction of fleet size, the deterioration of ship conditions and other adverse effects, and even affect the national security.

2.4.2 Open Registry

The first open registry was in Panama in 1922, when an American shipping company transferred the registration of ships from the United States to Panama, because the United States prohibited the sale of alcoholic beverages on American ships. During the second world war, many American shipowners moved their ships to Panama, a more neutral country, to get around the Neutrality Act, which barred them from sailing in the European war zone. After World War II, the number of ships registered in Panama, Liberia, and Honduras grew so fast that the three countries had a new name “Panlihon”. Liberia was ranked by Lloyd’s Register of Shipping as the world’s largest open registry country in 1949 (Boczek, 1962). Since then, open registry has quickly become a common phenomenon that has spread around the world. Today, Panama, Liberia and the Marshall Islands are the world’s top three open registry countries, with 16%, 13% and 13% of the world’s total registered ship deadweight tonnage, respectively (UNCTAD, 2020).

According to UNCTAD, the so-called “open registry” is a system in which there is no “genuine link” between the flag State and the ownership or crew of a ship, but foreign shipowners are encouraged to fly their flags for less costs. International Transport Federation (ITF), an international trade union federation of transport workers’ unions around the world, also defined “open registry” as a “flag of convenience”, which referred “if the beneficial ownership and control of the ship is not in the flag State but in another country or region, the ship is under the FOC; where the identity of the beneficial owner is unknown, any ship shall be deemed to be under the FOC if there is no ‘genuine link’ between the flag State and the natural

person or corporate entity who has effective control over its operation” (Ai, 2004). ITF would sometimes declare a particular open registry country as FOC to signal member unions to boycott ships registered in those countries. According to its list, some countries and regions currently adopting open registry are shown in Table 1.

Table 1 - Implementation of open registry in various countries and regions

Countries or regions	Overview of implementation
Panama	The Corporation Law was amended in 1927 to allow non-resident foreigners to register as companies and own merchant ships registered as Panamanian nationality, which is the beginning of the world’s open registry.
Liberia	The Liberian Maritime Code was enacted on 16 December 1948 to implement open registry.
Honduras	Implemented from the 1950s.
Costa Rica	Implemented from the 1950s.
Bahamas	Self-government in 1964 and implemented open registry, independent in 1973.
Cyprus	Allowed off-shore companies to own FOC ships registered in Cyprus in 1972.
Somalia	/
Bermuda	Implemented from the 1950s.
Lebanon	/
Singapore	ITF dropped Singapore from its list of FOC countries in November 1988.
Philippines	In November 1988, ITF decided to consider the Philippines as an FOC country starting from 1989, but for various

	reasons the Philippines was not included.
Hong Kong	Implemented from the 1990s, have not been designated FOC by ITF.

Source: Ai, Y. Z. (2004). *Reacearch on Ship's Registry Regime and Countermeasures of China*.

Unpublished master's thesis, Wuhan University of Technology, Wuhan, China.

However, some open registry countries and regions, such as, Hong Kong, Singapore, known for relatively fair labour practices and high-quality ship management, have not been designated FOC by the ITF. Therefore, the terms “open registry” and “flag of convenience” are not exactly synonymous from the view of organized labour and ship management. By comparing the registration conditions of these open registry countries and regions, some common characteristics of open registry can be obtained. **First**, it is not strictly required that ships must be owned by their own nationals or enterprises, and ships owned or controlled by foreigners or foreign enterprises are allowed to register. **Second**, the employment of foreign crew members is permitted, and there is no nationality restriction even for officers. **Third**, registration fees and taxes are very low.

The existence and growing strength of open registry is based on many interests between developed countries and open registry countries. In most developed countries and regions, the cost of ship registry and ship survey is much higher than that in open registry countries, as well as the crew's wages and taxes, resulting in high administrative and labor costs of ship operation. Thus shipowners in many developed countries choose to register their ships in open registry countries in return for lower operating costs. On the other hand, for open registry countries, they can also benefit from it. The registration fee of ships is a considerable foreign exchange income to balance the international balance of payments. In addition, it can also

expand the scale of the flag State's fleet and improve the status of international shipping.

In the United States, for example, if a ship flies the flag of the United States, the ship needs to employ American crew and pay the crew at American standard wages. In addition, unless in an emergency, U.S.-registered ships must be built in the United States, and repairs and drydocks must be carried out in American ports. These restrictions make flying American flags too expensive in the world's shipping market. American shipowners have to choose the open registry fleet with convenient registration conditions and low operation costs to strengthen their competitiveness in the international shipping market. And the American government acquiesced in this behavior. Although a large number of merchant ships registered overseas has affected the fleet of American nationality, the United States has acquiesced in allowing its shipowners to register in open registry countries for the sake of interests and strategic positioning, which is why the United States has the most shipowners with ships of open registry than any other country in the world. (Sun, 2012)

The biggest advantage of open registry is the economic benefits, which is the first factor to be considered for shipowners. Shipowners tend to maximize the profits in the operation process, so many aspects involved will be included into the consideration range of cost measurement. The **first** is the financing environment of the flag State. Since shipping is a capital-intensive industry, where shipowners often choose to raise funds through loans, a flexible registration system that facilitates the financing of shipowners would naturally be favoured. In general, open registry countries can provide favorable and convenient financing conditions, better financing services and greater freedom, thus helping shipowners reduce financing costs and improve economic benefits (Yang, 2003). The **second** is the registration fees and tax

standards, those in open registry countries are very low, and even no income tax on ship operation at all. The **third** is other costs of ship operation, including fuel, crew salaries, ship survey fees and so on. Since open registry countries have fewer restrictions, such as no restrictions on the nationality of crew, shipowners can choose to tend to lower costs, so as to enhance their competitiveness.

Another advantage of open registry is the institutional advantage. **Firstly**, the registration procedure of open registry is very simple, which unifies the nationality registration and the ownership registration of the ship. After registration, the flag State issues the unified ship registration certificate, which not only represents the ship's nationality but also represents the ownership of the ship. And the registration procedures are handled by the same registration authority, which is very simple (Wang, 2009). **Secondly**, the open registration system is very loose, with a wide range of registered objects and low requirements for applicants. In Panama, for example, all vessels may be registered without regard to their sizes, types or ages, and it also allows Panamanians, foreign companies or other entities to be registered in Panama as shipowners.

However, the disadvantages of open registry and the adverse effects on the shipping industry are also obvious. **First**, open registry may threaten the maritime security. **Second**, open registry may be detrimental to the interests of the crew. Open registry has been opposed and resisted by the ITF, who argues that such unfair competition violates the collective agreement between labor and management and damages the interests of seafarers. Some developing countries that do not adopt open registry worry that it will rob their labour force, and hinder the development of their merchant fleets (Ademuni-Odeke, 1998). **Third**, open registry may have a negative impact on the marine environment. Environmentalists said that open registries are

responsible for the vast majority of the world's marine pollution. The huge disasters brought by ship pollution accidents to the marine environment have been confirmed in many famous cases, and the vast majority of these accidents are caused by open registry ships. However, open registry is not the main cause of pollution accidents from ships, but the lack of a unified standard to prevent hazards.

Even though the international community is largely opposed to open registry, this registration model is still thriving. The advantages of open registry show that the system itself meets the needs of shipowners and thus brings benefits to shipowners and flag states, which is also the embodiment of its value. Under the background of economic globalization, open registry can integrate different resources in different countries in the world to form an efficient system of shipping. With such resources, the shipowner can construct a perfect operating structure that maximizes profits, financing in a completely open and competitive market, building ships in Japan, hiring British managers and Filipino seafarers, which is exactly what open registry can do.

2.4.3 Second Ship Registry

With the continuous development of open registry, which can help shipowners avoid strict regulations, increase competitive advantages, escape national taxation, or hide identities, more and more ships have been registered to open registry countries, and the proportion of open registered ships has been growing since 1989, as shown in Figure 2 (Yin et al., 2018). This fast expansion of open registered fleets has been noticed by the traditional maritime countries, because it has limited the growth of their domestic fleets, and caused a decrease in the national income and a rise in unemployment rates, which has a certain negative impact on the national economy, politics and other aspects.

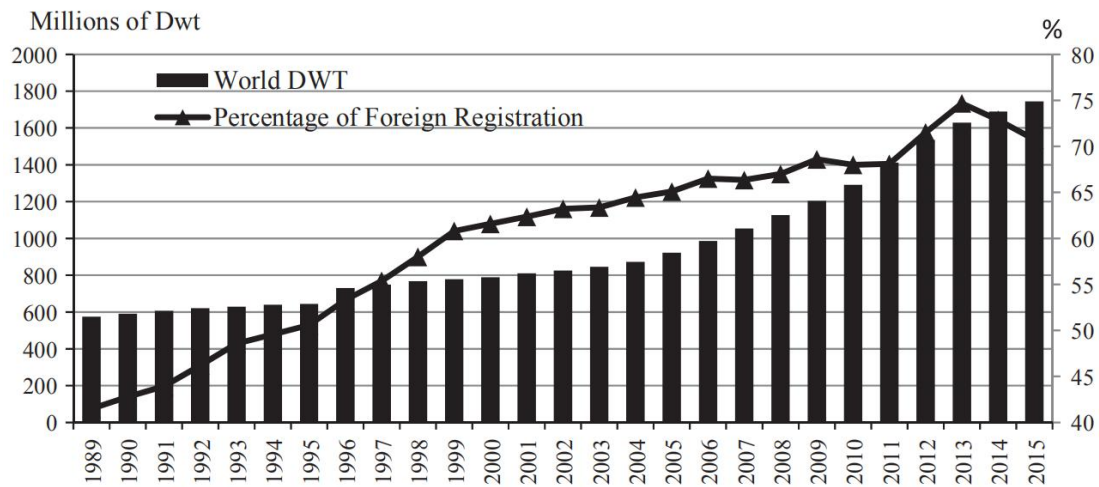


Figure 2 - Development of world fleet and percentage of foreign flag registration

Source: Yin, J. & Fan, L. & Li, K. X. (2018). Second ship registry in flag choice mechanism: The implications for China in promoting a maritime cluster policy. *Transportation Research Part A Policy & Practice*, 107(01), 152-165.

In order to maintain a large scale, high standard of the national fleets, and reduce the operating costs of the national ships to a certain extent, some traditional maritime countries and regions began to imitate the open registry and adjust their shipping policies, then introduced the second ship registry, which is between closed registry and open registry. The so-called “second ship registry” is another registration system similar to open registry, which is set up by a State for its shipowners on the basis of not changing the original traditional ship registration system. It is called the “second ship registry” in order to distinguish from the traditional ship registration system.

Second ship registry can be divided into off-shore registry and international ship registry. Off-shore registry refers to the situation where some traditional maritime countries in the early days took their off-shore territories as the places of ship registry. The British Isle of Man, the French island of Kerguelen and the Dutch Antilles are representative. However, off-shore registries are not so convenient for the shipping

industry because they are often sparsely populated areas with poor communication. Therefore, some countries represented by Norway and Denmark have set up an international ship registry different from the original system. European countries are active implementers of second ship registry. At present, the countries that have implemented the second ship registry are shown in Table 2 (Yin et al., 2018).

Table 2 - Development of second ship registers

Countries	Second Ship Registers	Year
UK	Anguilla, Bermuda, Virgin Islands, Cayman Islands, Turks and Caicos Islands, Falkland Islands, Gibraltar, Isle of Man, Channel Islands Ship Registers	Since 1984
France	Kerguelen, Wallis and Futuna Islands Ship Registers	1987
Norway	Norwegian International Ship Register (NIS)	1987
Denmark	Danish International Ship Register (DIS)	1988
Germany	German International Register of Shipping (GIRS)	1989
Portugal	Madeira International Ship Register (MAR)	/
Spain	Canarias Islands International Ship Register (CSR)	/
Japan	Japanese International Ship Register	1996
Brazil	Brasilia Special Register (REB)	1998
Italy	Italian International Ship Register (IIS)	1998
Netherlands	Netherlands Antilles Ship Register	/
New Zealand	Cook Islands Register	/
Turkey	Turkish International Ship Register (TISR)	1999
Russia	Russian International Ship Register (RISR)	2006

Source: Yin, J. & Fan, L. & Li, K. X. (2018). Second ship registry in flag choice mechanism: The implications for China in promoting a maritime cluster policy. *Transportation Research Part A Policy & Practice*, 107(01), 152-165.

The establishment of second ship registry is mainly supported by the following factors. **First**, the phenomenon of a large number of ships flying foreign flags has led to the serious outflow of the fleet of various countries, which directly led to the loss of tax revenue, the decrease of crew employment, and the threat of the national fleet. **Second**, for the consideration of national defense security, each country believes that the ownership of its own merchant fleet plays an important role in the second force of the State, which is the most important factor to promote the second ship registry. **Third**, due to the depression of the shipping industry, open registry ships have more competitive advantages, which puts the traditional maritime countries under pressure. The world's shipping powers have taken various measures to vigorously develop their own international shipping industry, hoping to attract the overseas registered ships to return back as soon as possible.

Looking at the second ship registry developed and implemented by various countries, the main purpose of the second ship registry is to implement the maritime support policy, through reducing the tax rate for the domestic fleet and adopting a flexible attitude in the employment of crew, so as to reduce the operating cost of the domestic fleet and improve its international competitiveness. The second ship registry measures adopted by various countries have the following common points. **First**, the registration conditions are loose, the registration procedures are quick and convenient, and foreign-funded ships are allowed to register in the State. **Second**, the nationality qualifications for crew members are relaxed, allowing shipowners to hire lower-wage foreign crew members to gain a competitive advantage in crew wage costs. **Third**, it

provides more attractive and competitive registration tax policies, so that shipowners can enjoy tax concessions.

Obviously, second ship registry has more obvious advantages. It provides a lot of preferential policies on the basis of guaranteeing the basic conditions of domestic registration. It is a complement and improvement to the closed registry system of the traditional shipping countries, and also a reference to the open registry system. It is a ship registration system parallel to the closed registry system. Second ship registry is the embodiment of the liberalization of shipping, and the preferential policy conditions can increase the convenience and opportunities of import and export trade in shipping ports, necessarily favored by shipowners seeking to maximize the profits. It can promote the healthy competition and rapid development of the domestic shipping industry. Its successful practice in European countries has been widely recognized around the world, and more and more countries has begun to implement the second ship registry system.

Chapter 3 Comparison of Ship Registries in different countries and regions

Due to the differences of ship registries around the world, and the international law cannot well balance the legislative differences between the countries. Countries around the world have to face the problems caused by the inconsistent provisions of different ship registries. This chapter will make a comparative analysis of the different ship registries in some typical countries and regions, and explore the legislative differences of the ship registration systems in different countries and regions.

3.1 Commercialized Open Registry - Panama

Panama is the world's first open registry country, and located at the intersection of North and South America. The famous Panama Canal runs through Panama City and connects the Atlantic and Pacific Oceans, making Panama an important shipping hub. The existence of Panama as an independent nation is historically linked to the Panama Canal and the United States. After gaining independence from Spain in 1821, Panama became part of the Republic of Greater Colombia; then with the support of the United States, it became independent in 1903 and formed the Republic of Panama. The United States thus gained de facto control of the Panama Canal, in accordance with the Treaty of Hay-Bunau-Varilla, and did not return the management of the Panama Canal until 1999.

Therefore, Panamanian Ship Registry cannot be understood without framing it within the country's political and economic relationship with the United States, which linked both countries from a different position, an imperialist power and a small, strategic and fragile nation in search of survival and sovereignty. Actually, it is not

only Panama, other ship registries leading the world rankings such as Liberia, or more recently, the Marshall Islands, also have or have had a relationship of political dependence in terms of national sovereignty with the hegemonic umbrella of the United States. It can be said that the majority of the open registers are administered from the United States. (Piniella et al., 2017)

As shown in Figure 3, with the development of the world shipping industry, the number of ships of Panamanian flag merchant fleet has been growing rapidly. As of 1 January 2020, the Panama Registry is in charge of managing the world's largest ship registry with 7886 registered vessels, which accounts for 329 million DWT, representing 16% of the world fleet (UNCTAD, 2020). This is thanks to the liberalising policies of Panamanian Ship Registry.

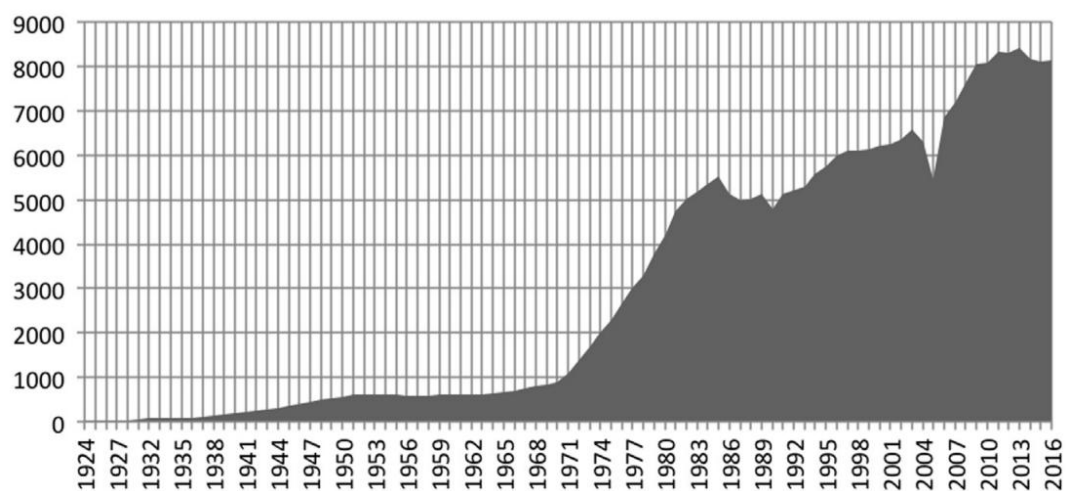


Figure 3 - Evolution of commercial seagoing vessels of Panamanian Registry

Source: Piniella, F. & Alcaide, J.I. & Rodríguez-Díaz, E. (2017). The Panama Ship Registry: 1917–2017. *Marine Policy*, 77,13-22.

Nowadays, access to the Panamanian Ship Registry is very easy, a registry fee based on tonnage is the only charge made and the manning of ships by non-nationals is freely permitted. The results for the shipowners are the avoidance of tax in the

country in which they are established, lower crew cost and anonymity, especially regarding the capital of the ship owning company. The revenues derived from the international maritime commerce of Panamanian ships are not subject to income tax in Panama, and taxes and fees only have to be paid on its tonnage under a system of highly competitive tariffs. A shipowner may use the crew of any nationality under international labour laws. The efforts of the Panamanian government to develop a tax haven and a no-questions asked system became an attractive option to many ship owners all over the globe. (Piniella et al., 2017)

In addition, the services of the Panamanian Ship Registry for overseas shipowners are very convenient. The Panamanian Ship Registry has more than 64 maritime privative consulates and 9 Technical Offices worldwide, operating on a 24-h basis. There are Maritime Regional Offices in Dubai, London, Manila, Seoul, New York, Piraeus, and Panama City. Another advantage of the Panamanian Ship Registry is the constantly innovating of ship registration processes, making it automated and simple, integrating two processes into one, with a maximum registration time of four hours. And the pre registry surveys are not mandatory, except for vessels with over 20 years since construction. Moreover, in order to improve the competitive costs of the Panamanian Ship Registry, there are discounted registration rates for fleets. Fleets with 5 - 50 vessels may receive discounts from 20% up to 65% on registry fees. Panama guarantees tax rates for twenty years when registering. (Piniella et al., 2017)

It can be seen that the Panamanian Ship Registry is a highly commercialized mode of open registry, which has stimulated the development of relevant industries in the country, such as the company establishment and consulting services, legal affairs, ship survey services, off-shore financing services, etc., and gradually formed a local industrial chain centered on ship registry.

3.2 Cooperative Off-shore Registry - United Kingdom

As the representative country of modern maritime law, the UK first registered ships through the way of “tonnage tax”, which is considered as an initial state of ship registry. The British Merchant Shipping Act (1984) broke the long-standing restrictions on ship registry, extended the privilege of ship registry to all British ships around the world, and introduced official numbers for newly registered ships. Then ship registry has developed from a tool to restrict maritime trade into a series of comprehensive legal systems, which is the template and ancestor of all modern legal systems of ship registry. (Ye, 2013)

However, the UK also faced the same problem as other developed shipping countries. Its national merchant fleet was losing massively and the international competitiveness of its fleet was weakening significantly. In response to this problem, considering that most British shipowners had registered their ships in the self-governing overseas territories, such as the Isle of Man, Bermuda and Gibraltar, the British government then set up the Second Ship Registry in the Isle of Man in 1978, allowing ships registered there to enjoy preferential registration policies and fly British flags. But only after the passage of British Merchant Shipping Act in 1984 did the Isle of Man officially start the second ship registry.

The second ship registry established by the UK in its overseas territory, Isle of Man, is known as “off-shore registry”, which is more relaxed in terms of registration conditions than the traditional British ship registry system. Any British national resident on the Isle of Man, or any company having a principal place of business on the island, may register ships in Isle of Man. In addition, the off-shore registry removed the restrictions on the nationality of the crew, requiring only the captain and

chief engineer to hold qualifications issued by the UK or other recognized organizations, and no corresponding restriction for the ordinary crew. Thus shipowners can save labor cost by hiring foreign crew members with lower wage standards. Moreover, ships registered in Isle of Man only need to pay a basic registration fee and are exempt from tonnage tax. Besides, according to the tax regulations of the Isle of Man, the owners and managers of companies incorporated in Isle of Man are exempt from income taxes, and the shipowners may also enjoy some tax reductions (Zhao, 2007). These preferential policies are also quite attractive to owners of British ships registered abroad, with obvious advantages.

It is worth to mention that in spite of the overall requirements, the off-shore registry in Isle of Man are very loose, but the standards of the safety for ships are not lowered. Ships registered in Isle of Man are subject to the same conventions of IMO and ILO on ship safety and labor conditions, as the ships under the traditional British ship registry. And the British government has set up maritime safety inspectors on the Isle of Man, who are specially responsible for the safety inspections of ships at least once a year. (Li & Li, 2017)

Although ships registered on the Isle of Man are able to enjoy various preferential policies not available to those registered in the UK, because of the Isle of Man is relatively remote geographical position, ships will spend a lot of time and energy to register there. After the Isle of Man opened its ship registry, the number of ships registered on the island did not increase significantly, which means these policies did not achieve the desired effect. Therefore, in the 1990s, the Isle of Man allowed ships to transfer their nationalities through bareboat charters, so as to increase its appeal to ship registrations, which had achieved some success. Subsequently, the British government successively set up international ship registers in Anguilla, Bermuda,

Virgin Islands, Cayman Islands, Falkland Islands, Gibraltar and so on.

Figure 4 shows the changes over time in the number of ships annually registered in the UK fleet and in the five UK second register fleets from 1970 to 2005 (Roberts et al., 2012), among them, Hong Kong began to implement an open registry system after its return to China in 1997. It can be seen that there was a sharp reduction in the UK fleet from 1970 to the 1990s, but a large increase for Hong Kong since 2000, and small rises for the Isle of Man and others since the 1990s. This shows that the UK's off-shore registry systems in these overseas territories have achieved some success in effectively stemming the continued loss of British merchant fleet. According to the latest statistics of UNCTAD, about 87.15% of ships owned by British shipowners still fly foreign flags (UNCTAD,2020).

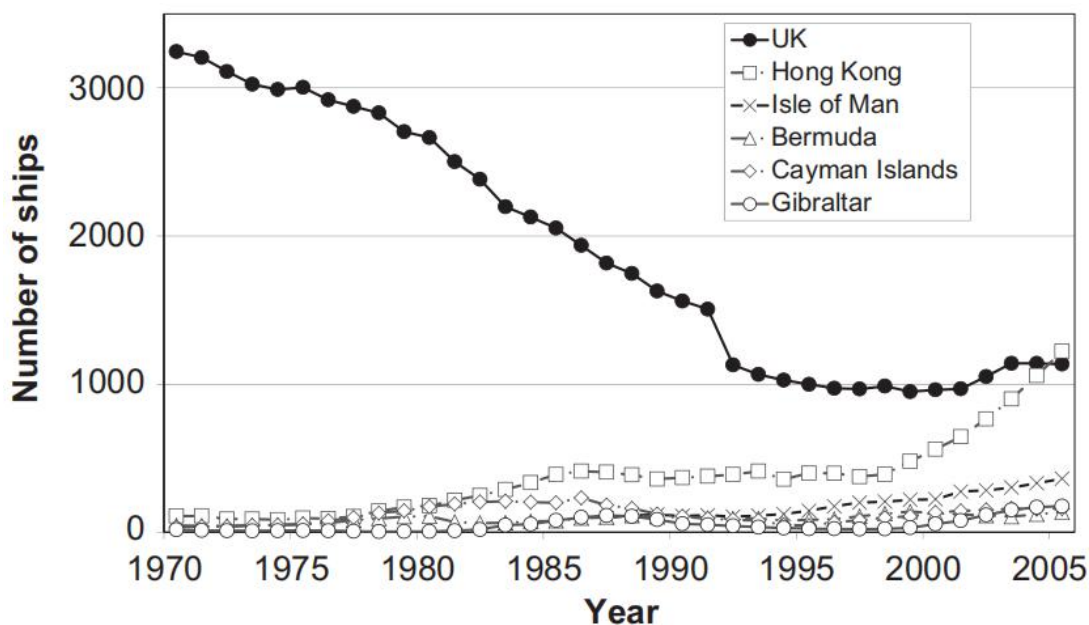


Figure 4 - Trends of number of ships for UK and UK second register flags

Source: Roberts, S. E. & Marlow, P. B. & Jaremin, B. (2012). Shipping casualties and loss of life in UK merchant shipping, UK second register and foreign flags used by UK shipping companies. *Marine Policy*, 36(3), 703-712.

These British overseas territories, through the implementation of off-shore registry, have driven the development of local maritime transportation and other related industries. With the support of the UK, British ships brought relatively advanced concepts of ship management and operation, and also promoted the development of local off-shore financial industries such as ship insurance and ship financing. In addition, ship registry also brought a large number of employment opportunities, solved the local employment problem, and promoted the local economic development. At the same time, British shipowners also solved the problem of ship operating costs with the help of off-shore registry, which has achieved a win-win effect of cooperation. It can be said that the innovation of the cooperative off-shore registry system is relatively successful, but this kind of cooperation must be based on the premise of close political and economic ties between the two sides, and the appropriate legal cooperation is required.

3.3 Separate International Ship Registry - Norway

Norway is one of the famous traditional maritime countries in the world with a long history of shipping, and is also the country first in the world to establish an international ship registration system. As is known to all, Norway is a country with high welfare. In its domestic laws, the standards of seafarers' wages and welfare are very high. In order to hire foreign crew for greater profits, Norwegian shipowners have transferred large numbers of ships to register in abroad. In response to this increasingly growing phenomenon, the Norwegian International Ship Register (NIS) was established in 1987. In contrast, the original ship registration system in Norway was called the Norwegian Ordinary Ship Register (NOS).

NIS has provided a more favorable policy for ship registry, mainly by reducing taxes

and relaxing the restrictions on crew employment. On the one hand, NIS has expanded the types of ships registered, removed the restrictions on the age of ships, and the nationality of shipowners. Both domestic and foreign owners can register their ships under NIS. But if the shipowner is not a Norwegian citizen or a Norwegian company, a person domiciled in Norway should be appointed as a legal representative. In terms of manning, NIS has no nationality restrictions on crew members other than the captain. In terms of taxes and fees, shipowners registered under NIS can be exempted from the income tax since 2007, which is changed to the tonnage tax, and the registration fees are also reduced. Thus the operation costs of shipowners have been greatly reduced. (Quan, 1999)

NIS has referenced to open registry, permitting the registration of ships owned by foreign owners, and having few restrictions on the crew's nationality. As a result, the Norwegian fleet quickly picked up and went from under two percent to triple the amount in the world fleet in just a couple of years (Nilsen, 2021). As shown in Figure 5, since the establishment of NIS in 1987, the number of ships registered in NIS has increased significantly in just a few years, and reached a peak of 896 ships with a gross tonnage of 21.45 million in 1991. However, over the following decades, the number of NIS registered ships did not continue to rise, but began to slowly decline. As of March 2021, the number of NIS registered ships was 709.

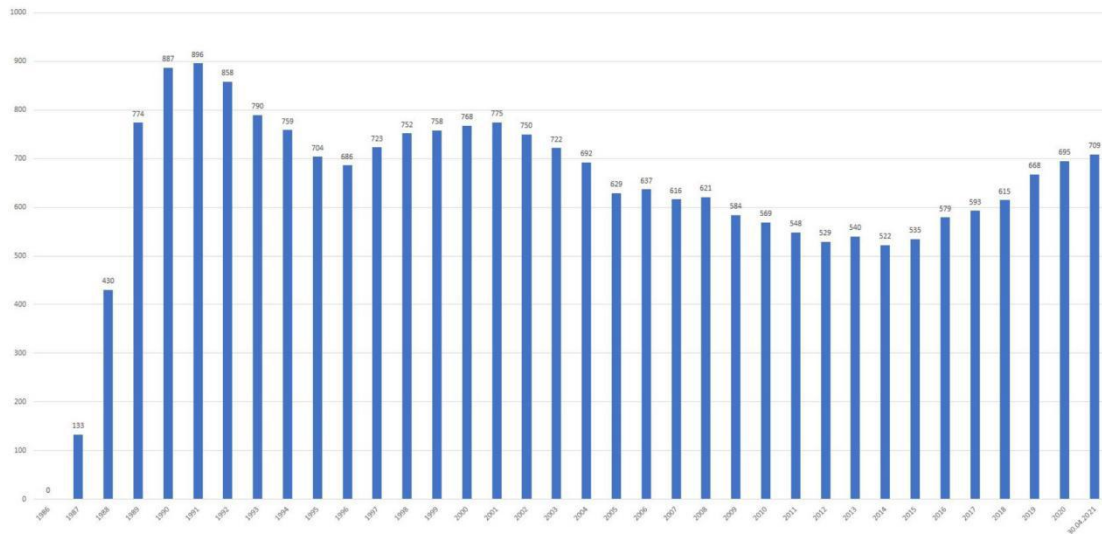


Figure 5 - Number of ships registered in NIS from 1987 to 2021

Source: Norwegian Maritime Authority (<https://www.sdir.no/>)

Norway has separated the international ship registry and the domestic ship registration by the NIS and NOS, allowing part of ships to lower their standards for international ship registry, while others still adopt the ordinary ship registry. Its success lies in that it gives the preferential policies to the ships of international registration without changing the original registration system. The implementation of NIS is aimed to attract a large number of overseas registered ships to return, and to reduce the loss of the Norwegian merchant fleet. However, from the perspective of the overall effect of the implementation, the attraction of NIS to ships' registration does not reach the desired effect of the Norwegian government, let alone the preferential policies of open registry countries.

According to the statistics of UNCTAD, after the implementation of NIS, the number of ships flying foreign flags in Norway increased from 20.78 million DWT in 1997 to 62.05 million DWT in 2020, and the proportion of ships flying foreign flags increased from 42.7% in 1997 to 97.05% in 2020, which means that over the past 23

years, Norwegian flag ships have dropped from 27.88 million DWT to 1.88 million DWT, a sharp drop of 93.26%. Other countries following Norway to set up the international ship registry, such as Denmark, Germany, Japan, etc., are also facing the same situation. The advantage of the once effective international ship registry is no longer obvious, and it has failed to attract the return of the national fleets. Now the international ship registry also needs to be adjusted and modified.

3.4 Service Open Registry - Hong Kong

For historical reasons, before 1990, the Hong Kong's Ship Registry was under the jurisdiction of UK, and ships registered in Hong Kong were flying British flags. In December 1990, Hong Kong promulgated the Merchant Shipping (Registration) Ordinance, and established the Hong Kong Shipping Register to undertake ship registration affairs. However, due to the uncertain political prospects before the Hong Kong's return to China, many local shipowners lacked confidence in Hong Kong's ship registry and transferred their ships to register in other countries one after another, which led to the low point of Hong Kong's ship registry in 1997.

Faced with such difficulties, the Marine Department of Hong Kong has introduced a series of drastic reform activities, which has promoted the development of Hong Kong's ship registry on the road of facilitation and premiumization. As shown in Figure 6, since 2000, Hong Kong's ship registry has embarked on a new starting point. The total gross tonnage of ships registered in Hong Kong has been on the rise year after year. By 2020, it has exceeded 130 million gross tonnage, ranking fourth in the world.

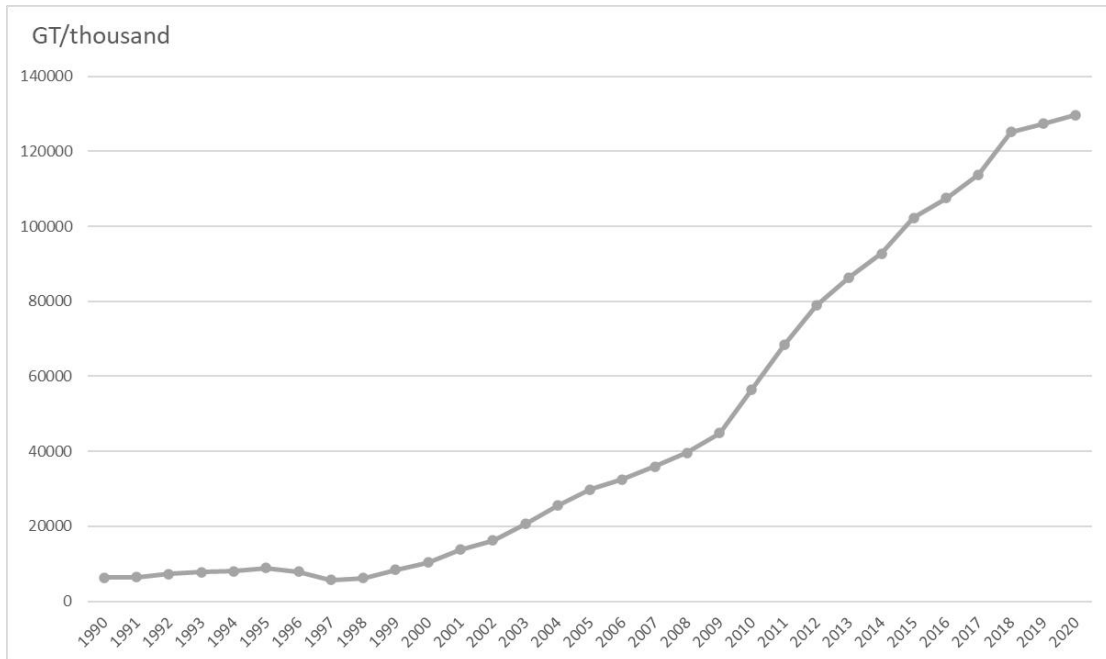


Figure 6 - The total gross tonnage of ships registered in Hong Kong, 1990 - 2020

Source: Hong Kong Shipping Register (https://www.mardep.gov.hk/en/pub_services/home.html)

There are few requirements for ship registration conditions in the legal system of ship registry in Hong Kong, and a wide range of ships can be registered. According to Article 11 of the Hong Kong Merchant Shipping (Registration) Ordinance (1990), “a ship is registrable if a majority interest in the ship is owned by one or more qualified persons, or the ship is operated under a demise charter by a body corporate being a qualified person (whether or not a majority interest in the ship is owned by one or more qualified persons), and a representative person is appointed in relation to the ship”. In addition, ships registered in Hong Kong have no age or tonnage restrictions, and they are allowed to be registered on bareboat charter without navigation restrictions.

There are no nationality restrictions on the manning of seafarers, but they must comply with the relevant provisions of the IMO and ILO Conventions. For example,

the ship's certificate of minimum safe manning in the SOLAS Convention and the seafarers' certificates of competence in the STCW Convention need to be certified by the Hong Kong Marine Department.

In terms of taxes, ships registered in Hong Kong on international voyages are exempted from income tax, and ships registered in Hong Kong can also enjoy a 29% port tax discount at ports in mainland China. In terms of registration fees, Hong Kong charges an initial registration fee and a annual tonnage fee, which are divided into different standards according to the tonnage of the ship. Moreover, in order to ensure the quality of ships registered in Hong Kong, the Hong Kong Marine Department has also launched its unique mechanism for flag State control, which is a combination of the Flag State Quality Control (FSQC) and the Pre-Registration Quality Control (PRQC). (Zhang, 2009)

A series of preferential policies have successfully attracted a large number of Hong Kong ships to return home and register. The proportion of Hong Kong ships flying foreign flags has dropped from 82.4% in 1997 to 28.18% today (UNCTAD, 2020). The successful experience of the ship registration model in Hong Kong can be summarized as follows.

First, Hong Kong has an open financial and legal environment. Hong Kong itself is a world-famous free port and international financial center, and its shipping financing capacity has been steadily rising in recent years. As a capital intensive industry, the shipping industry prefers an open financial environment.

Second, Hong Kong has relaxed the restrictions on ship registry to the maximum extent, but it does not relaxed the obligations of ships to comply with the

requirements of international conventions, which makes the ship registration system in Hong Kong achieve the unity of both quality and quantity.

Third, Hong Kong's ship registration authority is committed to simplifying ship registration procedures and improving the quality of ship registration services to provide convenience to shipowners. By promoting the "e-government", Hong Kong has set up branches and offices around the world to provide one-stop service and limit the processing time of ship registration to two hours. (Zhang, 2009)

Fourth, Hong Kong has adopted the open registry, which has promoted the development of the local shipping industry and the sustainability of its maritime advantages. Therefore, the success of Hong Kong's ship registration system proves that the innovation of the ship registration system is of great practical significance for promoting the development of the shipping industry.

Chapter 4 Innovation of China's ship registry system

4.1 Current status of ship registry system in China

As a country with a traditional closed registry system, China has been implementing relatively strict conditions for ship registry, which are mainly reflected in the following aspects. **First**, in terms of the ownership, the owners of ships registered in China must be Chinese citizens, legal persons or Chinese-foreign joint ventures in which Chinese investment accounts for more than 50% of the total investment, according to Article 2 of the Ship Registration Regulations of China (1994).

Second, in terms of the nationality, the nationality registration of a ship can be carried out only after the completion of the ownership registration, which means the ownership registration is regarded as a precondition for the nationality registration. In addition, a mandatory ship survey by CCS must be carried out for ships to be registered. Moreover, China also stipulates that ships shall not have dual nationality at the same time. Therefore, in the case of bareboat charter, ships chartered into China from abroad shall revoke their original nationality, and ships chartered to abroad from China shall have their Chinese nationality suspended or revoked temporarily.

Third, in terms of the manning, before July 2014, Article 7 of the Ship Registration Regulations of China (1994) had stipulated that “ships of Chinese nationality shall be manned with Chinese citizens, if it is really necessary to employ foreign crew members, it shall be submitted to the competent authority for approval”. But on July 29, 2014, this regulation was amended as, “seafarers on the ship of Chinese nationality who are required to hold certificates of competency must hold the corresponding seafarers' certificates of competency of China”. However, one of the

conditions for obtaining the seafarers' certificates of competency of China is that they must be Chinese nationals, including compatriots from Hong Kong, Macao and Taiwan, according to the relevant regulations for seafarers in China. Namely, there are still some restrictions on the nationality of the crew.

Fourth, in terms of the registration procedures, the registration of ships in China shall be undertaken three levels of examination, namely, preliminary examination, review examination and approval. The registration of a ship can only be completed after all the three stages of examination have been passed. Ship registration procedures in China are multiple and strict. In November 2018, Chinese ship registration authority changed the examination levels of nationality registration of ships into two levels: examination and approval, while other registration procedures, including ownership registration, bareboat charter registration, mortgage registration, etc., are still in three levels. And in terms of the examination content, the examination work of the Chinese ship registration authority is mainly a formal examination of the application materials submitted by the applicant, so the examination on the application materials is quite strict.

Fifth, in terms of the effectiveness of ship registry, according to Article 24 of the Property Law of China, Article 13 of the Maritime Law of China, and Article 6 of the Ship Registration Regulations of China, “the registration of the ownership, mortgage and bareboat charter of ships has the effect of registration antagonism, and without registration, it shall not be against a third party”. Therefore, from the perspective of the private law property of ship registry, the Chinese ship registration authority is also very strict with the materials of registration, in order to ensure the authenticity of the registration.

4.2 Existing Problems of ship registry system in China

The closed ship registry system adopted in China can better strengthen the administrative management of the shipping industry and shipping market by the competent authorities, which is adapted to the current basic national conditions of China. But at the same time, the current ship registry system in China also has some problems.

First, the legislation of ship registry in China is relatively backward, and needs to be revised urgently. The current legislation of ship registry in China is mainly based on the Maritime Law of China issued in 1992, the Ship Registration Regulations of China issued in 1994, and the Measures for Ship Registration of China issued in 2016. Among them, the Measures for Ship Registration belongs to departmental regulations, which has a relatively low legal status. While, due to the long history of the legislation of the Maritime Law and the Ship Registration Regulations, which are not comprehensive in content, a series of supplementary documents were issued by the competent authority subsequently. In the practice of the ship registration, applicants and the registration staff often do not understand the procedures and contents of the ship registration due to the complicated contents of complex documents, thus affecting the efficiency and quality of the ship registration. Recently, China has started to amend the existing Maritime Law and Ship Registration Regulations, and the new amended legislation will solve this problem.

Second, the ship registration procedures are complicated and unscientific, which is very inconvenient for shipowners. As mentioned above, the ship registration in China requires the ownership registration first, and then the nationality registration. Only after obtaining the nationality certificate can the ship sail. Although in the specific operation, for the qualified ship, which has complete and valid ship survey

certificates, the ownership and nationality registration can be applied at the same time, but generally only a newly built ship can meet this condition. In addition, once the shipowner changes, the original ownership and nationality registration of the ship need to be cancelled, and a new ownership and nationality registration need to be applied again. However, each registration procedure needs to go through a long three-level examination and approval, it often needs a month or even longer time to pass all the procedures. While during this period, the ship has to be in a state of suspension, which caused huge economic losses to the shipowner. In recent years, the competent authority has been committed to reducing the processing time of ship registration, and introduced a series of convenient service measures, such as “Green Channel”, “Parallel Handling” and “Non-stopping Registration”. But in order to solve the problem from the root, it is necessary to improve the top-level design of ship registration procedures.

Third, the inconsistency between the registered shipowner and the actual shipowner caused by the ship “attached” registration. This means that the shipowner registers the ownership of the ship in the name of a company with the relevant waterway transportation operation qualification, pays management fees to the company and independently manages the transportation activities in the name of the company. This phenomenon is quite common in the domestic ship registration, and its emergence has its specific historical reasons. During the period of transition from planned economy to market economy in China, laws and policies required civil economic subjects to have certain qualifications and conditions, so as to realize the orderly and standardized management of the market. The ship “attached” operation is a phenomenon of “qualification borrowing” under specific historical conditions. Some unqualified individuals or private enterprises seek for more market competition opportunities by “attaching” their ships on qualified enterprises (Gao & Zhao, 2020).

This phenomenon has seriously disturbed the supervision of the competent authority on the waterway transportation market, the competent authority has repeatedly ordered to prohibit the “attached” operation of ships and the “attaching” behavior of shipping companies, meanwhile, the shipowners and the “attached” shipping companies also bear huge legal risks.

Fourth, like other traditional maritime countries, China is also faced with the problem of a large number of Chinese ships flying foreign flags. According to the UNCTAD’s Review of Maritime Transport in 2020, as shown in Figure 7, in terms of the number of ships, the total number of ships owned by Chinese shipowners is 6869, including 4569 Chinese flag ships and 2300 foreign flag ships. In terms of DWT, the total ships owned by Chinese shipowners is about 228.38 million DWT, accounting for 11.15% of the world’s total. Among them, the Chinese flag ships is about 99.48 million DWT and the foreign flag ships is about 128.89 million DWT, foreign flags accounting for 56.44% of the total ships (UNCTAD, 2020).

	Country or territory of ownership	Number of vessels			Dead-weight tonnage				
		National flag	Foreign flag	Total	National flag	Foreign flag	Total	Foreign flag as a percentage of total	Total as a percentage of total
1	Greece	671	3 977	4 648	60 827 479	303 026 753	363 854 232	83.28	17.77
2	Japan	909	3 001	3 910	36 805 225	196 329 652	233 134 877	84.21	11.38
3	China	4 569	2 300	6 869	99 484 023	128 892 849	228 376 872	56.44	11.15
4	Singapore	1 493	1 368	2 861	74 754 209	62 545 517	137 299 726	45.55	6.70
5	Hong Kong, China	883	807	1 690	72 505 185	28 452 208	100 957 393	28.18	4.93
6	Germany	205	2 299	2 504	8 340 596	81 062 481	89 403 077	90.67	4.37
7	Republic of Korea	778	837	1 615	14 402 899	66 179 736	80 582 635	82.13	3.93
8	Norway	383	1 660	2 043	1 884 535	62 051 275	63 935 810	97.05	3.12
9	Bermuda	13	529	542	324 902	60 088 969	60 413 871	99.46	2.95
10	United States	799	1 131	1 930	10 237 585	46 979 245	57 216 830	82.11	2.79
11	United Kingdom	317	1 027	1 344	6 835 508	46 355 337	53 190 845	87.15	2.60
12	Taiwan Province of China	140	850	990	6 636 271	44 255 009	50 891 280	86.96	2.48
13	Monaco		473	473		43 831 888	43 831 888	100.00	2.14
14	Denmark	25	921	946	31 435	42 683 049	42 714 484	99.93	2.09
15	Belgium	113	188	301	10 040 106	20 658 108	30 698 214	67.29	1.50
16	Turkey	449	1 079	1 528	6 656 989	21 433 413	28 090 402	76.30	1.37
17	Switzerland	26	401	427	1 113 387	25 365 225	26 478 612	95.80	1.29
18	India	859	183	1 042	16 800 490	9 035 433	25 835 923	34.97	1.26
19	Indonesia	2 132	76	2 208	22 301 493	1 604 369	23 905 862	6.71	1.17
20	Russian Federation	1 403	339	1 742	8 292 932	14 812 631	23 105 563	64.11	1.13
21	United Arab Emirates	118	852	970	480 283	20 271 823	20 752 106	97.69	1.01
22	Islamic Republic of Iran	238	8	246	18 245 935	353 441	18 599 376	1.90	0.91
23	Netherlands	700	492	1 192	5 584 365	12 437 918	18 022 283	69.01	0.88
24	Saudi Arabia	137	132	269	13 303 057	4 126 462	17 429 519	23.68	0.85
25	Italy	499	179	678	11 005 343	6 400 010	17 405 353	36.77	0.85
26	Brazil	302	94	396	4 963 496	8 984 821	13 948 317	64.42	0.68
27	France	106	333	439	898 897	12 448 289	13 347 186	93.27	0.65
28	Cyprus	141	165	306	4 958 311	6 659 094	11 617 405	57.32	0.57
29	Viet Nam	910	150	1 060	8 390 791	2 357 014	10 747 805	21.93	0.52
30	Canada	222	159	381	2 723 583	7 247 389	9 970 972	72.68	0.49
31	Malaysia	464	156	620	6 378 887	2 164 848	8 543 735	25.34	0.42
32	Oman	5	51	56	5 704	8 069 314	8 075 018	99.93	0.39
33	Qatar	59	67	126	1 056 669	6 054 422	7 111 091	85.14	0.35
34	Sweden	88	213	301	929 401	5 580 520	6 509 921	85.72	0.32
35	Nigeria	182	74	256	3 227 668	3 031 686	6 259 354	48.43	0.31
	Subtotal, top 35 shipowners	20 338	26 571	46 909	540 427 639	1 411 830 198	1 952 257 837	72.32	95.33
	<i>Rest of world and unknown</i>	<i>3 037</i>	<i>3 015</i>	<i>6 052</i>	<i>36 513 130</i>	<i>59 204 480</i>	<i>95 717 610</i>	<i>61.85</i>	<i>4.67</i>
	World total	23 375	29 586	52 961	576 940 769	1 471 034 678	2 047 975 447	71.8	100.0

Figure 7 - Ownership of world fleet, ranked by carrying capacity in DWT, 2020

Source: UNCTAD. (2020). *Review of Maritime Transport*. Geneva: United Nations.

It can be seen from the above data that although the number of Chinese flag ships is nearly twice of foreign flag ships, foreign flag ships account for a larger proportion in DWT. That is to say, most of the Chinese-funded foreign flag ships are large or very large ships, while the national flags ships are relatively small. Despite the Chinese fleet is growing more and more quickly, which is ranked NO.3 in the world, but among them, the ships flying foreign flags have occupied the mainstream, which has seriously affected the development of shipping industry in China, led to the huge loss of national tax revenue, and even threatened the national maritime security. Next, this paper will focus on the discussion and analysis of this issue.

4.3 Reasons for Chinese ships to fly foreign flags

There are many reasons why Chinese shipowners choose to fly foreign flags, including political and economic factors. Some of them are common reasons to traditional countries, and some are specific to China. This paper will mainly analyze the following three primary reasons.

The **first** and most important reason is to avoid high taxes and fees. According to the Regulations of China on Import and Export Duties (2003) and the Provisional Regulations of China on Value-Added Tax (2008), for new ships built abroad or second-hand ships bought abroad, if they are registered as Chinese flag ships, then the import duties of 9% tax rate and the import value-added tax of 17% tax rate shall be levied. In addition, for shipping companies, they need to pay business tax of 3% tax rate and corporate income tax of 25% tax rate. For ships entering domestic ports from ports outside China, a tonnage tax shall be levied by classification according to the net tonnage of the ship. For shipowners in China, they also need to pay a vehicle and vessel tax according to the net tonnage of ships. By contrast, the open registry countries and regions have adopted low preferential tax policies, ships registered in

these countries and regions can save a lot of operating costs for shipowners. Obviously, tax policy is the most important factor that prompts Chinese shipowners to register their ships overseas.

The **second** reason is to get more favorable financing terms. As is known to all, the shipping industry is a capital intensive industry. The construction and sale of ships require a huge amount of capital to support, thus a large-scale, economically sound financing market is needed as the basis. China, as a big shipping country, has a considerable demand for ship financing. Among various ship financing products, commercial bank loan is the most widely used, accounting for more than 70% of ship financing services (Cao et al., 2020). However, the commercial bank loan market in China is not a completely open and free competition market, and the government's control on commercial bank loan is very strict. The financial authority has formulated administrative regulations on commercial bank loans to limit the loan interest rates. As a result, the domestic loan interest rate is relatively high, the loan amount is limited. Many commercial banks even do not carry out ship loan business at all. The financing environment is very unfavorable. Therefore, many Chinese shipowners have migrated their ships to registered in foreign countries, so as to enjoy various advantages of foreign ship financing and obtain sufficient financial support.

The **third** reason is to avoid the complicated and cumbersome administrative approval procedures. Due to the influence of domestic policies, Chinese administrative agencies often have complicated and strict supervision measures in the process of supervising the shipping market. In terms of administrative examination and approval procedures, both the registration of ships and the establishment of international shipping enterprise need to pass through the complex and cumbersome procedures for examination and approval. A large number of paper

materials and supporting documents need to be provided, and the whole process takes a long time. While the top open registry countries and regions in the world have all adopted the rapid and convenient ship registration procedures, to save time and cost for shipowners as much as possible. Many countries even set up overseas offices in the world's main shipping countries, to facilitate shipowners to handle the ship registration in the nearest place. Shipowners, by contrast, of course prefer to choose a fast and convenient country for registration.

4.4 Exploration on the international ship registry in China

To alleviate the serious situation of the flagging out of Chinese-funded ships, the Chinese government has been committed to exploring governance policies that encourage ships to register in China, aiming to expand China's fleet tonnage and strengthen ship resources control. Up to now, China has carried out a series of pilot explorations to establish an international ship registration system in China. It mainly includes the special tax-free ship registration (STFSR) policy implemented in 2007, the bonded ship registry in Shanghai Yangshan Port implemented in 2011, the international ship registry in Tianjin Dongjiang implemented in 2013 and in Shanghai FTZ implemented in 2014.

4.4.1 Special tax-free ship registration policy

In July 2007, the two-year STFSR policy began to implement, which was designed as a preferential policy for Chinese-funded international shipping vessels that had flown foreign flags to return to China and fly Chinese flag instead. Under this policy, ships meeting certain ship age restrictions and technical conditions would be exempt from import duties and value-added tax (MOT, 2007). However, the policy also made clear restrictions and conditions on the ships' ownership and age, policy implementation procedures, tax incentives, and shipping operation supervision, as

shown in Figure 8 (Chen et al., 2017).

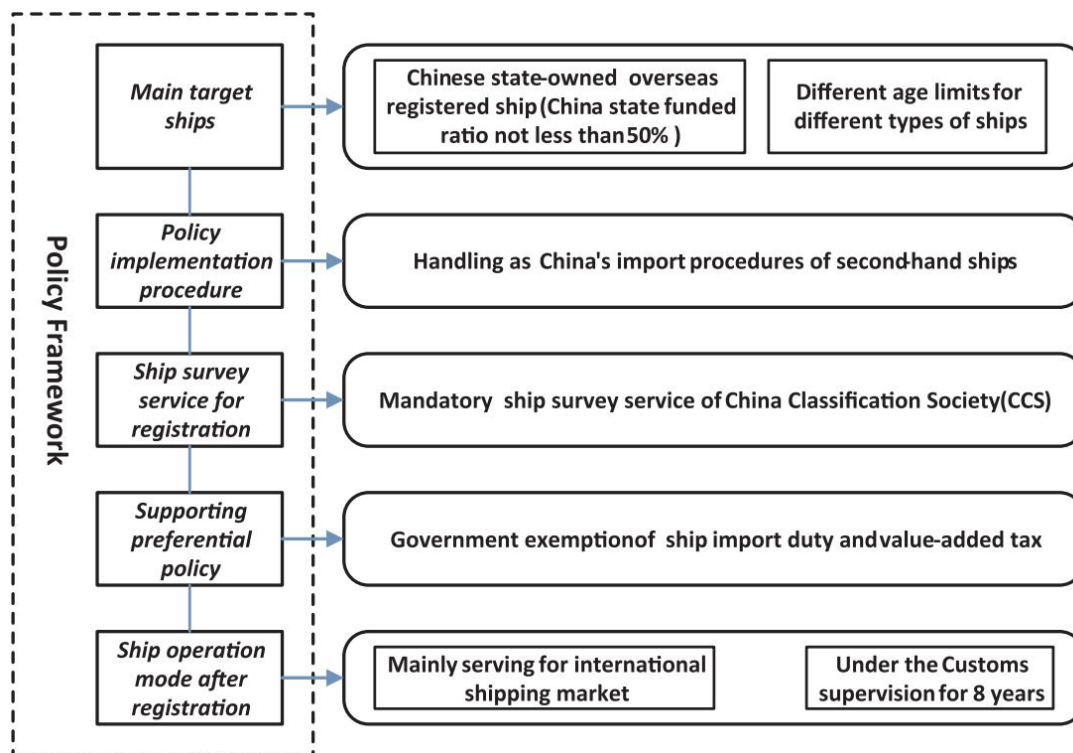


Figure 8 - Overall framework of the STFSR policy in China

Source: Chen, J. & Li, X. K. & Liu, X. & Li, H. (2017). The development of ship registration policy in china: response to flags of convenience. *Marine Policy*, 83, 22-28.

However, although the STFSR policy has provided a series of preferential conditions for ships returning China to register, the effect of the policy was less substantial than anticipated. As a result, the government extended the policy period twice in 2009 and 2012 respectively, and expanded the registration port from the initial limited three designated ports: Shanghai, Tianjin and Dalian, to any international maritime port in China (MOT, 2011). According to statistics, as of December 31, 2011, only 38 ships have successfully applied for STFSR, with a total of 640 thousand DWT, accounting for only about 3% of the total number of Chinese-funded ships flying foreign flags, far from the expected effect of the policy (Chang et al., 2012). Finally, the special

policy ended in failure in December 2015. The three stages of policy implementation are shown in Figure 9 (Chen et al., 2017).

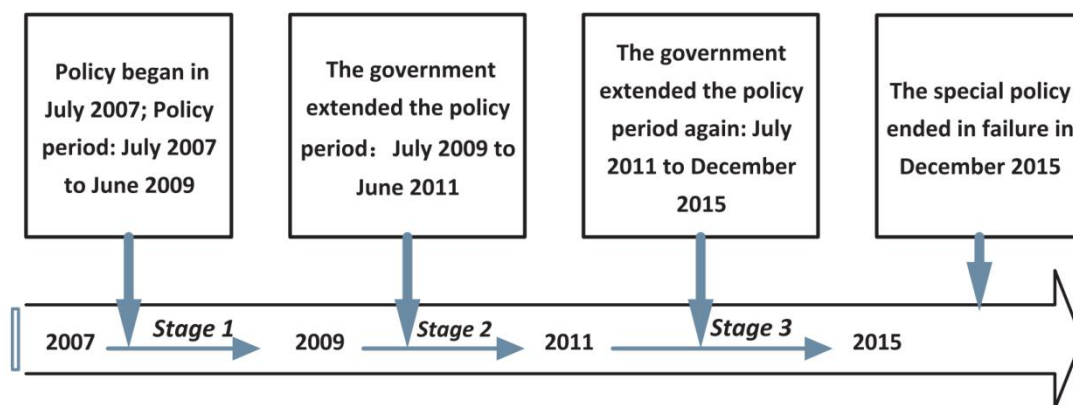


Figure 9 - Process of the STFSR policy in China

Source: Chen, J. & Li, X. K. & Liu, X. & Li, H. (2017). The development of ship registration policy in china: response to flags of convenience. *Marine Policy*, 83, 22-28.

The failure of the STFSR policy in China can be attributed to the following reasons (Chen et al., 2017). **Firstly**, the policy's orientation and the registration process was not quite reasonable. Ships returning to China to be registered under the new policy would be forced to conform to many operational restrictions on their shipping service, and the ship registration procedure would be carried out in a manner similar to China's ship import management model, which involved various government departments and different approval processes, and there is no clear deadline for the completion of such approval requirements. As a result, the registration procedure took a quite long time, and ships had to be suspended from shipping service, which leads to enormous costs to the shipping enterprises.

Secondly, the policy also set various strict ship registration conditions such as ship age restrictions, ownership restrictions, mandatory ship survey compliance, and so on,

resulting in the disqualification of a large proportion of operating ships. Thus, the policy was not attractive to shipping companies. The strict restrictions on ships included the following requirements. **First**, the ships must be Chinese-funded ships for international navigation. The proportion of Chinese capital investment for the ship should be no less than 50%, so the foreign ships were excluded from the applicable scope of the policy. **Second**, the ships must have been registered overseas prior to December 31, 2005. The newly built ships were excluded, to prevent Chinese shipping companies from purchasing new ships overseas and registering them under this policy, in order to protect the development of China's shipbuilding industry. **Third**, the ships' age must meet certain requirements depending on the different ship types, in order to ensure the quality of the ships registered under the policy. **Fourth**, the ships must be under the mandatory ship registration survey by CCS and obtained the ship survey certificates, other ship classification societies were not recognized. (MOT, 2007)

Thirdly, the policy put excessive shipping operation supervision on the ships registered under it. The ships registered under the STFSR policy were regarded as second-hand imported ships, which meant they were subject to customs supervision for eight years. 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.

Fourthly, the related supporting policies in China were insufficient and resulted in operational inconvenience after ship registration. Restricted by the overall domestic ship operation environment, even if the ship was successfully registered under the

STFSR policy, it was difficult to further improve the profit margin for shipping enterprises. Therefore, the STFSR policy had its own limitations, only limited to the ship registry itself, and did not touch the core issue of the innovation of Chinese ship registry system, which led to its inevitable failure. The failure of the STFSR policy has clearly indicated that the problem of Chinese-funded foreign flag ships cannot be solved by relying on minor improvements to the original closed ship registry system.

4.4.2 Bonded Ship Registry in Shanghai Yangshan Port

In order to further attract the Chinese-funded ships with foreign flags to return to China and fly Chinese flags instead, China has carried out pilot exploration on its international ship registration system in the Shanghai and Tianjin FTZs. In 2009, the State Council of China made it clear that an international shipping development comprehensive pilot zone would be established in Shanghai Yangshan FTZ, as a tasks to build Shanghai into an international shipping center (State Council, 2009). Under this background, the Bonded Ship Registry in Shanghai Yangshan Port of China emerged at the historic moment.

On December 21, 2011, Shanghai Yangshan FTZ was officially approved to carry out the Bonded Ship Registry, which was the first pilot area in mainland China to carry out such a service. After the launch of the registration of bonded ships, “China Yangshan Port” became a new port of registry, and the shipping enterprises registered in the Yangshan FTZ could register their tax refund or bonded ships engaged in international shipping business in the new port. This was the first attempt to combine the international ship registration system with the construction of FTZ in China.

The Bonded Ship Registry in Shanghai Yangshan Port has drawn from the

experience of the STFSR policy. In addition to the preferential policies from which ships could enjoy bonded or export tax rebates, the bonded ships could also enjoy the support of the customs for the registration, so as to improve the overall registration efficiency of ships. The advantages of the Bonded Ship Registry is to learn from the experience of developed shipping countries and regions, realize the one-stop ship registration business, and provide efficient and fast service for ships' registration. At the same time, the port service measures are innovated to provide a series of convenient services for the Chinese flag ships.

In practice, “Guanhai Chaoyang”, the first vessel registered in “China Yangshan Port”, applied for bonded ship registry on June 27, 2011, and took half a month to complete the specific registration process, under the joint efforts of Shanghai MSA and CCS. However, in accordance with China's regulation of international shipping services, the 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, and this would take more than one month. Finally, due to the difficulty in providing such a Record Certificate of International Transport Vessel, it took more than five months to complete all the procedures for “Guanhai Chaoyang”. For a long time thereafter, no other ships chose to register in Yangshan Port for Bonded Ship Registry. (Xia, 2016)

The reasons can be summarized as follows. **First**, there had been a lack of specific guidelines or procedures for the registration of bonded ships, and shipping companies were worried about the instability of the policy. **Second**, the customs inspection of Yangshan Port required ships to stop sailing, resulting in the loss of the voyage. **Third**, the bonded ship registration policy had some appeal only to the bonded ships transferred from overseas and new ships built abroad, or some small

and medium-sized enterprise, which could get some financing through the policy. Therefore, the Bonded Ship Registry in Shanghai Yangshan Port did not highlight the significance of the evolution of China's ship registry system.

4.4.3 International Ship Registry in Tianjin Dongjiang

In May 2013, the Pilot Plan for Innovation of International Ship Registration System in Tianjin Dongjiang Bonded Port Area was approved, and the international ship registry in Tianjin Dongjiang was officially put into effect, making “Tianjin Dongjiang” the first pilot program to implement the international ship registry in China. Compared with the previous policies for the change of the ship registration system in China, Tianjin laid emphasis on the innovation of the registration conditions and completed many breakthroughs.

First, the new port of registry was “Tianjin Dongjiang”, which was different from the original port of registry “Tianjin”. **Second**, the strict restrictions on the proportion of Chinese shareholding of shipowners was relaxed, although it had not broken the original limit of 50% Chinese shareholding, if an approved overseas Chinese-funded enterprises wanted to invest in China, its investment could be regarded as Chinese investment. **Third**, the age limit of ships was relax too, which was two years longer than the previous requirements of the SFTSR policy. **Fourth**, it had broken through the restrictions on hiring foreign crew members, with the approval of Tianjin MSA, foreign seafarers could be employed no more than 30% of the crew, including the captain, chief engineer and other officers. **Fifth**, it had increased the registration of ship financial leasing and broadened the financing channels of shipowners.

Although the international ship registry in Tianjin Dongjiang had achieved many

“first breakthroughs”, which was more effective and had a wider scope than the Bonded Ship Registry in “China Yangshan Port”, it still had some limitations. **First**, in terms of tax, although ships in the FTZ can enjoy preferential tax and export tax rebates, other taxes and fees during the operation of ships are still very high. The taxes and fees borne by shipping companies and crew members are higher than those of overseas open registry countries and regions, which cannot meet an internationally competitive tax and fees standard. **Second**, in terms of financing environment, the domestic ship financial leasing industry has just started, and the financing environment has not been improved, which cannot meet the needs of Chinese shipping companies. **Third**, in terms of ship survey service, only the CCS is recognized as a legal ship survey institution in China, while Hong Kong and Singapore both recognize many members of the IACS as their legal ship survey service institutions, which lacks flexibility in choosing ship survey service for shipowners. (Sun & Huang, 2013)

4.4.4 International Ship Registry in Shanghai Free Trade Zone

In January 2014, under the opportunity of the establishment of Shanghai FTZ in 2013, the Pilot Plan for the International Ship Registration System in the China (Shanghai) Pilot Free Trade Zone was approved, and the international ship registry in Shanghai FTZ was officially launched, which was also a further innovation to the Bonded Ship Registry in Shanghai Yangshan Port. Compared with Tianjin, Shanghai made further modifications in innovating the supervision system and simplifying the registration process, mainly reflected in the following aspects.

First of all, in terms of the ownership, it has broken the “not less than 50%” limit on the proportion of Chinese shareholding of shipowners in the traditional ship registration system of China, allowing the registration of ships with more than 50%

foreign investment, which is in line with the spirit of the FTZ to relax the proportion of foreign shares in Sino-foreign joint ventures and Sino-foreign cooperative international shipping enterprises, and can effectively promote the industrial upgrading and scale expansion of Chinese shipping industry.

Secondly, in terms of crew manning, it has removed the restrictions on the proportion of foreign crew members, and cancelled the pre-approval, giving shipowners greater freedom in crew employment. **Thirdly**, it has set up two ports of registry, the bonded ship is registered as “China Yangshan Port”, and the duty-paid ship is registered as “China Shanghai”, so that ships can enjoy the preferential tax policy and convenience as much as possible. In addition, the international ship registry in Shanghai FTZ has improved the tax policy and financial leasing provisions, and relaxed the requirements for ship registration from various aspects, which is more open and flexible. (Tang, 2014)

Due to the innovation of the international ship registry in the FTZ, a new regulation, the Measures for ship registration of China (2016), was adopted and came into force in 2017. It has implemented the special provisions on the international ship registration system in the FTZ, which provide clear guidance on the operation of the international ship registration in the FTZ, optimize the ship registration procedures in the FTZ, provide one-stop maritime service, and establish an information sharing mechanism to avoid duplicate submission of materials. This series of modifications further show that China has paid attention to the lag in the legal system, and adjusted it according to the practical achievements of the innovation of ship registry to improve the legal and policy environment of China’s ship registry.

According to statistics, from 2008 to 2013, the number of Chinese-funded foreign

flag ships increased from 1403 to 2648, with an average annual increase of about 200, and its proportion of DWT increased from 59.03% to 64.79% (Wang et al., 2015). While according to the latest data of the Review of Maritime Transport (UNCTAD, 2020), as of January 2020, the number of Chinese-funded foreign flag ships is only 2300, and the proportion of DWT has also dropped to 56.44%. In addition, according to internal data from the China MSA, in 2020, there were a total of 26 ships registered in China's free trade zones for international navigation, with a total of 3.61 million DWT and an average of 0.14 million DWT.

The above data have shown that after a series of exploration on the international ship registration system, China has achieved phased achievements on the innovation of ship registration system. However, there are still some constraints in the implementation of the international ship registration system, such as, complicated registration procedures, excessive government supervision, insufficient supporting policies, and so on.

4.5 Suggestions on perfecting the ship registry system in China

Although the international ship registration system in China's FTZ has achieved initial results, the overall implementation effect is not obvious. This paper will put forward some suggestions on the improvement of China's international ship registration system from the legislative and policy aspects.

4.5.1 Suggestions on legislation

At present, the only written legal basis of China's international ship registration system in the FTZ is the Measures for Ship Registration of China implemented in 2017. While, as a departmental regulation issued by the MOT, it has a relatively low legal level, and the special provisions on the international ship registration in the

FTZ are very general, with poor practical operation. Moreover, the Ship Registration Regulations of China has been implemented since 1994. In the past 20 years, with the rapid development of the domestic economic environment, the shipping industry has undergone great changes. The outdated laws and regulations can no longer meet the updating and development of the ship registration system in the FTZ, so they are urgent to be further modified and improved. Specific suggestions for further revision and improvement are as follows.

First, the restricted conditions for ship registration shall be relaxed appropriately. The new legislation should give consideration to both the freedom of registration and the effectiveness of management, so as to ensure the safety of ship navigation while satisfying the openness and freedom of the FTZ, and strive for the most appropriate degree of looseness. The general restrictive conditions of ship registration can be divided into two categories: restrictions based on the interests of the flag State and restrictions based on the safety of navigation. The former mainly includes limiting the proportion of foreign capital in registered ships to protect domestic industries and restricting the employment of foreign crew to protect the interests of domestic crew. The latter mainly aims to ensure the safety of water traffic, maintain the stability of shipping order, prevent and reduce the illegal acts of maritime transportation. As the economy of the FTZ is highly open, the first kind of restrictions can be appropriately relaxed, and the second kind of restrictions shall not be too loose, in order to ensure the safety of navigation.

Second, a broader choice of ship survey service organizations shall be recognized. At present, CCS is the only accredited ship survey organization by the competent ship registration authority in China. Ships surveyed by overseas classification societies shall be registered in China only after the classification survey by CCS.

This can maintain the legal status and competitive advantage of CCS to a certain extent, but in the long run, such unilateral protectionism is not conducive to promoting the growth of CCS in the international competition. Therefore, the ship survey service under the international ship registration system in the FTZ shall not be limited to the CCS, the other classification societies of the IACS shall be recognized by the ship registration authority of China, so as to give more options to shipowners and improve the efficiency of ship registration.

Third, the procedures for ship registration shall be improved. The current ship registration system in China still has some problems, such as complicated procedure design, too many approval processes and too long processing period, which leads to a waste of much time and energy for shipowners, and even the huge economic loss of the delayed voyage. Therefore, it is necessary to simplify the current ship registration procedures, so as to improve the efficiency of ship registration and facilitate the shipowners for greater convenience.

4.5.2 Suggestions on policy

Of course, the innovation of ship registry system cannot be separated from the support of supporting policies. Suggestions on policy can be divided into two aspects: taxes and financing environment. **Firstly**, in terms of taxes, high taxes and fees have always been the main reason to affect the return of Chinese-funded foreign flag ships, although the current domestic relevant tax policy has reduced the import duty and import value-added tax for some qualified ships, but the business tax, corporate income tax and other taxes are still very high, thus shipping companies have a heavy tax burden. Therefore, the key to modify the ship registration system is to reduce the amount and types of taxes, giving shipping enterprises the greatest possible preferential tax reduction policy.

One of the specific innovation suggestions is to further expand the scope of reduction and exemption of import duties and value-added taxes on ships. At present, the policy of reduction and exemption of import taxes in China only aims at the Chinese-funded ships that have been registered abroad, while ships manufactured or purchased abroad are not eligible for the exemption; the scope is very limited. This is mainly for the protection of the domestic shipbuilding industry. Therefore, differentiated reduction policies can be adopted in this regard, the duty-free preferential policies shall be given to the import of high-tech and innovative shipbuilding equipment, technology and materials, so as to support the development of high-tech shipbuilding industry in China, and promote the development of China's shipping industry.

In addition, the "tonnage tax" could be introduced to replace the income tax of shipping enterprises, allowing shipowners to pay different registered taxes and fees according to the tonnage of ships. This kind of tax system has been adopted by many countries. Moreover, a certain percentage of income tax or social security payment could also be reduced or exempted to shipowners who employ domestic crew members.

Secondly, in terms of financing environment. The limitation of domestic ship financing environment has restricted the development of domestic fleet. In order to promote the development of nationally registered fleet, a competitive financing system shall be established for nationally registered ships. For example, giving more favorable credit conditions to the shipowners who have registered their ships in China. Specific preferential policies may include: reducing the loan interest rate for ship purchase and shipbuilding, relaxation of repayment restrictions, implementing

policy subsidies for shipping and shipbuilding enterprises, and so on.

Chapter 5 Summary and Conclusions

With the rapid development of economic globalization, the opening of the ship registration system is an inevitable trend of the international shipping industry. In order to conform to this trend, most of the world's shipping powers have adopted open registry or semi-open second ship registry system. As one of the traditional shipping countries, China is also faced with the opportunity of modifying the traditional closed registry system and establishing the international ship registration system.

Starting from the ship registry, this paper discusses in detail the concept, history, significance and types of ship registry, compares the characteristics, advantages and disadvantages of the three types of ship registries, and deeply analyzes their historical origins and development processes. On this basis, the paper compares and analyzes the policies of different ship registration systems adopted by several typical countries and regions and their implementation effects. Furthermore, this paper focuses on China, specifically analyzes the current status and existing problems of China's ship registration system, summarizes the reasons for the flagging out of Chinese-funded ships, and discusses the necessity to modify the ship registration system in China.

Finally, combining with the exploration for international ship registration system in China in recent years, this paper points out some problems and constraints in the implementation of the international ship registration system in China. Then, on the basis of drawing previous experience and lessons, and studying from the advanced practices of other open registry countries and regions, this paper puts forward relevant suggestions from both legislative and policy aspects, such as relaxing the

restricted conditions of ship registry, expanding the scope of ship survey service organizations, further simplifying the procedures for ships' registration, lowering the standard of taxes and fees, and liberalizing the financing environment.

The economic development is inseparable from the prosperity and development of shipping industry. In order to attract the Chinese-funded foreign flag ships to return to the motherland as soon as possible to strengthen the Chinese flag fleet forces, it is necessary to modify and improve the ship registration system of China in time, and to implement the supporting tax and financing preferential policies at the same time, thus to realize the dream of China's shipping power.

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