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International Maritime Regimes – Business Rules?

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ABSTRACT

Marine transportation has an important role in the world wide trade, which makes it of interest to investigate how effective are the international regimes, which control it. The regimes are negotiated and agreed upon by governments but the actual compliance rests with the ship owners, who often operate world-wide and not in direct contact with the states, which register the ships. In this thesis the maritime safety regime is studied and a main question is whether the effectiveness of the regime is reduced by commercial interests.

In the study I have primarily used international regime theory to assess the character and effectiveness of the safety regime and the influence of commercial interests. Especially the investigation has been pursued from an assessment of the effectiveness in a formal sense to the regime performance in actual real world operation.

The main conclusion is that although commercial interests are manifested – direct and indirect – in the formation, contents and operation of the safety regime, the actual adherence is high, which implies that any negative influence of commercial interests is limited for the regime's effectiveness.

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1 INTRODUCTION – HYPOTHESES

1.1 Introduction

Since long there has been a debate within the maritime community on the effectiveness of the international maritime regimes addressing safety, environment and labour conditions on one side and the competitiveness of the shipping industry on the other side. Simplified this controversy can be expressed as societal versus commercial interests. There are a number of practices within the maritime business, which indicate that commercial interests are given priority as the use of flags of convenience, operation of sub-standard ships, illegal operational oil spills just to mention some examples.

A main player and also a focal point for criticism as regards the maritime regimes is the International Maritime Organization – IMO – a specialized agency of the United Nations. IMO came into operation in 1959 with the purposes as summarized by Article 1(a) of the Convention, "*to provide machinery for cooperation among Governments in the field of governmental regulation and practices relating to technical matters of all kinds affecting shipping engaged in international trade; to encourage and facilitate the general adoption of the highest practicable standards in matters concerning maritime safety, efficiency of navigation and prevention and control of marine pollution from ships*"¹. The Organization is also empowered to deal with administrative and legal matters related to these purposes.

A key motivation for the establishment has been stated as follows "*The ownership and management chain surrounding any ship can embrace many countries and ships spend their economic life moving between different jurisdictions, often far from the country of registry. There is, therefore, a need for international standards to regulate shipping - which can be adopted and accepted by all.*"².

The words "highest practicable standards" (1st quotation) and "which can be accepted and adopted by all" (2nd quotation) clearly demonstrate that there are ambiguities as regards the influence of commercial interests. It is thus of interest to further investigate whether these

¹ Quote from IMO website www.imo.org (About IMO – Brief history of IMO) (May 2009)

² Ibid, (About IMO – Introduction to IMO) (May 2009)

ambiguities also can be found in the decision processes themselves and the resulting resolutions and conventions – regimes – and their implementation and enforcement.

1.2 Motivation for the study

Marine transportation has an important role in the world wide trade, both in international and domestic transports and it is estimated that 95 percent of the world trade (by weight) is conducted by sea (Tan, p 11). This makes it of general interest to study the regimes, which control maritime transportation and also to investigate how effective these are.

From a political science point of view the maritime regimes are of interest as they are negotiated, adopted, implemented and enforced by the states within a framework of international cooperation. A second question is the actual compliance with the regimes. The compliance rests to a large degree with the operators of the ships, who are formally under the jurisdiction of the state where the ship is registered but in reality often physically distant from that state.

Studies of the maritime regimes are few and many of them concern mainly the legal aspects. Of interest for this study is Tan on vessel-source pollution, Boisson on the development of the maritime safety regime and DeSombre on flagging standards. Boisson gives essentially a description of the formal and technical development of the safety regime and touches only briefly the political aspects. Both DeSombre and Tan include analyses of the effectiveness of the maritime regimes and discuss to some extent the political and commercial influences. This study is intended to complement DeSombre, Boisson and Tan by using a framework of theories in political science to analyse the international maritime safety regime as regards political and commercial influences.

1.3 Hypotheses

Two overarching hypotheses are formulated as a framework for the analysis:

- A. International regime theory can be used to analyse the character, effectiveness and resilience of the international maritime safety regime.
- B. Commercial interests influence the formation and operation of the maritime safety regime and tend to reduce their effectiveness.

Both hypotheses are general and will be further elaborated and specified in the empirical study.

1.4 Outline of the study

This thesis is organized as follows:

- An overview of the international maritime regimes
- Theoretical framework focusing on international regime theories
- Regime formation
- Regime content
- Regime in operation
- Reflexions
- Conclusions

2 THE INTERNATIONAL MARITIME REGIMES

2.1 Introduction

Shipping is an international industry and it was early recognized that the best way of improving safety at sea is by developing international regulations that are followed by all shipping nations. A main concern has always been that local regulations would be detrimental for free trade and competition and it is consequently better to have regulations, which all ships were compelled to follow – albeit from the commercial point of view as few as possible. From the mid-19th century onwards a number of such treaties were adopted. The maritime regimes include now several issue areas and some of the more important are safety (of lives), maritime pollution prevention and security. In this thesis I will concentrate on maritime safety.

The maritime regulatory system can be divided into two phases, the formation and operation. The formation process is essentially the formulation of the regulations in an inter-governmental process and the operational phase is broadly speaking the actual every day working of the regulations in the real world. This can also be formulated as the formation provides the framework and the operation is the effective functioning of the system. One reason for this division is that the actors have different roles. The border line between the two phases will be defined more in detail in this chapter.

2.2 Formation of the international maritime regimes

2.2.1 The formation process

The formation process can strictly be seen as constituted by two parts, first the initial formation of rules/regulations in an issue area (as maritime safety, pollution prevention etc) and a second phase where the rules/regulations are amended and expanded. This second phase is for many of the issue areas an ongoing process, which is institutionalized with regular meetings (annual or biannual as for the maritime safety). The description of the formation process includes both the phases.

The formation process starts with identifying a problem. The next steps are finding possible solutions, negotiations and decisions of an acceptable solution and finally adoption of the regime. In this process a number of constraints and obstacles have to be observed, as the sovereignty of individual states, other international treaties – especially UNCLOS³ – as well as the influence and expectations from various actors.

2.2.2 The Conventions

The international maritime regimes are formalized and documented in convention texts. The maritime safety regime is based on nine conventions⁴ and some of them are complemented by protocols and agreements. Totally the regime includes nineteen instruments. The convention which is considered most important and basic for maritime safety⁵ is “Safety Of Lives At Sea” or SOLAS for short. SOLAS contains regulations for the construction, maintenance and operation of ships and their equipment. SOLAS also includes administrative provisions including certification. It may be noted that a number of regulations refer to Codes, which generally are issue specific⁶ and the texts in SOLAS specify the applicability and compliance requirements (mandatory, recommendation). It should be noted that SOLAS also includes provisions related to security.

2.2.3 Actors

The main actors in the development of the maritime regulations are the states, which in intergovernmental conferences agree on the contents of the regulations. To facilitate the negotiations between the states the International Maritime Organization – IMO – was created. IMO is a specialized agency of the United Nations with 168 Member States and three Associate Members. IMO’s role is in short “*to provide a machinery for cooperation among Governments* –“ (cf. chapter 1.1)

In addition to these main players there is a number of actors representing various interests and among the most influential – albeit not formally – are ship owners, classification societies⁷

³ UNCLOS = United Nations Convention on the Law of the Sea

⁴ See www.imo.org/Conventions/mainframe.asp?topic_id=247 (May 2009)

⁵ According to IMO website www.imo.org (Safety – Introduction) (May 2009)

⁶ Examples are Life-saving appliances, Dangerous goods.

⁷ Classification societies are commercial entities entrusted by ship owners and shipbuilders but also by national maritime authorities to supervise, check and verify that ships are built, maintained and operated according to given regulations (including those set up by the classification societies)

and seafarers. These interests interact in the decision process both on a national level and directly at the intergovernmental meetings. On the national level they give (and are also asked for) advice to and promote issues of their special concern (lobbying), which they want the nation's representatives to include in the negotiations and decisions. They can also participate in the intergovernmental meetings formally as observers with no voting rights, but can in reality play a rather active role by taking part in the debates, making proposals and lobbying.

2.2.4 The intergovernmental conferences

The formulation of the regulations and rules is a rather lengthy process from initiation to actual decision, in which work groups, subcommittees etc are involved. The details in the process are of secondary importance in this context. In this process the Maritime Safety Committee – MSC - in IMO plays an important role. In MSC all members of IMO (the states) can participate with full and formally equal voting power. MSC is formally subordinated to the Assembly and the Council⁸, but effectively the decisions of the committee will result in international regulations. As all member states can participate and vote at the MSC meetings, these function as intergovernmental conferences. MSC meets at least annually and its main task is to develop, revise and amend as well as agree and decide on the regulations and rules in the conventions. In the MSC meetings a number of representatives from different interests participate as observers.

Decisions are formally taken by majority vote. In reality most decisions are taken in consensus, which can be said to be the norm in these conferences. This means that all member states' sovereignty is respected but sometimes to the expense of “diluted” decisions, as a consequence of all compromises needed.

2.2.5 The law of the sea – UNCLOS

The maritime regimes have to be in accordance with United Nations Convention on the Law of the Sea – UNCLOS.

The control of the sea traffic was traditionally upheld by sheer power, the nation(s) which had the most powerful fleets ruled the seas. Early in the 17th century the law of the freedom of the

⁸ The Assembly is the highest governing body of IMO and consists of all member states and meets once every two years. The Council is the executive organ of IMO and its 40 members are elected by the Assembly. For further details on the structure of IMO the reader is referred to IMO website www.imo.org (About IMO – Structure) (May 2009).

sea was formulated by the Dutch humanist and theologian Hugo Grotius in “*Mare Liberum*”, 1609. According to Grotius (p 37-43) the freedom of the sea was vital for the communication between nations and no single state could monopolize the control over the oceans as it was too immense and lacked stability and fixed limits.

The present UNCLOS was agreed upon in 1982, and includes also provisions on the rights as regards internal and territorial waters.

The freedom of the sea is given in UNCLOS article 87, which states “*1. The high seas are open to all States, whether coastal or land-locked. ---- It comprises, inter alia both for coastal and land-locked States: (a) freedom of navigation, ---. 2. These freedoms shall be exercised by all States with due regard for the interests of other States in their exercise of the freedom of the high seas.—*“

Also the right of “*innocent passage*” should be noted as given in the Articles 17. “*Subject to this Convention, ships of all States, whether coastal or landlocked, enjoy the right of innocent passage through the territorial sea*”.

The main principle in UNCLOS is thus in essence that all ships are free to navigate in the open seas as well as in the territorial waters, although the coastal states may to some extent adopt laws and regulations for the passage (Article 21) in conformity to UNCLOS and other international laws.

It is also of interest to observe Article 91 Nationality of ships. “*1. Every State shall fix the conditions for the grant of its nationality to ships, for the registration of ships in its territory, and for the right to fly its flag. Ships have the nationality of the State whose flag they are entitled to fly. There must exist a genuine (my underline) link between the State and the ship. 2. Every State shall issue to ships to which it has granted the right to fly its flag documents to that effect.*” This wording is of interests as regards the so called flags of convenience, to which I will come back later.

2.2.6 Ratification and implementation

After a convention has been agreed upon by the states, it has to be ratified or acceded by each state, which is party to the convention.

The implementation of IMO conventions depends upon the governments of member parties. Contracting governments implement the provisions of IMO conventions as far as their own ships are concerned and also set the penalties for infringements, where these are applicable.

This means that in general each government has to adopt national legislation, which covers the provisions in the respective IMO conventions. A government may also have certain limited powers in respect of the ships of other governments. The way in which these powers may be used are very carefully defined, and in most conventions the flag state is primarily responsible for enforcing conventions as far as its own ships and their personnel are concerned. IMO itself has no powers to enforce conventions.

2.2.7 Summary

The formation of maritime regulations are negotiated and decided in intergovernmental conferences. The regulations have to be in conformance with the law of the sea, UNCLOS. The regulations have to be implemented by each individual state in their domestic law, and it is the responsibility of the individual state to enforce the provisions of the regulations on the ships under its jurisdiction.

Prime actors in the formation process are the states and IMO although other interested parties as ship owners etc can actively influence the outcomes.

The formation phase is here defined to end with the implementation of the negotiated international regulations in domestic law (or similar) in the respective states.

2.3 Operation of the maritime regulations

The operation of the regulations, which actually tells how effective they are, involves in principle the same actors as the formation process, but now the ship operators have a more prominent role and the states have a more individual domestic role. Central in the effectiveness of the regulations is the actual compliance by ships. In this context the concept of Flag of Convenience (FOC) has to be considered. Although the flag state (the state where the ship is registered) has the jurisdiction over its ships, the concerns as regards safety and pollution has brought on the port states⁹ to demand some control and sanction measures. Such measures are labelled Port State Control and have an influence on how effective the regulations are in practice.

⁹ The port states are the states, which are visited by the ships.

2.3.1 Actors

The actual compliance with regulations is the responsibility of the ship operator¹⁰. Simplified the connection between adopted regimes and the operator can be described as: A state implements the regime by making its provisions part of the state's domestic law, which applies to all ships under this state's jurisdiction. Violations (non –compliance) of the regime shall be sanctioned by this state (flag state). This is an ideal picture, as in many cases the ships operate far away from or even never visit the flag state and the operators have no substantial connection with the flag state¹¹. It is thus difficult if not impossible to impose any sanctions. Furthermore for some flag states the income from having ships registered under their flags are seen as an important source of revenue, which could influence their willingness to impose sanctions. The flag “problem” will be further discussed in connection with the flags of convenience.

The ship operators are, however, not beyond control as the port states have the possibility to exercise some control and also impose sanctions on ships, which do not comply with the regimes – see below Port State Control.

The compliance with the regulations is exercised by the maritime authorities (in flag and port states) but in practice a large part of this task is delegated to the classification societies¹². The main reason is that the authorities lack resources as regards manpower and/or competence to fulfil the controls. The classification societies on the other hand are involved more closely with the design, construction and maintenance of the ships (over their lifetime) and statutory controls/audits are seen as an extension of their branch. It may be noted that these societies are commercial entities.

2.3.2 Flags of convenience

2.3.2.1 Regulations in US

Regulations applicable to US registered ships, which were introduced in the period 1915 to 1922, increased the costs for shipping compared with ships flying other flags. This meant that the US flagged ships had a competitive disadvantage in international shipping. Although the main principle was that US owned ships should be registered in US, the US authorities made

¹⁰ The ship operator can be the ship owner, a ship management company etc. The International Safety Management Code (ISM Code) which is a mandatory part of SOLAS defines the operator clearly

¹¹ Compare with UNCLOS article 91 on “genuine link between the State and the ship” see 2.2.5 above

¹² The delegation to classification societies is in accordance with SOLAS (Consolidated edition 2004) Chapter I, Part B, Regulation 6.

two interesting exemptions in the 1920s. One concerned a number of ships which had acquired large debts due to the higher operating costs within the US system. To still keep these ships within US control (US owners) they were allowed to register in Panama on the condition that they were employed only on routes not competing with US flagged ships (DeSombre p 75).

The second exemption concerned cruise ships. Already in the 1920s holidays on cruise ships were popular in the US but the prohibition to serve alcohol onboard US flagged ships put the American operators in a disadvantageous competition situation. The US operators therefore asked for and got the permission of the US government to register their ships in Panama and could thereby circumvent the prohibition (DeSombre p 76)¹³.

2.3.2.2 *What is a flag of convenience (FOC)*

The International Transport Worker's Federation (ITF) has the definition "Where beneficial ownership and control of a vessel is found to lie elsewhere than in the country of the flag the vessel is flying, the vessel is considered as sailing under a flag of convenience (FOC)".

DeSombre (p 4) has a similar definition for a FOC using the concept open registry, which is characterized by not requiring citizenship (or place of residence) of ship owners or operators, allowing non-nationals to work on its ships, levying minimal or no taxes and being in many cases less effective in imposing international as well as domestic regulations on its registered ships. A prerequisite for a FOC is an open registry, but it should be observed that there are a number of open registries, which generally have adopted, implemented and enforced to a large extent the international maritime regimes. The ITF definition implies that all open registries are FOCs, which seems a too wide definition¹⁴.

2.3.2.3 *Present situation*

After WW II the world fleet has increased steadily and is at present more than six times the size (in gross tonnage¹⁵) in the early 1950s. Most notably is the increase of FOC ships, which today comprises about sixty percent of the world fleet. The two largest registries of FOC ships are Panama and Liberia, which today have about thirty percent of the world fleet. It should

¹³ The state Panama was "created" with the active support from the US in 1903, and the US influence remained strong at least into the 1950s (Bonniers lexikon 1965, Vol 10, column 1237).

¹⁴ In fact ITF makes a differentiation as its list of FOCs does not include all open registries.

¹⁵ Gross register tonnage (GRT) is an internationally adopted method for measuring the size of a ship. GRT essentially gives the volume capacity of a ship

also be noted that the FOC states beside maritime states also include a number of landlocked nations like Bolivia and Mongolia¹⁶.

2.3.2.4 Why use a flag of convenience

The overall commercial interest for ship owners is maximum profit and minimal costs (Tan p 35, Payne p 69-72). To achieve this, ship owners want with respect to the maritime regulations to have:

- Minimal regulations
- Free and fair competition

Regulations are generally considered to be cost increasing by imposing requirements on equipment standards, crew standards and direct costs for required certifications and audits. Free and fair competition is considered as a guarantee for cost-efficient operations. However, ship owners are concerned that states might impose different regulations, which could make competition unfair. Consequently they can accept some regulations if it is internationally binding for all states (Tan p 35, Hirst and Thompson p 274).

Payne (p 69-72) summarizes four reasons for a ship owner to adopt a flag of convenience

- Ease of registration
- Tax benefits
- Reduction in operating costs
- Freedom of control

2.3.3 Port State Control

The basis for port state control is the aspect that ports are a part of the sovereign territory of a state, and that the states have a right to control the access to their ports (DeSombre p 89).

Without going into details it can be stated that UNCLOS provides the ability for states to do Port State Control (PSC) on ships visiting their ports to ensure that they are seaworthy and do not constitute a threat to the environment. This is interpreted as the ship and its equipment, manning and operation shall comply with the requirements of the international maritime regulations. The port state also has a right, if the deficiencies are grave, to detain the ship in port until the deficiencies are remedied.

¹⁶ See the ITF website <http://www.itfglobal.org/flags-convenience/flags-convenien-183.cfm> (May 2009)

2.3.4 Coastal states

According to UNCLOS ships have a right to innocent passage through the territorial waters of coastal states including straits used for international navigation. The general requirements are that the ships, which are using the rights of transit are to comply with the generally accepted international regulations. The coastal state can also impose requirements on sea lanes, traffic separation etc in consultation with IMO. The right of the coastal states to control the ships is more limited than for a port state, and any actions from these states are to be based on that the passage of the ships should constitute a major threat to safety and environment. For a further discussion of coastal states' rights the reader is referred to Tan 204- 211. It can be noted that the provisions in UNCLOS on the rights of the coastal states are open to different interpretations (cf. Tan p 210).

2.3.5 Summary

The main actors in the operation of the regime are the ship owners, the maritime authorities in the individual states and the classification societies acting on delegation from the maritime authorities. The ship owners are generally not restricted to register their ships in their country of domicile, but may choose any flag. In many cases the flag states have limited resources to exercise full control of the ships under their jurisdiction. The classification societies perform part of the flag state controls and audits. Port State Control has emerged as an instrument for port states to control that visiting ships comply with the maritime regulations and they can to some extent also apply sanctions in cases of non-compliance.

2.4 Conclusions

There are two phases in the maritime regimes, formation and operation, and a main characteristic difference between these are the roles of the actors. One important link between the phases is the substantive content of the regimes – the actual provisions (regulations), which are decided in the formation process and are to be complied with in the operational phase. This can also be expressed as that the regulations are the outcome of the regime formation and the input for regime operation.

3 THEORETICAL FRAMEWORK

3.1 Motivations for choice of theories

International commercial shipping can be seen from the following perspectives or interests:

- The ship owners¹⁷
- The nations
- The civic society

These interests are often interrelated but also conflicting, which results in tensions and ambiguities in the regimes established to regulate international shipping. In reality there are no exact dividing lines between the three interests but rather alliances depending on issues. However, broadly speaking there are two main positions. The ship owners essentially want to make a profit and see regulations as mainly cost-increasing. The nations and the civic society have in many respects common interests and want to have regulations to protect people's safety at sea, the environment, etc. This very simple picture is complicated in many ways. As an example, in many nations shipping is an important business as well as an important source of income and for such nations ship owners' interests are important. And ship owners also have an interest in *some* international regulation (cf 2.3.2.4).

The purpose of this thesis is to investigate whether and how the international maritime regulatory system can be described using international regime theory (first hypothesis) and how commercial interests influence the maritime regulations (second hypothesis). For the first hypothesis the choice of theoretical framework is rather straightforward – theories of international regimes - and the focus will be on regime effectiveness, robustness and character. The commercial influence is less amenable for a direct political science analysis but elements from regime theory might be useful in this context. It can be argued that concepts as path dependence or logic of appropriateness would offer a theoretical framework, as shipping has a history dating back several thousands year with rooted perceptions, traditions and practices, and this will be briefly discussed below.

¹⁷ The ship owners are here considered as the prime representatives of commercial interests. Other commercial interests are cargo owners, shipbuilders etc.

3.2 International regime theory

3.2.1 Introduction

The aim is to use international regime theory to analyse the maritime safety regime with regard to regime effectiveness, robustness and characterization. The theoretical background for the analysis will be based on Hasenclever et al. and Peters.

The starting point is that the maritime safety regime fulfils the criteria for an international regime according to what Hasenclever et al. (p 12) labels as a lean (and formal) definition “*Regimes are institutions with explicit rules, agreed upon by governments that pertain to particular sets of issues in international relations*”. It can be stated that the three criteria in the definition are fulfilled, as there are explicit rules – the convention texts – which have been agreed upon between the states – first sentence in SOLAS¹⁸ - and within a particular issue area – maritime safety.

Although the formal definition of a regime does not explicitly mention principles and norms it can be presumed that regimes generally are based on some common understandings¹⁹. This is certainly true for the maritime regimes, and it is expressed in the overarching aim of IMO “Safe, secure and efficient shipping on clean ocean”.

3.2.2 Regime effectiveness and robustness

Hasenclever et al. (p 2) have two indications of whether a regime (institution) is significant, *effectiveness* and *robustness*.

The effects of a regime can be judged as to what extent members comply with its norms and regulations and secondly to what extent its objectives and/or purposes are fulfilled. The effectiveness in these senses can also be seen as a measure on how well states can cooperate in the issue-area (ibid p 2).

The robustness can be judged from whether the regime can last over time, or in other words is resilient (ibid p 2). Regimes are exposed to changes in power constellations but also, as in the case of maritime regulations, of other external pressures as changes in technology,

¹⁸ SOLAS consolidated edition 2004, p 3

¹⁹ Cf Chayes & Chayes p 8

environment considerations etc. This all adds up to how well the regime can adapt to changing conditions without losing its long term objectives.

It may be noted that effectiveness and robustness are conceptually independent as a regime can be resilient but not effective and vice versa, however they may correlate (ibid p 3).

Peters uses instead of regime effectiveness and robustness the term “good institution” and mentions as minimal requirements: the regime should survive including some degree of cooperation between members (resilience) and it should have an effect upon its members’ values and behaviour (effectiveness) (Peters p 151).

3.2.3 Regime characterization

One of the aims of this study is to demonstrate and if possible find causal evidence for the influence of commercial interests on the maritime regulations. From this viewpoint it is of interest to do some characterization of the maritime regimes. As a basis for this characterization I will use Hasenclever’s et al. classification of international regime theories as power-, interest- or knowledge-based (Hasenclever et al p 1). These three concepts can also be described as realism, neoliberalism or cognitivism²⁰ respectively. The differences between these “schools” are mainly due to different views on the nature of state actors and their motivation, i.e. assumptions of the actors behaviour. The overall characteristics of these three “schools” are summarized in Table 1 which is cited directly from Hasenclever et al p 6.

	Realism	Neoliberalism	Cognitivism
Central variable	power	interests	knowledge
“Institutionalism”	weak	medium	strong
Meta-theoretical orientation	rationalistic	rationalistic	sociological
Behavioural model	concerned with relative gains	absolute gains maximizer	role-player

Table 3.1 Copy of table Table 1 in Hasenclever et al.

The aim here is to use these rather broad characteristics and investigate which of these “schools” gives the best representation of the maritime regimes. The operational procedures to do this will be further elaborated in chapter 4.

²⁰ Hazenclever et al uses the term cognitivism, where others might use constructivism, here I will use the terminology used by Hazenclever et al

3.3 Logic of appropriateness - Path dependence

International commercial shipping is an activity with a long history and deeply rooted traditions, which may result in behaviours characterized by logic of appropriateness and/or path dependence.

The path dependence in regime behaviour describes when a policy has been adopted, it will have a continuing and largely determinate effect for the regime and that any changes in policy will require relative large pressures to be realized (Peters p 71). According to Pierson path dependence can be identified by three phases²¹. First a formative moment when events start a motion in a certain direction (policy decision), second a period of reproduction when positive feedback strengthens the chosen policy (path) and third when this equilibrium state is disturbed by some events (often minor but not necessarily coincidental) and a new path direction is chosen. The maritime regimes, which are studied here, have a history which dates back in a formal sense to early twentieth century and has roots even earlier, which might indicate path dependences in their development. From a brief survey of the development of the regimes the general impression is that the three phases (in path dependence) are not very distinct as the regimes were established as consequences of increasing awareness in the issue areas (of the regimes) and further developed in an evolutionary way. Although it can be argued that some major accidents lead to changes in the regimes, the effect was in general that changes were speeded up.

The traditionalism within shipping might imply that there are strong perceptions of what is appropriate and how to solve problems in the maritime regimes. This indicates that the concept “logic of appropriateness” could be useful to characterize these regimes, as this concept stresses the influence established beliefs and norms have on behaviour. “Logic of appropriateness” can be contrasted with “logic of consequentiality” in the actions (solving a problem) of an institution as follows:

²¹ Falkemark’s summary has been used here (Falkemark p 46)

	Logic of appropriateness	Logic of consequentiality
Identifying the problem	Which type of situation is at hand	Which alternatives exist
The perspective of the institution	Which are the norms and beliefs of the institution	Which are the values of the institution
Evaluation of options	How appropriate are different actions	Relation between the values and alternative consequences
Choice!	The most appropriate action	The action which results in maximum utility (Rational choice)

Table 3.2 Comparison of logic of appropriateness and logic of consequentiality

According to Hasenclever et al. (p 155) logic of appropriateness can be included in regime theory in its cognitive version, where actors are role players and secondly knowledge is a central variable. In this context the concept of “epistemic” communities is worth considering. Peters (p 145) describe them as *“These communities are conceptualized as agreements on certain fundamental bodies of knowledge that can then function as a mechanism for pressing those professional and scientific views on to government”*. These communities operate often transnationally. If in this description “bodies of knowledge” is changed to “commercial practices” and “professional and scientific” to “professional”, a description of the international commercial shipping is obtained.

It can be noted that the concepts of path dependence and logic of appropriateness are closely related as both stress the importance of ideas and norms (Peters p 84).

3.4 Main operational procedure

In the description of the maritime regimes two phases were identified formation and operation, with the regulations (the substantive content) forming the link between the two phases.

The analysis of the regimes will be divided into the following parts:

1. The formation of the regime
2. The substantive content of the regime

3. The operation of the regime

The main hypotheses in this study are

- A. International regime theory can be used to analyse the character, effectiveness and resilience of the international maritime safety regime.
- B. Commercial interests influence the formation and operation of the maritime safety regime and tend to reduce their effectiveness.

The hypotheses and division of the analysis are connected and the strength of these connections is assumed as shown in the table below:

	1 Formation	2 Content	3 Operation
Hypothesis A	XX	X	(X)
Hypothesis B	(X)	X	XX

Strength of connection

XX strong

X of importance

(X) less important

The strength of these connections is a working hypothesis, which should be corroborated in the empirical study.

3.5 The maritime safety regime

Maritime safety is here defined as mainly the safety of human lives, but a secondary implication is that the ships shall be safe (stay afloat and be possible to control).

SOLAS (cf. 2.2.2) will here be used as the main representative document describing the international maritime safety regime.

For the empirical study the MSC meeting records (minutes)²² and the SOLAS convention - SOLAS, Consolidated Edition, 2004²³ - will be the basic sources, but complemented as needed.

²² MSC protocols are available at the website of the Swedish Maritime Administration, however a password is needed

²³ As there is a more or less continuous process of amending and improving SOLAS new up-to-date versions of the consolidated SOLAS convention are regularly issued, the 2004 edition is the latest (Feb 23, 2009)

4 REGIME FORMATION

4.1 Main questions

The hypothesis A assumes that the international maritime safety regime can be analysed using international regime theory. This may look as a rather trivial statement but is made complex as there is a web of actors beside the states, a general conception by many actors that the maritime regulation system is not political, and some confusion among actors of the role of IMO.

The operational formulation of the hypothesis can be divided into the following assertions:

1. The character of the safety regime can be described using a “mainstream” behavioural model.
2. The regime is effective.
3. The regime is robust.

As the hypothesis A is in essence a formal question and the formation of the maritime regulatory system also occurs within a formal framework, the hypothesis A can thus be tested against the formation process. This can be further motivated if the formation process is limited “downstream” to the implementation in domestic law (similar) in the respective states. This limitation requires that effectiveness (assertion 3) means that the states have implemented regulations, which can be seen as a formal definition of effectiveness. The influence of commercial interests on the formation of the regimes will presumably be mostly indirect via the states’ actions, which are not directly manifest, but it will be considered.

The following operational hypotheses will be used and verified/falsified:

Hypothesis	Verification by	Sources
The safety regime can be characterized by a central concept	Action in the MSC meetings	Minutes from MSC meetings
The safety regime is effective in a formal sense	Ratification and implementation by states	IMO documentation, DeSombre
The safety regime is robust	History of SOLAS and ratification by states	SOLAS contents and IMO documentation
Commercial interests influence the safety regime	Action in the MSC meetings	Minutes from MSC meetings

Table 4.1 Operational hypotheses

4.2 Characterization of the maritime regimes

International regime theories have according to Hasenclever et al. (p 1) three mainstream approaches power-, interest- and knowledge-based. Instead of using one of these approaches to analyse the maritime regimes I will investigate which of the central variables power, interest or knowledge best describes the maritime regimes²⁴.

The aim of characterizing the safety regime is to analyse what kind of influences shape it and if there is a support of the second hypothesis, commercial influence. The operational tool here will be the activities of different groups at the MSC meetings, as they are reflected in the minutes.

The structure of shipping has in the past fifty years changed from three dominating nations UK, USA and Norway having more than fifty percent of the world fleet registered in the 1950s to the situation today where Panama, Liberia, Bahamas, Greece, Singapore, Hong Kong (China) and Marshall Islands together have a share of 52 percent and UK, USA and Norway of 8 percent. It may be noted that compared with the 1950s the world fleet is now more than six times larger.

As regards beneficiary ownership at present Greece, Japan, China and Germany together have more than fifty percent.

²⁴ This can be seen as an inverted way of using the regime theories

With regard to the main characteristics power, interest and knowledge the following constellations could be formed:

- Power* the “hegemon” US and China as an “upcoming hegemon” might use their positions
- Interest* the top states as regards ship registrations, Panama, Liberia, Greece, Hong Kong Marshall Islands, Bahamas, Singapore and Malta²⁵ (including almost seventy percent of the world fleet) – interest group A
and
the top states as regards domicile of the beneficiary owners, Greece, Japan, China, Germany, US, Singapore, Norway and UK²⁶ (controlling also almost seventy percent of the world fleet) – interest group B
- Knowledge* representatives for the shipping industry and mainly ship owners and classification societies

There are no clear cut borders between the constellations but rather a general classification of their concerns. The influence at the MSC meetings of the constellations is operationally evaluated from their recorded activity at the meetings. In the investigation the following samples of the records from the MSC meetings have been analysed including MSC 66 (1996), MSC 69 (1998), MSC 72 (2000), MSC 75 (2002), MSC 78 (2004), MSC 81 (2006) and MSC 84 (2008). The activity of a representative (from a state, NGO etc) is assessed from the records of the meetings as number of proposals and statements at the meeting. The results are shown in the table below and are related to the four constellations identified above. The activity “level” is the average of the activities of the respective constellations’ activities at the analysed meetings MSC 66 – MSC 84.

Characteristic	State (s)	Activity “level”
Power	USA	11
Interest A	Top flag states	14
Interest B	Top owner states	60
“Knowledge”	IACS, ICS etc	21

Table 4.2 Average activity levels at MSC meetings

The conclusion from the table is that the maritime safety regime is mainly influenced by the owner states’ interests, i.e. the traditional maritime states’, but with a substantial impact of the

²⁵ From http://www.marad.dot.gov/documents/Top_25_Registry_Flag_2006.xls (May 2009)
²⁶ http://www.marad.dot.gov/documents/Top_25_Country_Ownership.xls . (May 2009)

“knowledge” based constellations. The low activity level of the most important flag states is also noteworthy.

The fact that some states (China, Greece, Singapore and USA) are represented in two of the constellations show their double interests. China has a rather low recorded activity at the meetings and consequentially China does not show any overt “hegemon” behaviour. USA is second (to UK) as regards meeting activity but does not have a recorded dominating impact. However, it is said that effectively the consent of both China and USA is considered important at the meetings, which is an indication that both states have some “hegemon” influence²⁷. The dominance of the owner states (the traditional maritime states) indicates that the safety regime continues to be controlled by these states and not the states, which have the formal jurisdiction of the world fleet. This influence of the owner states could be interpreted as an indication that commercial interests are prioritized. However, such a conclusion is considered at this stage – regime formation- to be premature.

The limitation of the analysis to the MSC meetings from 1996 and onwards is motivated by that it is the present situation which is of interest. A short survey was, however, made of a few earlier MSC meetings – MSC 1 (1959), MSC 10 (1965), MSC 30 (1974) and MSC 50 (1985). The meetings 1, 10 and 30 are characterized by participation being limited to fourteen (MSC 1 and 10) and sixteen states (MSC 30) and the meeting records (and the meetings) being rather short and records of individual delegations statements etc being rare. Not until 1978 MSC included all IMO members, and at MSC 50 all IMO members could participate. This meeting shows also that it was the traditional ship owning countries which were most active. The conclusion is that the safety regime is closest characterized as interest-based and mainly by the states with the largest ship owners’ interests. There are also tendencies of hegemon behaviour (mainly USA) and the knowledge based influence is also noteworthy.

4.3 Regime effectiveness

As stated in 3.2.2 the effectiveness of a regime means primarily to what extent members comply with its norms and regulations and secondly to what extent its objectives and/or purposes are fulfilled. Operationally the effectiveness can be seen as consisting of a formal part and the actual operation in reality. The formal part, which is a necessary condition for the

²⁷ Private communication from delegates at the MSC 84 meeting

operational part, includes that the states will ratify (or accede to) the agreement (convention or similar) and implement the provisions in the agreement in domestic law (or similar).

IMO has a register of ratifications of conventions, which can be used to evaluate how many states have ratified each convention. As IMO has no power to enforce the provisions²⁸, enforcement is the responsibility of the states, which have ratified (acceded to) the convention. This requires that the provisions are included in domestic law (or similar).

It is here assumed that the ratification of a treaty can be seen as the state's willingness (or at least intention) to implement the provisions in the agreement (DeSombre p 40), and consequently also to include them in domestic law.

From the IMO statistics on ratifications²⁹ main results are obtained for the implementation of the nineteen listed safety conventions:

Implementation ranges from 26 to 95 percent, with a median value of 63 percent. Upper quartile is above 74 percent and lower quartile is below 47 percent. With regard to the size of the world fleet 47 percent (in GRT) have an implementation above median, and 5 percent are in the lower quartile.

It may be noted that 48 percent of the world fleet has an implementation between median and the lower quartile. These results are similar to DeSombre's (p 42) although there are some differences in which safety conventions have been included³⁰.

There is however one serious shortcoming in this overall analysis of convention implementation as it treats all conventions as of equal importance (DeSombre observes also this p 40). This could result in a non-realistic reflection of how states implement the safety regime and to overcome this, a division is made between conventions with general applications to maritime safety and those addressing more special issues. The ten basic conventions are:

- SOLAS 1974 and the SOLAS Protocols 1978 and 1988
- Standards of Training, Certification and Watchkeeping – STCW 1978
- Load Lines 1966 and Load Lines Protocol 1988
- International Regulations for Preventing Collisions at Sea (COLREG) 1972
- International Maritime Satellite Organisation (INMARSAT) – Convention and Operational Agreement 1976
- Maritime Search and Rescue (SAR) 1979

²⁸ http://www.imo.org/Conventions/index.asp?topic_id=148 (Enforcement) (May 2009)

²⁹ http://www.imo.org/includes/blastDataOnly.asp/data_id%3D24741/status-x.xls (May 2009)

³⁰ DeSombre (p 257-258) includes one ILO convention as well as there is a difference as regards which IMO conventions should be labelled as safety conventions

The remaining nine conventions address fishing vessel safety, container safety, special trade passenger ships etc. In the table below the results are compiled on adoption of all respectively the ten important conventions

	All conventions		The 10 important conventions	
	Adoption rate %	Share of world fleet %	Adoption rate %	Share of world fleet %
Highest value	95		100	
Lowest value	26		50	
Upper quartile	≥74	23	100	82
Above median	63- 73	25		
Below median	48- 62	42	50 - 90	12
Lower quartile	≤ 47	4		

Table 4.1 Regime adoption

One reason for a less than 100 percent adoption is that the regimes will undergo substantial changes as regards content (and not objectives) and consequently some conventions/regulations will more or less not be applicable any longer. From the table it is clear that a 100 percent adoption of the ten important conventions is the prevailing norm and consequently none of these conventions can be considered as non-relevant or obsolete.

Examining the adoption rates of all conventions shows that ten states (about 15 percent of the states in the sample) have an adoption rate of 84 percent (or above) and this group consists mainly of the traditional maritime nations as UK, Norway, Netherlands etc. This can be interpreted as a definition by these states that in practice about 15 percent of the conventions are non-relevant or obsolete.

It may further be noted that with regard to the four conventions, which are fundamental for the maritime safety, all states have implemented SOLAS 1974 and Load Lines 1966, also COLREG and STCW have a high implementation rate of 97 respectively 98 percent.

The general conclusion is that the safety regime is fairly effective at least in the formal sense. This judgment is based on that more than 80 percent of the world fleet is registered in states which have implemented 100 percent of the ten basic safety conventions. Second more than 90 percent of the world fleet is registered in states which have implemented at least 50 percent of all the safety conventions. Finally it can be noted that the four fundamental conventions

have an almost 100 percent implementation. The actual compliance will be further analysed under regime operation (Chapter 6).

4.4 Regime robustness

Regimes are exposed to changes in power constellations but also as in the case of maritime regulations of other external pressures as changes in technology, environment considerations etc. The robustness can be judged by the endurance of the regime over time and by its resilience against every power shift among its member (Hasenclever et al. p 2). This all adds up to how well the regime can adapt to changing conditions without losing its long term objectives.

The maritime regimes have been exposed to external pressures both due to technology changes etc and due to rather large shifts in registration of ships. Formerly great maritime nations (as the UK and USA) have been superseded by “new” maritime nations (Panama, Liberia). An operational assessment whether these changes have had a major impact on the regimes can be made by comparing the main objectives and contents of the relevant conventions over times and seeing whether there are any major changes in the adherence to the regimes.

The present maritime safety regime has its origins in the Titanic disaster (1912) and it still contains elements from this. The creation of IMO resulted in the establishment of a machinery for the intergovernmental negotiations, which has contributed to make the maritime regimes robust. A comparison of SOLAS contents in 1974 (when the present SOLAS convention was agreed upon) and the actual SOLAS edition (2004) show, that the safety regime contains essentially the same elements as when it was formally agreed upon but complemented as required due to new demands. The ability to adapt the regime to changing conditions and demands has been an important factor. However, there are also complaints ranging from that reactions are too slow and too inefficient to too many new (unnecessary) regulations (Stefenson p 33). From the IMO statistics on ratifications³¹ it is clear that the adherence to the safety regime is lasting and there is a progressive increase.

Challenges of the international maritime safety regime have been made, as one state's or group of states' discontent of the reactions on severe accidents, where they want to impose

³¹ From IMO website (Feb 23, 2009) http://www.imo.org/includes/blastDataOnly.asp/data_id%3D24741/status-x.xls

stricter regulations in their waters. However, it has been generally possible to overcome these tensions. One reason is the anticipated problems, if the regime ceases to be globally applied. A recent case was the stricter stability regulations for ro-ro passenger ferries, which were demanded by the north-west European states after the Estonia disaster. This resulted in a convention with a limited application but within the international regime (Boisson p 222) It can be concluded that the maritime safety regime is robust.

4.5 Commercial interests

Commercial interests have most probably influenced the regime formation, but it will be difficult to discern these interests from the other interests the states have in the formation process. Commercial interests are displayed by the activities at the MSC meetings of interest groups as ship owners' etc. However, the actual casual influence can only be stated qualitatively and the further impact of commercial interests will be deferred to regime contents and operation (Chapters 5 and 6).

4.6 Concluding remarks

The formation of the maritime safety regime is an on-going process to adapt the regime to new demands and requirements due to technological developments, new threats, response to accidents etc. The analysis shows that in a formal sense the regime is quite effective and robust. The traditional maritime nations exercise a strong influence on the regime formation, although they formally (juridically) control a rather small fraction of the world fleet. However, the beneficiary owners are mostly in these states, which could support the hypothesis that commercial interests influence the safety regime.

5 REGIME CONTENT

5.1 Hypotheses

The substantive contents of the maritime regimes are the rules/regulations/provisions³² as given in the conventions. The regimes have a commercial impact as the regulations are generally considered to have a cost increasing effect (cf. 2.3.2.4). The regulations are formulated in the regime formation process in which both the states and non-state actors participate (cf. 2.2.3), although formally only states have decisive power. It is thus of interest to study how commercial interests influence the contents of the regimes. This influence can be divided in a more openly manifest way by commercial interests acting directly and/or indirectly via governments and in a less obvious way, which can be described as logic of appropriateness.

Shipping is generally a private venture and as such basically a commercial enterprise acting internationally, where the overarching aim is maximum profit and minimal costs (Tan p 35, Payne p 69-72) (cf. also 2.3.2.4). The commercial interests, as ship owners etc., act both on the national governments by lobbying, submitting proposals etc. and directly at the international deliberations. These commercial interest groups can be seen as a variety of epistemic communities, which will be further explored below. A second concern for the commercial interests is that regulations should be stable and not change too quickly and/or radically. It is in this context the concept of logic of appropriateness can be seen as an explanation and causal factor in the choices of regulative methods.

The following hypotheses can be derived from the main hypothesis of commercial interests' influence.

- Commercial interests are advocated by epistemic communities
- Logic of appropriateness motivates the choices of regulations

It can be noted that both the concepts of epistemic communities and logic of appropriateness are consistent with regime theories (Hasenclever et al. p 149 and p 155).

³² The concepts rules, regulations and provisions are here treated as similar concepts and in the text I will generally use regulations as a common denomination for these concepts.

In the empirical analysis the following operational methods will be used.

Hypothesis	Verification by	Sources
Actions by epistemic communities influence regime contents	Established definitions of epistemic communities	Descriptions of the actors
	Activities by the epistemic groups	Activities in MSC Representation in delegations at MSC meetings
Logic of appropriateness influence regime contents	Development of SOLAS contents and main issues at the MSC meetings	SOLAS and MSC meeting records

Table 5.1 Operational methods

5.2 Actions by epistemic communities

5.2.1 Definition of epistemic communities

The shipping industry is global and includes a number of actors, where the main ones are the ship owners (including operators), the providers of technical services –including the shipbuilders-, the seafarers, ports and port operators as well as some non-governmental organizations. These actors are represented at the IMO MSC meetings as observers and some of them are quite active. In a sense these groups represent special knowledge and insight in the shipping business and have interests in influencing the development of the maritime regulations, albeit with different aims. The definition of epistemic communities by Haas “*network[s] of professionals with recognized expertise and competence in a particular domain and an authoritative claim to policy-relevant knowledge within that domain or issue-area*” (Hasenclever et al. p 149) gives a description, which fits quite well with several of these groups of non-state actors. This can be further emphasized as most of these groups operate transnationally to influence both local governments and in intergovernmental contexts with their expert knowledge (cf. *ibid* p 149)³³.

The most prominent and active actor groups influencing the regimes in maritime safety and pollution prevention are:

³³ The epistemic communities are originally seen as based on scientific knowledge, but here I have extended into technical and operational knowledge – but still based on expertise and competence.

- Ship owners
- Seafarers
- Classification societies
- “Environmental” groups

These groups have different expertise as well as aims when influencing the regimes. Broadly speaking these groups can be associated with expertise within the domains as shown in the table below:

Actor	Domain of expertise	Overarching aim
Ship owners	Commercial knowledge	Profit
Seafarers	Operational knowledge	Working conditions
Classification societies	Technical knowledge	Technical issues (and profit)
Environmental groups	Pollution damage	Preservation of the environment

Table 5.2 NGO’s roles

IMO has formulated requirements on NGOs which are granted consultative status at the IMO meetings and citing from these rules³⁴ *“the purposes of consultative status are to enable IMO to obtain information or expert advice from non-governmental organizations with special knowledge in a particular section of IMO’s activities and to enable such non-governmental organizations representing large groups whose activities have an important and direct bearing on IMO’s work to express their points of view to IMO.”* and *“Consultative status shall only be granted to non-governmental organizations which are truly international and are active and effective in their field.”* (my underlinings)

These requirements support that several of the NGOs participating in IMO meetings can be labelled epistemic communities using Haas’s definition (compare with my underlining above).

Judging from their activities at the MSC meetings, there are two NGOs that are prominent, IACS the international association of classification societies and ship owners represented by ICS, INTERTANKO, INTERCARGO and CLIA (former ICCL)³⁵.

³⁴ IMO website (Feb 24, 2009)

http://www.imo.org/includes/blastDataOnly.asp/data_id%3D19684/guidelinesonconsultativestatus.pdf

³⁵ ICS is the International Chamber of Shipping, INTERTANKO the independent tank ship owners, INTERCARGO the dry cargo ship owners, CLIA the cruise liner association

5.2.2 Activities of the epistemic communities.

The main community (group) with manifest commercial interests is the ship owners although, as mentioned earlier, the classification societies also have some interest. Here I will concentrate on the ship owners.

To investigate the ship owners' influence on the contents of the regulations one way would be to find evidence for a number of cases where ship owners have been successful in having their commercial interests satisfied. Such evidence would be difficult to discern from other influences as it would be interwoven with other issues in a negotiating process which starts at a national level and where the final outcome is reached at the intergovernmental meetings. Here I will use a qualitative assessment of ship owners' influence, which includes how active the ship owner community is at the IMO meetings, but also to what extent ship owners are directly represented in national delegations at these meetings.

The activity level of the ship owners at the MSC meetings is on average 18, which can be compared with the most active state (the UK) which has an average level of 15 (Cf. also Table 4.2).

The composition of the delegations are available for the MSC meetings 78, 81 and 84. For the eight top flag states a mean value of nine delegates represented ship owners and for the eight top ship owner nations the mean value was fifteen delegates. Greece is part of both the top flag and top owner groups and if Greece is excluded a mean value of two delegates from the top flag and nine delegates from the top owner group are obtained. The conclusion is that the major ship owning states actively support their ship owners, notwithstanding that the ship owners have chosen another state of registration for their ships.

Adding the results that the ship owning nations are more active at the MSC meetings, the composition of the delegations and the direct activities of the ship owners at the meetings gives an impression that commercial concerns have an influence on the contents of the maritime safety regime. As costs are a main concern for ship owners it can be assumed that their influence on the regime contents includes this aspect. Commercial interests are thus influencing the regime content but whether they reduce the regime effectiveness cannot be asserted.

5.3 Logic of appropriateness

5.3.1 Development of regulations

International commercial shipping is an activity with a long history and deeply rooted traditions, beliefs and norms, which could result in behaviours characterized by logic of appropriateness. The origin of the maritime regimes can be traced back to the reactions on the Titanic accident³⁶, which resulted in an international conference (with five participating nations) in 1914 where provisions were agreed³⁷ upon passenger ship safety as regards safety of navigation, structural strength, radiotelegraphy, life saving appliances and fire protection. Notable is that the main focus was on mitigating the consequences of an accident and only to a limited extent on avoiding the accident. The reasons for this can be referred to what Boisson (p 37) labels as a fatalistic approach to why accidents happen³⁸ but also the prevailing dogma of absolute freedom of competition (Boisson, p 53). This freedom made it possible to build and operate a ship in whatever way chosen. The regulations still concern to a large extent the construction and equipment of the ships. Regulations on how to operate the ship are in comparison fewer (Stefenson p 34).

The maritime safety regulations have often been established in response to events (accidents), which have had consequences that could not be accepted by the civil society (ibid p 33).

There are two ways to respond when making regulations, one is directed to prevent accidents to happen and the second is to mitigate the consequences. To exemplify, prevention could be to reduce risks for a collision by introducing improved navigational aids, mitigation could be better life saving appliances as improved life vests/survival dresses. Preventing and mitigating measures are generally complementary. It should also be noted that it is now recognized that the human factor is the root cause at most accidents³⁹.

The traditions, norms and beliefs of the maritime community which still influence the regimes are:

- The sea is a hostile environment and it is more or less unavoidable that accidents happen, however, there is always a fair chance that people can survive if adequate life-saving appliances are available.
- Human factors are recognized but difficult to do anything about.

³⁶ There were some earlier agreements on ship's lights and signals, meeting practices etc

³⁷ The agreement came never into force internationally

³⁸ Accident were regarded as natural or some act of God etc

³⁹ Generally about 80 % of all accidents are attributed to the human factor (cf, Barnett et al.)

These beliefs result in that the appropriate actions are to focus on mitigating the consequences of accidents and on technical issues. The connection with commercial interests is that a concern from that point of view is to have regulations, which do not imply radical changes as such are considered costly.

In the empirical investigation the following questions will be asked:

- Are mitigating provisions prioritized in the safety regime?
- With regard to the importance of the human factor, how and to what extent is it addressed in the safety regime?

5.3.2 Accident prevention contra mitigating consequences

The empirical investigation on whether mitigating provisions are prioritized will be based on the development of SOLAS regulations in the period 1974 – 2004. This choice is based upon SOLAS as the basic convention as regards maritime safety (IMO website). This is also reflected in the MSC meetings, which mainly (sixty to seventy percent) concern SOLAS issues. Of interest is to note the spectacular rise of MSC's concern of security matters⁴⁰ (cf 5.3.3).

The contents of SOLAS can be broadly divided into regulations with the objective to prevent accidents and mitigate the consequences of accidents. In addition there are regulations which can be labelled as administrative concerning inspections, certification etc. The following rules have been applied in the analysis:

Mitigating consequences – regulations which include provisions, actions etc which aim at mitigating the consequences of an accident. A typical example is the regulation of a collision bulkhead which aims at keeping the ship afloat after a head front collision.

Preventing accidents – regulations which include provisions, actions etc which aim at preventing an accident. A typical example is requirements on ship borne navigational equipment. This requirement is vital for avoiding collisions etc.

The quantitative analysis has been made of the number of text pages applicable to the two categories (mitigating or preventing)⁴¹. The regulations which refer to other matters are

⁴⁰ Security became a main issue of SOLAS in 2001.

⁴¹ An alternative could have been to count the number of regulations for the two categories, but as depending on the issues some regulations are short and others contain more text it is considered that counting text pages gives at least some measure of the importance of the regulation.

relatively few and as the main concern here is the distribution between mitigating and preventing regulations the category other is not included.

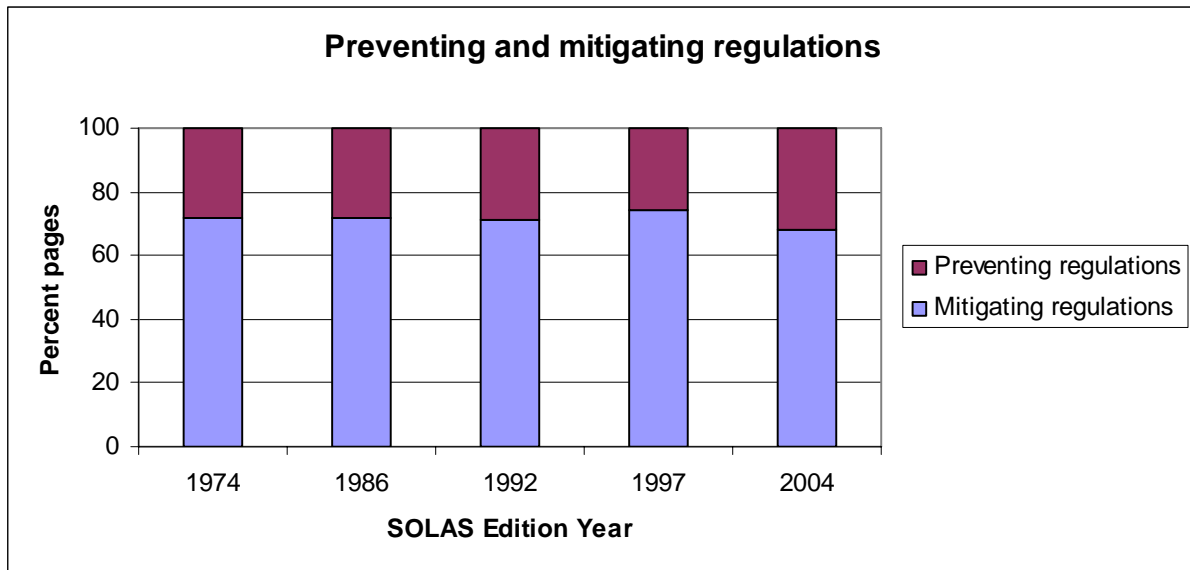


Fig 5.1 Distribution of text pages containing preventing respectively mitigating regulations
The diagram shows that the mitigating regulations are dominating in SOLAS, but with a weak tendency that the preventing regulations are increasing.

5.3.3 The human factor

It is generally agreed that the human factor is a main contributing cause in at least eighty percent of all accidents (Barnett et al. p 2). The question is now whether this is reflected in MSC's work on regulation development? Here a survey of the records from a number of MSC's meetings has been made as regards number of pages devoted to the topics treated at the meeting. This is admittedly a crude way of discerning the relative importance of each topic; one main objection is that although the human factor is an agenda topic, it can also be embedded in other (more technical) topics. It is, however, a fair first approximation of how important the human factor is considered in actual regulation development work.

The same MSC records, which were analysed in Chapter 5.3, were analysed as regards contents. In the analysis the text has been divided in the following categories:

- Formal and administrative issues
- Regulation development issues with subgroups
 - SOLAS issues (all)
 - Security (in SOLAS)
 - Human factor (in SOLAS)

- Issues in other conventions (STCW, SUA etc)

The main results from the analysis are shown in the figure below.

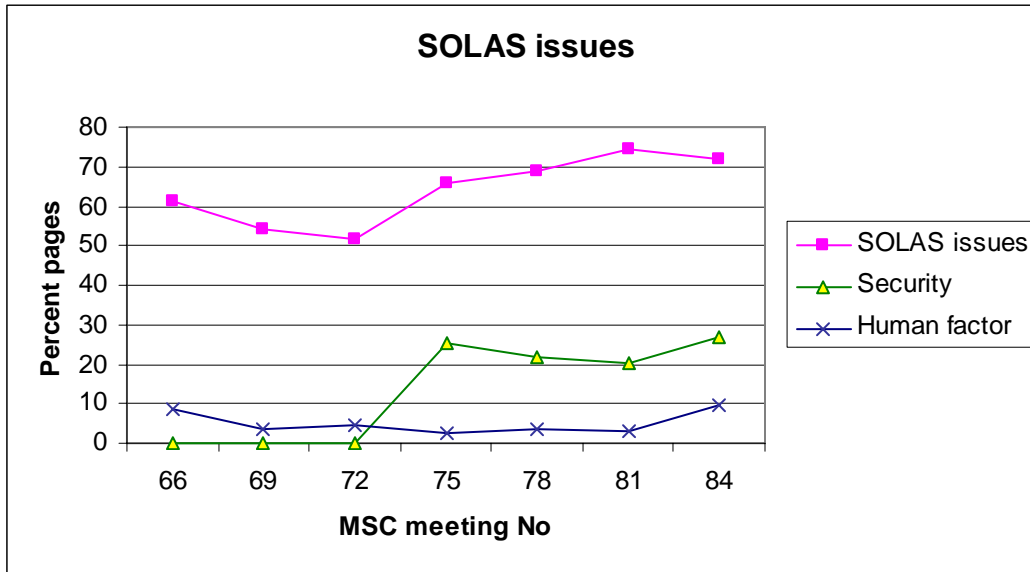


Fig 5.2 Agenda topics at MSC meetings (percent text pages)

Totally about 80 percent of the records refer to regulation development issues, and of these SOLAS has a dominant position as shown in the diagram above. It is obvious that the human factor is considered at a rather low level, notwithstanding its important role in accidents. This supports the supposition that hard technical matters are prioritized, which can be interpreted as adhering to logic of appropriateness – accidents and their consequences should be countered by technical regulations.

5.3.4 Discussion and conclusions

The dominance of mitigating rules is supported by the reactions on the Estonia disaster, where 852 lives were lost. The regulation activities as a direct response to Estonia were mainly focussed on mitigating actions as keeping the ship stable and upright even if water-filled and not on preventing water ingress (Stefenson p 34). Although important contributing factors in the accident were due to human errors – in design, maintenance and operation – most regulation changes concerned technical matters.

A second observation from the analysis of the topics at the MSC meetings is the prominent role maritime security has obtained in recent years, as a reaction to terrorist attacks. An interesting question is whether the present balance between concern of security and human factor is justified, if consequences are considered. Accepting that 80 percent (or more) of all accidents are human factor related it can be argued that more focus on this element would be

more efficient to save lives than focusing on security. In other words applying logic of consequentiality could be more effective for improving maritime safety than logic of appropriateness.

It can be concluded that commercial interests influence the regime content mainly through ship owners' direct and indirect actions in MSC. One reason is that ship owners with their knowledge and advice have a status as an epistemic community. From a commercial point of view radical (and costly) changes of the regulations should be avoided. This is achieved by acting according to logic of appropriateness, which is manifested by prioritizing consequence mitigating regulations to accident preventing.

6 THE REGIME IN OPERATION

6.1 Main questions

In this part I will investigate how the maritime safety regimes operate in reality and focus on the second hypothesis that commercial interests have an influence on the effectiveness and actual compliance to them. The causal chain of how commercial interests influence the effectiveness of the safety regime can briefly be described as:

1. Commercial interests are manifested by ship owners' actions to reduce costs.
2. The ship owners are free to choose the flag of registration.
3. Flags of convenience (FOC) (open registries) generally offer lower costs for registration.
4. Ship owners choose FOC registration to reduce their costs.
5. FOC registered ships can have lower safety levels.

The analysis of this causal chain relates to the basic concepts effectiveness and robustness in regime theory. The analysis will now concern the following main questions:

- The relation between regime adherence and country of registration
- Ship owners' choice of country of registration
- The operational effectiveness of the maritime safety regime

(The first two items in the causal chain are considered as postulates)

It is evident that in the causal chain ship owners play an important part as they decide which flag to use and consequently to which safety standard they will apply. This does not mean that the states are without power to influence ship owners' choices. It is thus of interest to first look in some depth at the different actors' perspectives. Then the operational considerations for the analysis will be discussed, before going into the empirical analysis of the three main questions.

6.2 Actors' perspectives

6.2.1 Interdependence states – ship owners

The relationship between states and ship owners is interdependent and has two facets; flag state – ship owner respectively port state – ship owner. The relation flag state – ship owner is basically juridical with some commercial consequences for both parties. The ship owner acts here in a regulation setting, which is decided by the state both as regards content and application. The freedom the ship owner has, with the emergence of the open registries, is that he may choose the flag state.

The relation port state – ship owner is to a large extent market influenced as the ship owners act on the international scene, seeking the best business opportunities. Many states are dependent on ship transportation for their exports and imports, but they are also concerned by their sovereignty as regards control of their territorial water (safety, pollution prevention, security etc). This means that a state may want tighter regulations but this is counteracted by the risk that ship owners will be reluctant to trade with this country if not compensated, which would raise costs for the state's exports and imports. The now internationally accepted practice of port state control (PSC) has strengthened the port states' position vis-à-vis the ship owners and results in that substandard ships can be more effectively banned from trading. Finally the relation between coastal states and the ships transiting through their territorial waters is briefly discussed.

6.2.2 The state perspective

It can be presumed that the individual states act ambiguously as they want to pursue their own interests and at the same time adhere to the internationally agreed conventions, which may occasionally be in conflict with the interests of the states. There is also an ambiguity within the state whether it will protect its interests as a flag, port or coastal state, which might result in different strategies.

6.2.2.1 *Flag state*

Here the analysis will focus on the issue that a state has adopted a convention but does not adhere to it – for example not effectively controlling that the ships in its registry fully comply

with the regime. The causes (excuses) for not adhering to the agreement can be listed according to (Chayes and Chayes p 10) as:

1. The rules are considered ambiguous and vague.
2. Limitations in abilities to comply with the rules.
3. Economic reasons.

Most regulations in the maritime regime are explicit and often quite detailed and technical as regards their content, which might indicate that there is a limited room for different interpretation (cf. SOLAS ed 2004). In effect one criticism of the maritime regimes is that they are too specific on how to do instead of indicating, which objectives the regulations aim at and accepting different solutions (as technical measures)⁴². It is probable that the adopted regulations are interpreted differently by the states when they implement them in their domestic laws, and a concern is that some states have a less demanding (leaner) interpretation. An indication of such leaner interpretation is to some extent if controls of regime adherence (i.e. inspecting ships) would reveal that non-compliance is related to country of registration. The second reason, limited abilities, refers primarily to those states, which have not the know-how and/or capacity of technical, bureaucratic and financial nature for the effective control of their ships. Primarily this reason refers to developing countries and/or states with no maritime traditions. The international nature of shipping also puts a strain on a state's capacity to control its ships as they may trade far away and more or less effectively be outside the state's jurisdiction and its ability to impose sanctions on offending ship owners.

The third reason – economics in the states perspective – may in some cases be a leading motive for not adopting and adhering to rules. A ship register is a source of income both from registration fees and taxes, but it is also associated with costs not only for running the register but also for measures needed to control and enforce the applicable maritime regime adopted by the state. From the state view, if maximizing income is the primary goal, the state will try to maximize the number of ships registered. One possible strategy is to have minimum regulations and minimum taxes, both of which are attractive for ship owners from a cost perspective. In this context the concept Flag of Convenience (FOC) is of interest. The strategy minimum regulations is to some effect countered by other states, as they will not in practice allow ships in their ports, if the ships do not comply with a minimum set of regulations of the international maritime regime defined by the port state.

⁴² There are at present trends to change the regulations to be more objective oriented and less detailed (cf. Stefenson p 33)

6.2.2.2 Port state

In its role as port state the state has two main concerns; the protection of its territorial water and the dependency of ship transportation. An example of a conflict situation is; state A is dependent on oil imports from state B, which chooses to export the oil by what state A regards as substandard ships registered in state B. The internationally accepted practice of Port State Control – PSC – gives the state A a legal basis for controlling the ships, but in the end this could result in cost increases for the transport or even worse that state B ceases to export oil to state A.

Generally such severe consequences do not arise but the example shows clearly the importance of the flag state's standards as regards regime adoption and adherence.

In practice PSC is exercised within a framework of regional agreements between states. An example is the so called Paris MoU, which consists of 27 participating maritime administrations and covers the waters of the European coastal States and the North Atlantic basin from North America to Europe⁴³.

6.2.2.3 The coastal state

In the role as a coastal state it has rather limited possibilities to control the ship traffic when for example an international sea lane passes through its territorial waters. A typical case is the international sea lane from the Baltic through the Belts to the North Sea. Traffic separation, which is mandatory, has been agreed upon at certain passages. But considering that most of the passage is quite narrow, shallow and difficult to navigate, an obvious provision would be compulsory pilotage, but this is not possible in accordance with the freedom of the sea – at present the agreement is that ships above a certain draught are recommended to use pilot assistance.

6.2.3 The ship owner perspective

A main concern for ship owners is cost and how to reduce it and as said before regulations are generally seen as cost increasing. Consequently from a commercial point of view the obvious question is: is it possible to avoid regulations or at least to some extent? If a practice of avoiding the regulations in the maritime operations is not negligible, this could mean that the effectiveness of the regime is reduced.

⁴³ [http:// www.parismou.org](http://www.parismou.org) (May 2009)

The legal way to avoid regulations is to register the ship in a state which has not, or more common only partly, adopted the international maritime regimes. Secondly a register could be chosen, which is known (or believed) to be less stringent on the compliance with the regulations, whether it is due to lack of resources and/or other reasons.

6.3 Operational considerations

The empirical analysis of the reasons (factors) for not adhering to the adopted regime is operationally somewhat complicated as the factors are interwoven and related. The empirical assessment is further complicated as it in many cases concerns deliberate decisions by the states as well as ship owners, which generally are not openly accounted for.

As the concern here is regime effectiveness in the real world empirical data are needed, which could be used to discern between possible reasons (causes) for not adhering to adopted regulations in the regime. Such data are to some extent available from the Port State Controls and a useful source is the annual Paris MoU statistics, which include the statistics on observed deficiencies (i.e. not complying with the mandatory provisions in the maritime regimes) as well as detentions as a consequence of non-compliance⁴⁴. Although deficiencies and detentions can be related to any of the general issue areas safety, pollution prevention and labour conditions, the majority (60 – 70 percent) falls within the maritime safety regime (cf. Paris MoU annual report 2007). The results in the statistics can thus be assumed to give a fair reflection of how the ships of the individual flag states adhere to the provisions in the safety regime. As said earlier the prime responsibility to adhere to regulations rests with the ship owner (operator), but it is the flag states responsibility to control the ships under their jurisdiction. This implies that the extent of compliance in effect indicates how efficient the flag states are in their implementation and enforcement of the regime.

With regard to the second main hypothesis on commercial influence it is of particular interest to discern between deliberate actions by a state (reason 3 economics) and non-deliberate (reasons 1 and 2). It is also of interest to see if the statistics can give an insight in ship owners' choices of flag.

Operationally the following questions are asked:

⁴⁴ A ship is detained if the deficiency is considered so grave that the ship is not seaworthy and/or a serious threat to the environment and/or labour conditions are not acceptable.

1. Are detentions/deficiencies related to rate of regime adoption –gives a basic picture if regime adherence is coupled to extent of regime adoption?
2. Is there a relation between economic development and detentions/deficiencies– gives insight if regime adherence is a matter of economic resources?
3. How attractive are the open registries (flags of convenience)?
4. Do the “attractive” open registries exhibit lower standards as regards rule adoption and regime adherence?
5. Is the effectiveness of the regime influenced?

The questions are related to the main hypothesis on commercial influence on the regime, and the effectiveness of the regime, these relations will be further elaborated in connection with the empirical analyses.

The empirical analysis will mainly be based on the following material:

Reported detentions and deficiencies from the Paris MoU Annual reports 2005, 2006 and 2007.

IMO statistics of ratifications of conventions

GNP per capita and GNP (by country)

World fleet statistics

6.4 Regime adherence

This part concerns regime adherence and refers to questions 1 and 2 formulated above.

6.4.1 Detentions

The detentions in the Paris MoU region have been compiled for the three year period 2005-2007 for the flag states which together register more than ninety percent of the world fleet (cf. chapter 4.4)⁴⁵. It was noted that a number of ships registered in states not represented in the chosen sample generally exhibited higher values for detention respectively deficiency rates. Their share of the world fleet is less than five percent but nevertheless their impact on regime adherence is worth considering especially with regard to the phenomena “flag of convenience” and secondly as most of these countries are in the segment low GNP per capita.

⁴⁵ Registries, which have had less than 100 inspections in the period 2005-2007 have been omitted as they are considered statistically uncertain.

The following hypothesis is now formulated: Detention rates correlate with degree of regime adoption. The figure 6.1 shows the detention rate as a function of regime adoption (based on all safety related conventions).

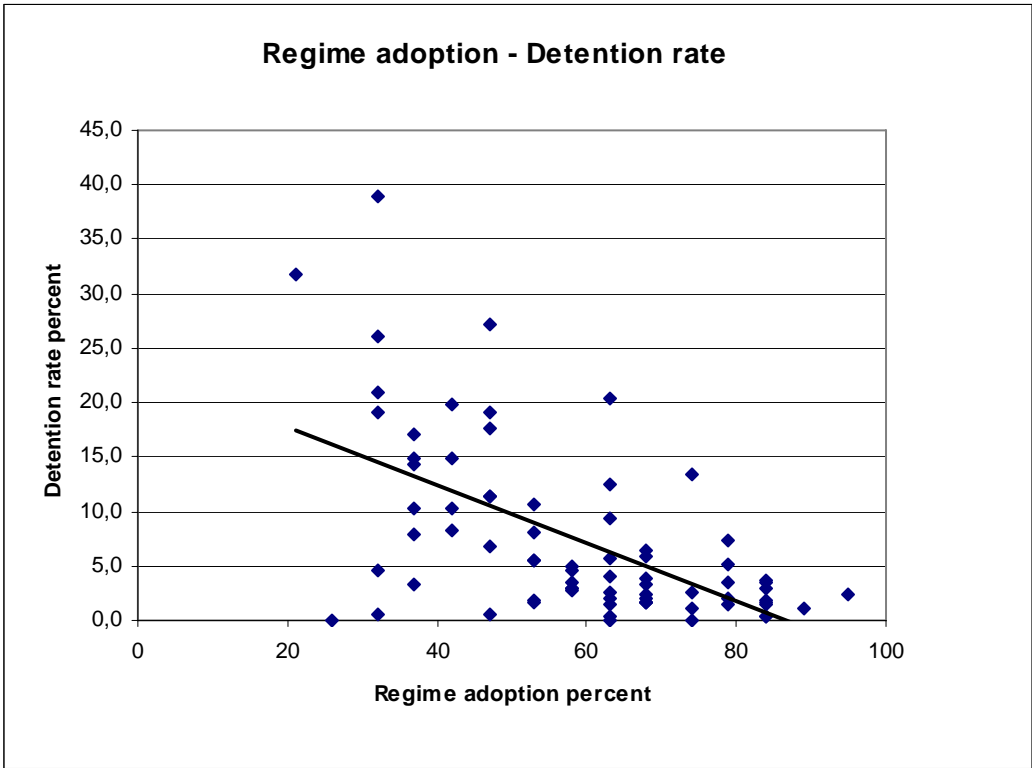


Fig 6.1 Detention rates (Paris MoU 2005-2007)

Although the scatter is appreciable the general picture is that there is a negative correlation between regime adoption and detention rate (cf. the linear trendline), the interesting question is why and this refers back to the three basic reasons on why there is a gap between regime adoption and adherence (cf 6.2.2.1).

The hypothesis is reasonably well verified.

6.4.2 Lack of resources

One main reason for a state for not adhering to the adopted regime can be lack of resources for effective control, which includes lack of know-how in the issue area, lack of qualified personnel and physical constraints as being able to control ships far away from the state. The lack of these resources can be referred to lack of economic resources, and a measure for this is GNP (Gross National Product)⁴⁶. GNP can be here used either as the total GNP or GNP per

⁴⁶ GNP data have been obtained from .

capita, here I will use GNP per capita as it gives each country's available resources related to other needs (welfare etc).

The hypothesis is now: detention rates increase with decreasing GNP per capita.

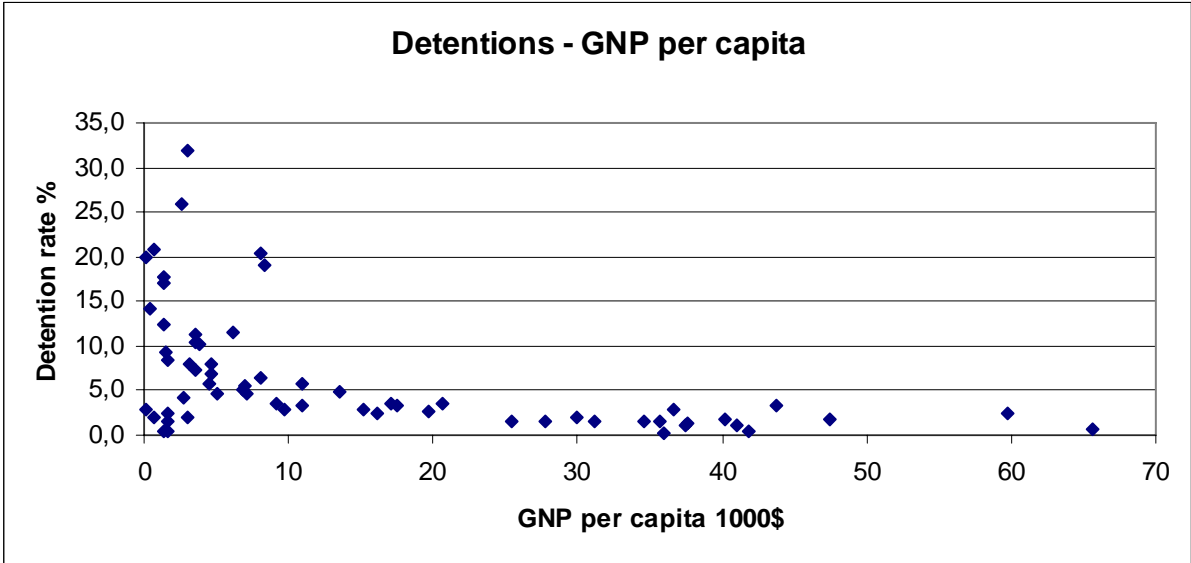


Fig 6.2 Detention rates as a function of GNP per capita.

The figure 6.2 shows that there is a pattern of increasing detention rates as GNP per capita is decreasing, but there is substantial scatter in the data especially in the low range of GNP per capita. In order to get a better picture the countries have been divided in three groups related to detention rates, and the results are compiled in the table below:

Detention rate	Detention rate Mean value	Share of world fleet	GNP per capita Highest/lowest 1000 US\$	Number of countries
≤ 5%	2,8%	62%	65,6/0,1	37
5,1 – 10%	7,4%	24%	11/1,1	11
> 10%	15,4%	2%	8,3/0,2	14

Table 6.1 Detention rate

The table shows again the result that higher detention rates are generally related to lesser national resources, but it is not necessary that a low GNP/capita results in higher detention rates. One reason is that although GNP/capita is low, a country can have a GNP in the upper end of all countries, examples are China and India which have a GNP/capita less than 2 000 \$, but still have detention rates 2,1 respectively 1,9 percent. Both countries have, however,

<http://www.studentsoftheworld.info/infopays/rank/PNBH1.html> and <http://www.studentsoftheworld.info/infopays/rank/PNB1.html> (May 2009)

economies, which can afford a global network and they are probably also concerned with their reputations as responsible states, which adhere to agreed conventions (anyway as regards maritime safety) (cf Chayes & Chayes p 8). It may also be noted that there are a number of states with low GNP per capita (as well as GNP), which show low detention rates and this will be discussed below.

The conclusion is that a state’s economic resources can be an important factor for the effective control of regime adherence. The hypothesis is not contradicted, but there could be other factors which also are important.

6.5 Effects of open registries

6.5.1 Attraction of open registries

Originally the general principle was that a ship is registered in the country of the beneficiary owner. After the introduction of the open registries, the choice of ship registry is now in reality up to the ship owners. This has led to that several states offer the ship owners, wherever these are from, registrations with lower fees, often lower taxes etc (DeSombre p 39). Here a quantitative assessment will be made of how attractive the open registries are. In Figures 6.3 and 6.4 the 10 largest ship registries (the top 10 flags) and the 10 largest ship owner countries are shown. It is obvious that the practice of using an open registry is quite popular.

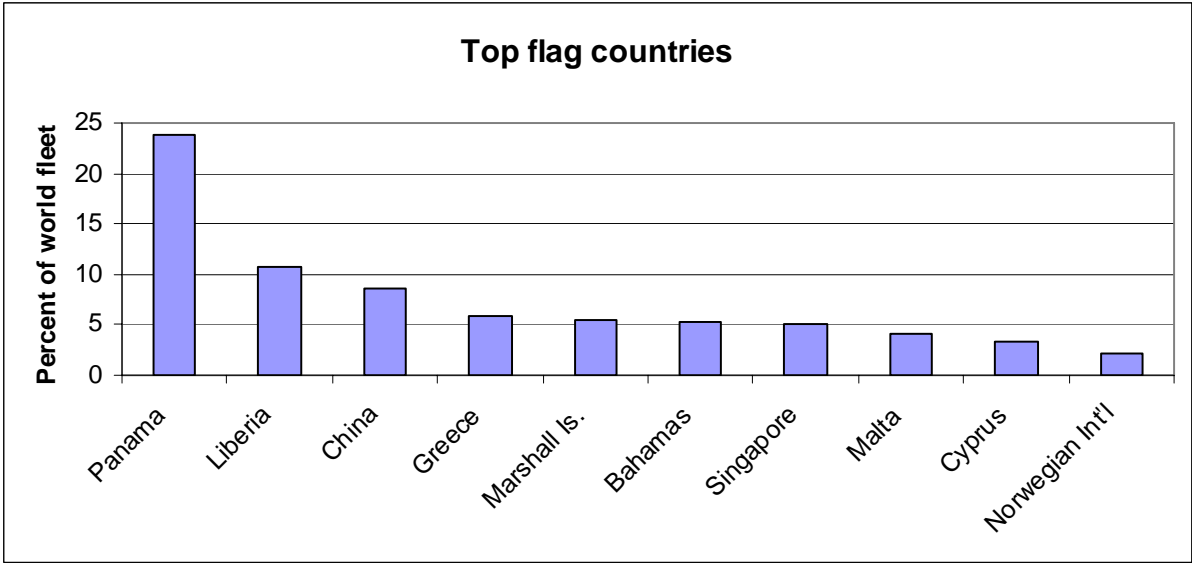


Fig 6.3 Top flag countries (≈ 75 percent of the world fleet)

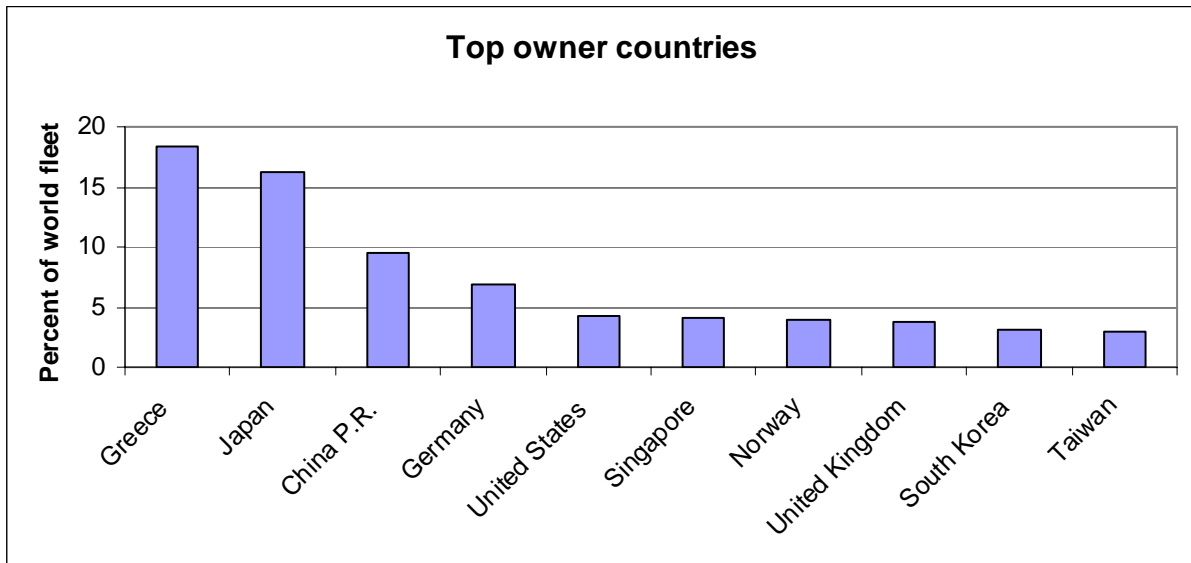


Fig 6.4 Top owner countries (\approx 75 percent of the world fleet)

To further analyse to which extent open registries are used, the discrepancy between country of registration (flag) and country of beneficiary owner has been evaluated by direct comparison for a selected number of countries which include more than 90 percent of the world fleet. Operationally this is done by subtracting for each of the selected countries its share of ownership from its share of registered ships. This gives a measure of how much of the world fleet actually has been registered under a flag which is not the domicile of the ship owners (i.e. flagged out).

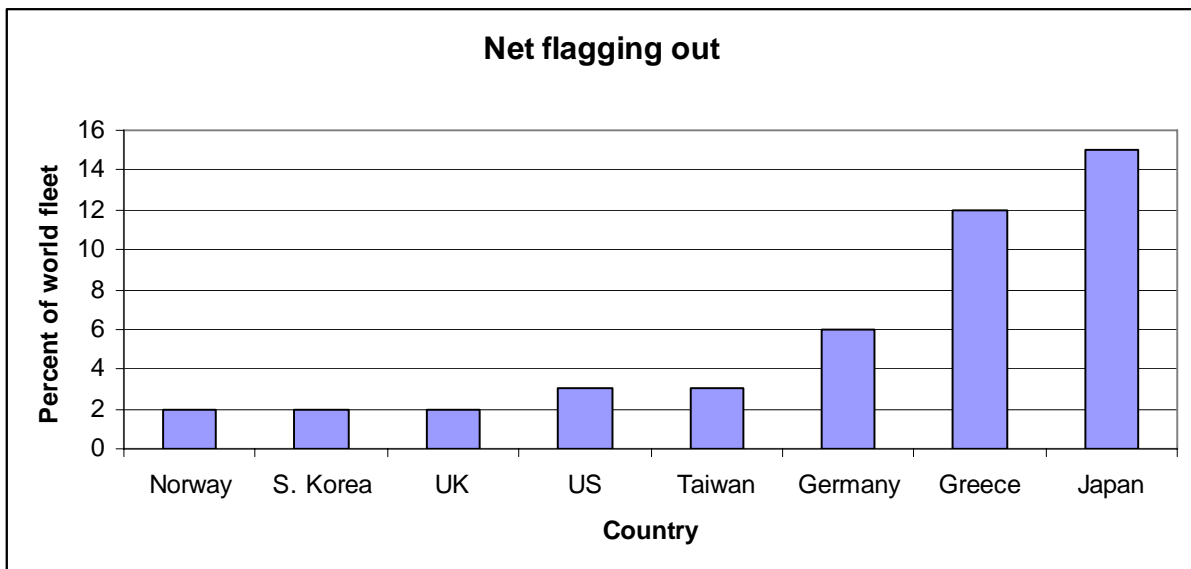


Fig 6.5 Flagging out

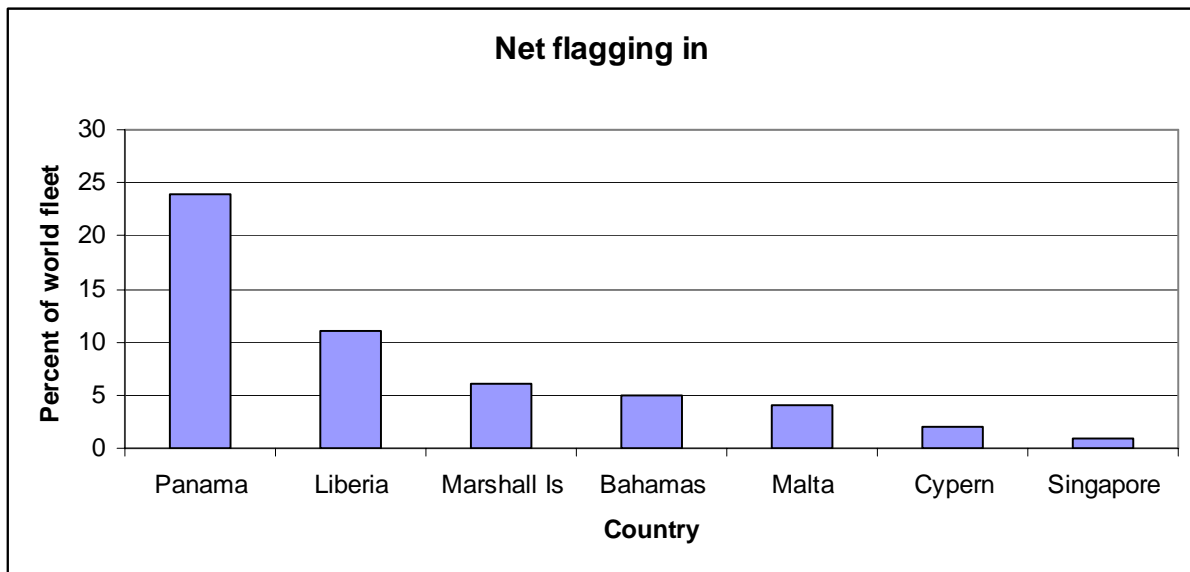


Fig 6.6 Flagging in

The results show that of the selected countries, 52 percent of the world fleet has been flagged out. As not all ship owning countries and flags are included it is here assumed as a fair approximation that 50 percent of the world fleet is flagged out.

It can be concluded that using an open registry is attractive as ship owners controlling half of the total world fleet have chosen this option. As ship owners try to maximize their profit it is evident that flagging out is seen as a commercially advantageous strategy for these ship owners. Also from the flag state perspective an open registry can be a successful strategy to get revenues by attracting registrations. Notably Panama has been very successful by attracting almost a quarter of the world fleet. The success of the open registries has certainly also inspired other countries – mainly developing countries - to start open registries as for example Honduras, Cambodia etc but also some land-locked states as Bolivia and Mongolia.

6.5.2 Standards of the open registries

A main issue is whether the open registries also imply lower adoption of and adherence to the maritime safety regime. An open registry is often referred to as a flag of convenience (cf. ITF's definition), which is implicitly presumed, more or less, not to fulfil agreed standards on safety at sea, pollution prevention and labour conditions.

For the investigation whether the open registries exhibit lower standards of adoption of and adherence to the maritime safety regime the following material will be used; the ITF list of

flags of convenience (FOC)⁴⁷, the IMO list on convention ratifications (cf. chapter 5.4) and statistics from Paris MoU of port state control (cf. chapter 6.3). In this analysis the following considerations are made;

- the ITF list includes a number of West European states which have open registries which apply the same conventions as regards the maritime safety regime as their ordinary national registries, these registers are not included as flags of convenience⁴⁸,
- only registries with ships having more than 100 inspections within Paris MoU in the period 2005-2007 are included.

The results are shown in the diagrams below, showing the relation of adoption and detention for the FOC countries and the other states (Non –FOC) respectively.

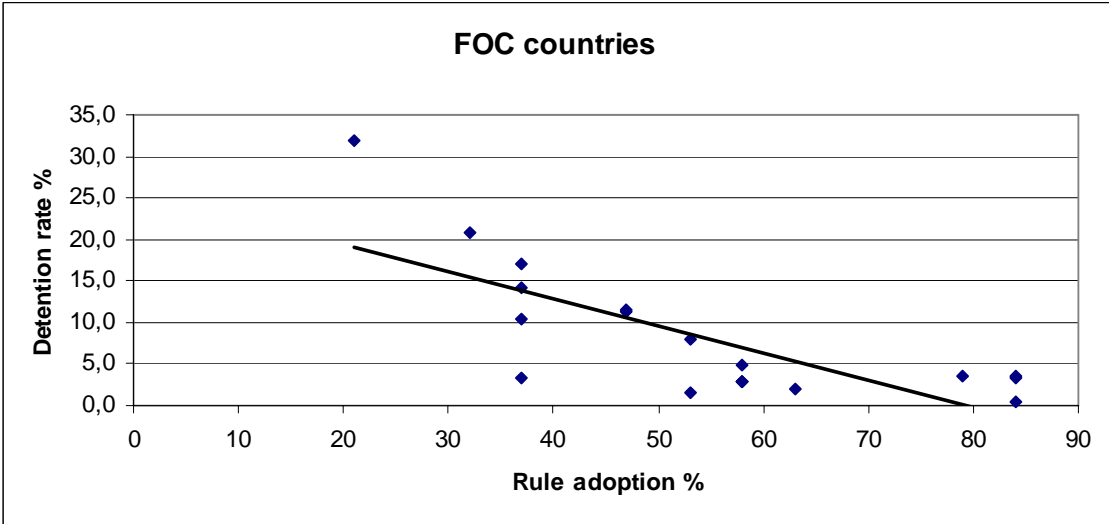


Fig 6.6 Detention rates for FOC countries

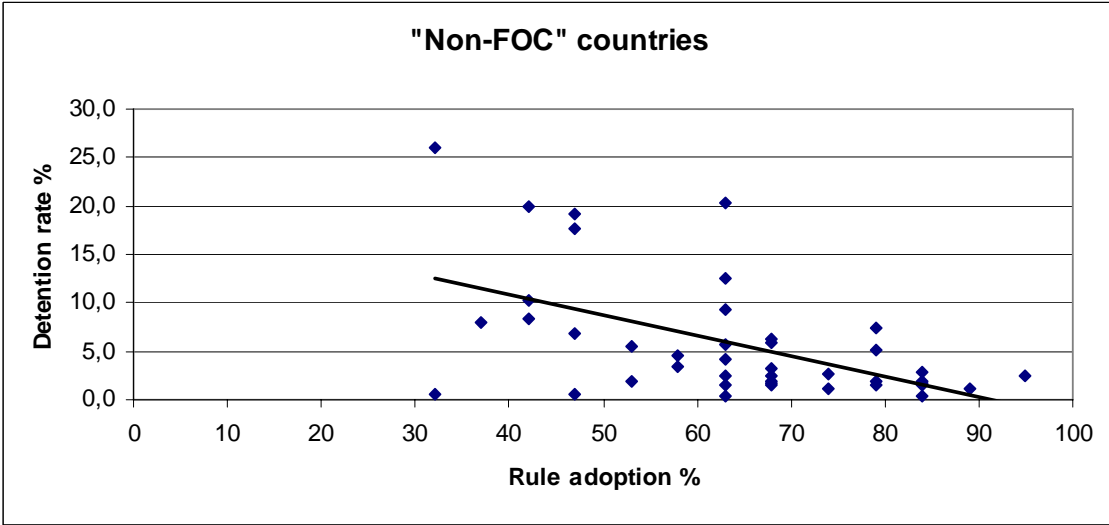


Fig 6.7 Detention rates for “Non- FOC” countries

⁴⁷ <http://www.itfglobal.org/flags-convenience/sub-page.cfm> (March 11, 2009)

⁴⁸ These registers may, however, have lower standards as regards labour conditions

Although the scatter is rather large in both diagrams some general conclusions can be drawn:

Detention rate increases as rule adoption decreases (cf. Fig 6.1)

The increase in detention rate is steeper for the FOC countries

Detention rates are lower for the FOC countries when rule adoption is above 60 percent.

The results do not show that the FOC designation (ITF definition) implies consistently lower standards on regime adherence. One reason is that the non- FOC countries include some states which effectively are FOC countries. Notable are for example Dominica, St Kitts & Nevis and Sierra Leone which seem to have opened or created their registries quite recently and are low on rule adoption (42, 47 resp. 42 percent) and high on detention (10,3, 19,1 resp 19,8 percent). A second reason is that several of the well established FOC countries as Liberia, Bahamas etc are strongly tied to interests in USA, UK etc and have seen it as advantageous to have an adoption standard close to these states. Also as DeSombre notes (p 53) adoption tends to increase with time starting from a low level when the open registry is created.

The general conclusion is again that the important factor as regards regime adherence is a high degree of regime adoption.

6.5.3 Standards of the top flag states

An open registry (flag of convenience) does not generally imply lower standards on regime adoption and adherence. The important question is here whether the transfer of ships from the beneficiary ship owners country (domicile) to an open registry results in lower standards being implemented. Operationally this will be assessed by comparing the standards on regime adoption and adherence of the owner country with the country of registration. Ideally this should be made for each ship and summing up. Here a more overall assessment is looked for and the results in 6.5.1 on flagging out respectively flagging in are used, by comparing the standards of the main “owner” states (Fig 6.5, flagging out) with the main flag states (Fig 6.6, flagging in). Further the standards of the flagging out states are averaged by calculating a weighted mean value of regime adoption respectively regime adherence, and similarly for the flagging in states. The weighting factor is the share of the world fleet. It is further assumed (cf. 6.5.1) that 50 percent of the world fleet is transferred to open registries.

	“Owner” states	Flag states
Rule adoption	74%	57 %
Detention rate	2,4%	5,3 %

Table 6.2 Effects of flagging out

The results show that the flag states have lower standards as regards adoption and adherence to the maritime safety regime. It should be noted that Panama has a large influence on the result and a recalculation treating Panama separately gives the following results:

	“Owner” states	Flag states except Panama	Panama
Rule adoption	74%	60 %	53%
Detention rate	2,4%	3,0 %	8,1%

Table 6.3 Effects of flagging out

The interesting result here is that although the flag states except Panama have less regime adoption than the “owner” states, the adherence (as measured by detention rate) is on the same level as for the owner states.

6.6 Regime effectiveness, conclusions and discussion

Summing up the results the following conclusions can be made:

1. Regime adoption and adherence are generally correlated, although there is large scatter especially for low adoption rates (Fig 6.1)
2. A state’s economic resources are generally but not consistently an important factor for regime adherence (Fig 6.2)
3. Open registries are attractive for ship owners as about half of the world fleet is registered in another state than the “owner’s” state (Figs 6.5 and 6.6)
4. There are indications that flag states with open registries have lower regime adoption rates but not consistently lower regime adherence. One important exception is Panama, which has an adoption rate of less than average and is in the lower region of regime adherence. Cf. Tables 6.2 and 6.3.

Before further evaluating the regime effectiveness some considerations has to be made of the fraction of the world fleet which have the flag of the registers with a high detention rate –

above 10 percent (cf. Table 6.1) i.e. low regime adherence. This group is not represented in the comparison of regime adoption and adherence leading to conclusion 4 above. In this group a number of states are included, which generally have a low share of the world fleet (below 1 percent). Totally it can be estimated that the group comprises less than 3 percent of the world fleet⁴⁹. If it is now assumed that this 3 percent of the world fleet are flagged out from “owner” countries with high standards (cf. Tables 6.2 and 6.3), this would imply an increase in detention rates from 2,4 percent to 15,4 percent for 3 percent of the world fleet. The operational effectiveness of the maritime safety regime is here mainly based on the lower the detention rates are the more effective is the regime. Flagging out results in an increase in detention rates and it has been shown that somewhat more than 50 percent of the world fleet is transferred to flags with higher detention rates.

In order to have an impression of how large the effects of flagging out are, it would be interesting to relate the figures above to number of ships. The operational obstacles are several for this exercise, but a rough estimation of number of ships will be made using the following approximations:

- The detention rates based on the three year period of MoU Paris statistics 2005-2007 will be used
- The ratio individual ships to number of inspections is 0,6 (R) (from MoU Paris statistics)
- The world fleet comprises 60 000 ships (N_{ship}) (Equasis statistics)⁵⁰
- 50 percent of the world fleet is flagged out resulting in an increase in detention rate of 2,9 percent(cf. Table 6.2)
- 3 percent of the world fleet is flagged out resulting in an increase in detention rate of 13 percent (cf. above)
- The expression for calculating No of ships which do not fulfil the regime requirements and are detained is:

$$\begin{aligned} & (\text{Fraction of world fleet}) * (N_{\text{ship}}) * (1/R) * (\text{Increase in detention rate } \%) \\ & = 0,5 * 60000 * (1/0,6) * 0,029 + 0,03 * 60000 * (1/0,6) * 0,13 \\ & = 1450 + 390 \end{aligned}$$

The first number (1450) refers to the ships which are transferred to the most common (popular?) flags and the second (390) to the flags with high detention rates as well as low

⁴⁹ If the distribution of detention rates in Table 6.1 is extrapolated from the 88 percent of the world fleet to 100 percent the share of the group with detention rates above 10 percent would be 2,3 percent.

⁵⁰ The Equasis statistics on world fleet can be found on EMSA’s website <http://www.emsa.europa.eu/end173.html> (May 2009)

adoption of the regime. Related to the world fleet (60 000 ships) about three percent do not adhere to the maritime safety regime. It must, however, be stressed that the calculated values are rough and merely gives an indication of the extent of flagging out and its consequences on maritime safety.

It can be concluded that about fifty percent of the ship owners choose to use another flag than the owners' countries – flagging out – which results in that an estimated number of three percent of the ships in the world fleet do not comply in actual operation with the maritime safety regime. As commercial considerations such as reducing costs are the main reason for ship owners use of flagging out the hypothesis that commercial interests reduce the effectiveness of the maritime safety regime is confirmed. However, considering that the maritime safety regime is a global arrangement, a large number of states are party of the regime and the actual operation of the regime to a large extent relies on ship owners from all over the world, a 97 percent regime adherence must be considered as a high degree of effectiveness of the regime.

7 REFLEXIONS (DISCUSSION)

Here I will discuss problems with the chosen approaches in this study and how these might influence the results and the conclusions. The following issues will be treated:

- My perspective
- Theoretical framework
- Operational procedure
- Regime effectiveness
- The political science perspective

7.1 Perspective

The motivation of the study has been the importance of international shipping for the world trade and an interest in the actual function of the international maritime regime. With regard to the perspective I have adopted, my professional background as a naval architect has naturally influenced me. My interest in the maritime regimes originates from work on fishing vessel safety, pollution from oil tankers, courses for participants from developing countries on the application of the regimes etc. The Estonia disaster further arouse my interest, as in my opinion the accident was a crude indication that there was a system deficiency in the application of the maritime safety regime. Admittedly my perception of the maritime regimes was that commercial interests have a negative influence (reducing regime effectiveness) on regime formation and content and especially on the operations where ship owners have the prime responsibility of regime adherence. My hypothesis of the commercial influence can be interpreted as a prejudice which could influence both the questions I formulate and the results I reach. Connected to prejudice is the perspective (horizon) of the study object and this is linked to Gadamer (p 298, 302), who in depth discusses hermeneutics and its problems in analysing texts. One important conclusion from Gadamer is that the analysis of a text (document) will be influenced by our prejudices and perspectives, but being aware of this may lead to a better balanced interpretation. It may be noted that the conclusion of the study is that

commercial influence has a negative effect, but on the global scale these effects are small and within what could be said to be expected deviations from a 100 percent effective regime.

7.2 Theoretical framework

A main concern in this thesis is the effectiveness of the maritime safety regime. As theoretical framework I have chosen international regime theory and with focus primarily on the effectiveness of the regime and possible causal relations between commercial interests and regime effectiveness. In addition logic of appropriateness was used as an explanatory factor in the development of the regime's regulations (substantive contents).

Alternative frameworks could be using the concept path dependence or a more clear-cut power perspective. I will briefly discuss both alternatives.

As mentioned earlier (cf. 3.3) the traditionalism in shipping could indicate that path dependence has a strong influence on the stages regime formation and content and would have an effect upon the regime effectiveness. In addition ship owners are interested in regulations governing their operations, which are consistent and stable over time. Path dependence could thus be used as an explanatory model for how the safety regime functions and develops, but here there are at least two problems in my opinion. The first is the identification of the three stages (formation, reproduction and punctuation, cf. 3.3), but the maritime safety regime is rather an evolutionary process. Also the path dependence concept stresses more ideas (Peters p 73) than interests, and here interests play an important part for the regime effectiveness. However, the impact of ideas on the safety regime cannot be totally discarded and was a reason for using the concept logic of appropriateness in finding a contributing factor of how the substantive contents (the regulations) have developed, without applying the stringent conditions for path dependence.

A different approach for the analysis of the safety regime could be using the concept of the three faces of power – decision-making, agenda-setting and preference-shaping (Hay 171 -). The present study touches implicitly on the faces of power as the empirical investigation shows quite clearly that there is dominance by a minority of states and a few interest groups on the formation and contents of the regime (cf. 4.2). It would thus be of interest to further pursue a faces of power study. The main constraint for doing such an analysis in the present study was that it would be quite resource-demanding to get empirical material from the

informal processes on an international level in readily accessible documents (in short the work-load for the study would be large).

Finally a comment on my perhaps unorthodox use of epistemic communities, which I see as supported by Haas (p 3) where he describes what beliefs and values their members have.

Haas's note (p 3) also makes it clear that the epistemic communities are not restricted to the natural sciences but “ *what bonds members of an epistemic community is their shared belief or faith in the verity and the applicability of particular forms of knowledge or specific truths*”.

Ship owners as an epistemic community share beliefs and values as well as expert knowledge on the commercial operation of ships, which the communities outside do not have (in their opinion).

7.3 The empirical study

7.3.1 Operational questions

The basis for the empirical study is the two main hypotheses:

- A. International regime theory can be used to analyse the character, effectiveness and resilience of the international maritime safety regime.
- B. Commercial interests influence the formation and operation of the maritime safety regime and tend to reduce their effectiveness.

The question now is whether the operational questions are consistent with or at least relevant to the main hypotheses. In the table 7.1 I have compiled all the operational hypotheses (or questions) used in the empirical study and also referred them to one of the main hypotheses, the connections are marked by X. It can be observed that generally the connections are consistent with the assumption made in 3.4.

<i>Operational hypothesis</i>		<i>Main hypothesis A</i>	<i>Main hypothesis B</i>
<i>No</i>	<i>Regime formation</i>		
1	The safety regime can be characterized by a central concept	X	
2	The safety regime is effective in a formal sense	X	
3	The safety regime is robust	X	
4	Commercial interests influence the safety regime		X
	<i>Regime content</i>		
5	Actions by epistemic communities influence regime contents		X?
6	Logic of appropriateness influence regime contents		X?
	<i>Regime operation</i>		
7	Detentions/deficiencies are related to rate of regime adoption		X?
8	There is a relation between economic development and detentions/deficiencies		X?
9	The open registries are attractive		X
10	Open registries exhibit lower standards		X
11	The effectiveness of the regime is influenced		X

Table 7.1 Connections operational hypotheses/questions to the main hypotheses

There are, however, a number of the operational hypotheses, which are not at first sight obviously connected, and these are marked X?. For these (hypotheses 5-8 in table 7.1) some further explanations (justifications) are needed.

The influence of epistemic communities is discussed above in 7.2. It can also be noted that there is another epistemic community the classification societies, which have expert knowledge of ship design, construction and maintenance. Also this community has an influence on regime contents, which is driven by technology interest but also indirectly by

commercial interests as the regulations provide one important basis for the revenues of the classification societies.

Logic of appropriateness as a factor that explains that commercial interests are prioritised may look somewhat far-fetched. This was discussed above (in 7.2) and it can be admitted that this coupling is indirect, but explains to some extent the resistance to radical changes in the regime.

The operational questions 7 and 8 in table 7.1, although not addressing directly the hypothesis B, are motivated as finding other or complementary causes of not adopting and/or adhering to the regime.

7.3.2 Sources, empirical material

There basic sources for the empirical investigation of the maritime safety regime are

- IMO statistics
- Convention texts
- IMO Maritime Safety Committee (MSC) meeting records
- Paris MoU statistics on Port State Control (PSC)

The use of the IMO statistics I see here as a reliable source for the status of adoption of the regime conventions.

The choice of using SOLAS as a source for the safety regime has been discussed earlier and was motivated by that SOLAS is generally referred to as the basic and most important document (cf. IMO web site). The question is whether my choice of using SOLAS could have biased the results of the investigation. The safety regime includes eighteen other conventions, protocols and agreements (IMO web site) but also in addition documents which are related to these. As pointed out in 4.3 the nineteen safety conventions are not all of equal importance for the maritime safety and one possibility could thus have been to include some of the most important of these as STCW, Load Lines and COLREG (cf. 4.3) in order to reduce the risk of bias. The problem to do this was mainly that the work-load for the empirical investigation would have increased substantially, but not yielding corresponding additional findings on particularly the commercial influence. A second point is that at the MSC meetings – with their primary task maritime safety – a major part is devoted to SOLAS issues (cf. 5.3.3). Even if it is accepted, that SOLAS is the main and representative document, there remains one problem in my use of SOLAS, as I have concentrated on the so called Consolidated Editions of SOLAS and not made any analysis of the Codes, which are related to in the SOLAS text. This

omission may have an impact on the evaluation of the balance between preventing and mitigating rules (cf. 3.2.2) and most probably pointing to a trend of more focus on accident prevention⁵¹.

The records from MSC meetings are a major source in the investigation, and I have used them mainly to discern the activities of the different actors. An important question is then how representative are the records of the actual activities at the meeting. First the records relate only the plenary meetings, but during the meetings there are a number of formal (working groups) and informal meetings, which activities are only summarized in the records. A second problem is that the records generally give a summary of the contributions and not the actual “atmosphere” at the meeting. In order to get an apprehension of a MSC meeting I had the opportunity to participate in the MSC 84 (May 2008) and my general impression is that the records give a fair description of the activities at the meeting.

Statistics from PSC are used to evaluate regime adherence. Here only the Paris MoU statistics was used, although there are a number of other regional agreements on PSC. The question is thus whether the Paris MoU statistics are representative. DeSombre has some results, where results from other regions can be compared with the Paris MoU. From figures 5.3, 5.7, 5.9 and 5.15 in DeSombre it can be concluded that there is a fair agreement between the different regions. Paris MoU can thus be seen as representative.

7.3.3 The analysis

A basic analysis method has been quantitative text analysis. A general problem with this method is that the qualitative impact is not considered. For example in the analysis of SOLAS whether the regulations are accident preventing or consequence mitigating no account was made of the importance of the regulation. Typical is also that in some issue areas the regulations are numerous and detailed and in other few and broad. Examples are Life saving appliances including 37 regulations, which by definition are consequence mitigating (the accident has already happened) and the International safety management including six (6) regulations, which are in principle accident preventing⁵².

Examining the regulations in more detail as regards importance and substantive contents, would, however, require a further elaboration of distinguishing criteria. For the purpose of showing the commercial influence on regulations this would not be a primary concern.

⁵¹ A notable feature is the importance of the introduction of the International Safety Management (ISM) code, which is a fundamental document in safety audits

⁵² Both refer also to Codes which give more detailed directions

The same qualitative problem (importance of issue at hand) can also be seen in the analysis of the MSC records, and I have generally not tried to rank the importance (of same reason as above).

Another problem in the analysis of the extent of regime adoption and adherence was to get the size and distribution of the world fleet. Here I had to use material from different sources, which have different bases as Gross Tonnage (GRT), deadweight or number of ships. A comparison shows that the differences of a particular country's fleet are generally less than one percent (of the total world fleet). These uncertainties (for each country) sum up but an estimate of the total uncertainty in fleet size for a group of countries is less than ten percent (relative the groups fleet size).

7.4 Effectiveness

A basic concept in this study is effectiveness, and I have pointed out the two aspects – the formal, which is reflected in the extent of regime adoption, and the operational, which is measured to what extent the regime is adhered to. There is a third aspect, which is touched upon in connection with the regime's substantive content; the question: is the maritime safety good enough? An obvious answer is “no” as there is continuous work going on in order to change and develop (and hopefully) improve the regime – primarily manifested in the work of the IMO Maritime Safety Committee. An analysis of global ship casualty statistics for the last twelve years could reveal if there are any trends in ship safety. The trend is that number of lives lost at sea per year has decreased from around 400 in 1995 to around 200 in 2007⁵³ and also the number ships lost has in the same period decreased from 250 to around 150⁵⁴. This can be seen as an indication that the safety regime really matters, but there is room for further improvements.

7.5 The political science perspective

The debate about the effectiveness of regimes in international relations is intensive and the opinions vary from that regimes have little or no effects (cf Mearsheimer) to being important for world politics (cf. Hasenclever et al. p 3 and Chayes and Chayes p 4). But also between

⁵³ Lives lost on cargo ships from: <http://www.marisec.org/shippingfacts/safety/lives-lost-at-sea.php> (May 2009)

⁵⁴ Total losses from <http://www.marisec.org/shippingfacts/safety/reduction-ship-losses.php> (May 2009)

those who argue that regimes matters, there are controversies on how to describe regimes and their impact. As Breitmeier et al.(p 2) points out a major problem in regime theory is to demonstrate the causal significance of regimes and to discern the effects of the regime from other factors. There are a multitude of hypotheses on the formation and operation of regimes but the empirical evidence is not conclusive and a problem is the lack of data which can be used comparatively (ibid p 2-3). A second point is here that the analyses of the regimes tend to look more at the formal side, i.e. what can be readily find in signed agreements to domestic lawmaking (Cf. DeSombre p). In this study I have tried to pursue the analysis further and to see to what extent the maritime safety regime has an effect in day to day operations, which was possible in my case as there are “hard” data from the real world from the Port State Controls. An advantage of using data from regime operation is that regimes include in many cases rules, which are obsolete and/or limited applicability. The regime’s effectiveness is thus more realistically assessed from data from real operation. In the present case the conclusions by DeSombres (p 50-54) on regime effectiveness – based on the formal adoption- is more negative than my based on actual regime adherence.

In the present case it is also clear that looking on the regime from one perspective – power, interest or knowledge is too one-dimensional as in reality the behaviour of the actors is a mix of these perspectives, albeit with interest as the most obvious for the maritime safety regime. However, power is important as demonstrated by USA in succeeding to put security high up on the agenda. Also knowledge as ship owners’ expertise is seen as important. In this context it can be argued that the ship owners’ influence could be seen as interest based – making a profit – but in my view it does not fully account for their influence as they use their expert knowledge of shipping as an argument for how governments should act. The importance of perspective is in line with the observation by Knill & Lenschow (p 188) that the perception of an institution depends very much from your viewpoint, which may result in that rather contradicting conclusions can be obtained if an institution/regime matters or not.

Finally the political science approach in this study has in my view been advantageous for the understanding of the maritime safety regime and the influence of commercial interests.

8 CONCLUSIONS

The conclusions from this study can be summarized:

Hypothesis A: International regime theory can be used to analyse the character, effectiveness and resilience of the international maritime safety regime.

The regime can primarily be characterized as an interest driven regime promoting ship owners' interests both by the states, which have the largest beneficiary owner interests, and the ship owners directly in the regime formation and control of its content. There is also some hegemon power influence by USA and China. In addition the ship owners and classification societies act as epistemic communities using their expert knowledge to influence the regime. The regime can be seen as in a formal sense effective as most states with ships registered - flag states – have adopted at least the most important safety conventions. Also in practice the adherence to the safety regime is high. In this context the fact that more than fifty percent of the world fleet has a flag, which is other than the beneficiary owner's does not seem to have a large effect on the adherence to the safety regime. It should here be noted that this does not imply that flags of convenience are not problematic, as these flags can exhibit poor standards as regards other maritime regimes as pollution prevention and labour conditions.

The safety regime can be considered robust as it has lasted at least fifty years and the regime generally has been able to adapt to new conditions but not losing its main aim.

Hypothesis B: Commercial interests influence the formation and operation of the maritime safety regime and tend to reduce their effectiveness.

The commercial interests are primarily promoted by ship owners. The ship owners are active in all stages of the regime, formation, substantive contents and operation. Especially in the regime operation the ship owners have a large influence as they are in practice free to choose any flag, which is most favourable (with regard to costs) for them. As said above this fact does however not have a large effect on the regime effectiveness, and the conclusion is thus that commercial interest influence the maritime safety regime but the overall negative effect is rather small, and probably within the margin of other causes for a less than 100 percent effectiveness. The answer to the question in the thesis' title is no

The final point is, can the maritime safety regime be more effective i.e. can more lives and ships be saved with a more rigorous regime? Although the trend with the existing regime is

positive, there is also a tendency that number of lives lost as well as ships lost levels out, which indicates that further and probably some innovative actions are needed. In this context it is in my opinion negative that the major body for promoting maritime safety – the IMO Maritime Safety Committee – is also concerned with security matters, which are more justice and police matters. As the main aim of maritime safety is saving lives and ships more focus on “pure” safety issues would probably be more effective.

Political science issues

International regime theory provides a fruitful base for the study of the maritime safety regime. It is important to have a broad perspective including power, interest and knowledge aspects for the understanding of the regime.

9 REFERENCES

- Barnett, M. *Non-technical skills: the vital ingredient in world maritime technology*
Gatfield, D.
Pekcan, C. <http://www.solent.ac.uk/mhfr/papers.aspx> , 2006
- Boisson, P. *Safety at Sea*, Edition Bureau Veritas-Paris, 1999
- Breitmeier, H. *Analyzing International Environmental Regimes*, The MIT Press,
Young, O.R. 2006
Zürn, M.
- Chayes, A. *The New Sovereignty*, Harvard University Press, 1993
Chayes, A. H.
- DeSombre, E. R. *Flagging Standards*, The MIT Press, 2006
- Falkemark, G. *Politik, mobilitet och miljö*, Gidlunds förlag, 2006
- Gadamer, H-G. *Truth and Method*, Second Revised Edition, Sheed & Ward, 1989
- Grotius, H. *The Freedom of the Seas*, Oxford University Press, 1916
- Haas, P. M. Introduction: Epistemic Communities and International Policy Coordination, *International Organization*, Vol. 46, No 1, pp 1-35, 1992
- Hasenclever, A. *Theories of International Regimes*, Cambridge University Press,
Mayer, P. 1997
Rittberger, V.
- Hay, C *Political Analysis*, Palgrave 2002

- Hirst, P
Thompson, G *Globalization in Question*, Polity Press, 2nd Edition, 1999
- Knill, C.
Lenschow, A. “Seek and Ye Shall Find!”: Linking Different Perspectives on
Institutional Change, *Comparative Political Studies*; 34 pp 187-
215, 2001
- Mearsheimer, J.J. The False Promise of International Institutions, *International
Security*, Vol 19, No 3 (Winter, 1994-1995), pp 5-49
- Payne, R. J. Flags of Convenience and Oil Pollution: A Threat to National
Security, 3 *Houston Journal of International Law*, pp 67- 99,
1980-1981
- Peters, B. G. *Institutional Theory in Political Science: The ‘New
Institutionalism’*. 2nd Edition, Continuum, 2005.
- Stefenson, P Erfarenheter från sjöolyckor, har vi lärt oss läxan, *Tidskrift i
Sjöväsendet*, No 1, pp 33-39, 2009
- Tan, A. K-J. *Vessel- Source Marine Pollution*, Cambridge University Press,
2006

Important sources

UNCLOS complete text can be found at

http://www.un.org/Depts/los/convention_agreements/texts/unclos/unclos_e.pdf (May 2009)

MSC meeting records are available at the Swedish Maritime Administration (Sjöfartsverket)

SOLAS Consolidated versions are continuously updated, the latest version is *SOLAS, Consolidated Edition, 2004* IMO Publication, 2004

Paris MoU statistics are available at www.parismou.org (May 2009)

Separate files

The following files, which contain processed material from the original sources, are available on request from willem.van_berlekom@comhem.se

- 1 Maritime safety conventions (Word)
- 2 MSC activities (Word)
- 3 SOLAS contents (Word)
- 4 Flags of convenience (Word)
- 5 Rule adoption (Excel)
- 6 Ship owners' participation (Excel)
- 7 Issues at MSC meetings (Word)
- 8 Detention and adoption (Excel)
- 9 Flag and owner (Excel)
- 10 Regime adherence (Excel)