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MARITIME POLICY AND THE SUCCESS OF NATIONS: THE CASE OF GREEK-FLAGGED OCEAN SHIPPING

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THE CASE OF GREEK-FLAGGED OCEAN SHIPPING

by

KATERINA KONSTA

A study submitted to the University of Plymouth

in partial fulfilment for the degree of

DOCTOR OF PHILOSOPHY

Graduate School of Management, Faculty of Business

August 2017

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Dedicated to my husband Nikos Koliniatis, our beautiful daughter Tina,
and
our four-legged children Hera, Leon, and Lola

Αφιερωμένο στον άντρα μου Νίκο Κολινιάτη, στην όμορφη κόρη μας Τίνα,
και
στα τετράποδα παιδιά μας Ήρα, Λέων, και Λόλα

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I would also like to thank the potential reader, and researcher who will be inspired by my work, and will take it one step further.

Katerina Konsta

August 2017

Authors Declaration

At no time during the registration for the degree of Doctor of Philosophy has the author been registered for any other University award without the prior agreement of the Graduate Committee. This study has been privately financed.

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Abstract

In an era that national flags are dying off (Sletmo 2001) there is no dispute about the success of Greek flagged shipping. **How can a small nation like Greece retain the highest percentage of all national fleets? Literature identifies that this success is due to several reasons. However, what are the elements that contribute to the success of Greek-flagged shipping?**

This study establishes that **'the success of Greek ocean-going flagged shipping is a blend of a tendency for governments to experiment with various policies intended to promote national competitiveness, individual entrepreneurship, the cluster as well as culture, knowledge and skill'**.

Literature from different disciplines and sources are summarised, compared, contrasted, and synthesised in order to develop a coherent outcome and gain a new perspective in the respective field.

Since ***"policy is like beauty in the eye of the beholder..."*** (Roe 2007c) a multilevel, holistic, exploratory, inductive, deductive, abductive, and overall pragmatic methodological approach is considered, as the only viable option for complex research questions related to maritime policy. A three-method approach is applied with every method contributing to each other: the Timeline A to Ω and Literature Analysis, Delphi Method, and the Application of Porter's diamond on national competitiveness.

The belief that traditional flags are dying off, implies that they are not dead yet. The Greek Registry, and every ship registry is a system of people, organisations, and processes and it is that system that contributes to the success of the flag.

Contrary to the belief of some players, government policy affects the size and the quality of the national flag ocean-going fleet undertaking various policies intended to promote national competitiveness.

This study contributes to academic knowledge as well as to the Greek and any other registry's competitiveness, as well as to the governmental decision making and development of maritime policies. Recommendations are made for the Greek flag and the maritime policy, as well as for the application of the GREKON MODEL to the real maritime world and academia.

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List of Abbreviations

Anti- Fouling Convention	International Convention on the Control of Harmful Anti-fouling Systems on Ships 2001
APMO	Average Percent of Majority Opinions
BRIC	Brazil, Russia, India and China.
Bunkers Convention	International Convention on Civil Liability for Bunker Oil Pollution Damage 2001
BWM or BALLASTWATER	International Convention for the Control and Management of Ships' Ballast Water and Sediments 2004
chisq.dist.rt	chi square distribution
CLC Convention	International Convention on Civil Liability for Oil Pollution Damage 1969
CLC Protocol	Protocol on the International Convention Civil Liability for Oil Pollution Damage 1992
COLREG Convention	International Regulations for Preventing Collisions at Sea 1972
EC	European Community
ECSA	European Community Shipowners Association
EDA	European Defence Agency
EEC	European Economic Community
EMU	European Monetary Union
EU	European Union
EUROS	European Ship Registry
FMT	Facilitation of Maritime Traffic Convention 1965
FREC	Faculty Research Ethics Committee
Fund Convention	International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage 1971
FUND Protocol	Protocol to the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage 1976
FUND Protocol	Protocol on the International Oil Pollution Compensation Fund 1992
FUND Protocol	Protocol on the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage 2003
GDP	Gross Domestic Product
GNP	Gross National Product
GRD	Greek Drachma
GREKON MODEL	The Greek-Flagged Ocean-Going Shipping Diamond developed by Katerina Konsta
GSCC	Greek Shipping Co-operation Committee

HNS Convention	International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea 1996
HNS PROT	Protocol on the Nairobi International Convention on the Removal of Wrecks 2010
Hong Kong Convention	The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships 2009
IACS	International Association of Classification Societies
IAME	International Association of Maritime Economists
ILO	International Labour Organization
IMO	International Maritime Organization
IMSO amendments	Amendments on the Convention on the International Maritime Satellite Organization 2006
IMSO amendments	Amendments on the Convention on the International Maritime Satellite Organization 2008
IMSO Convention	Convention on the International Maritime Satellite Organization 1976
INTERVENTION	International Convention Relating to Intervention on the High Seas in Cases of Pollution Casualties 1969
Intervention Protocol	Protocol Relating to Intervention on the High Seas in Cases of. Pollution by Substances other than Oil 1973
IOD	Institute Overseas Development
ISM	International Safety Management
ISPS	International Ship and Port Facility Security
ITF	International Transport workers Federation
KESEN	Greek Maritime Academy
LLMC Convention	1976 Convention on Limitation of Liability for Maritime Claims
Loadline Protocol	1988 Protocol on the Convention on Loadlines
London Convention	1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter
London Convention Protocol	1996 London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter
LSE	London School of Economics
m	horizontal choices
MARPOL	International Convention for the Prevention of Pollution from Ships MARPOL (Annex I/II, Annex III, Annex IV, Annex VI) 1973/78
MATCH	Excel function
MOU	Memorandum of Understanding

n	horizontal choices
NAFTA	North Atlantic Free Trade Association
NAIROBI WRC	2007 Nairobi International Convention on the Removal of Wrecks
NAT	Navy Retirement Fund or Mariners Insurance Fund or Seafarers Social Fund
NGO	Non-Government Organisations
Nuclear Convention	Civil Liability in the Field of Maritime Carriage of Nuclear Material Convention 1971
NYSCC	New York Shipping Co-operation Committee
ODI	Overseas Development Institute
OPA	Oil Pollution Act
OPEC	Organization of Petroleum Exporting Countries
OPRC Convention	International Convention on Oil Pollution Preparedness, Response and Co-operation 1990
OPRC/HNS	Protocol on Preparedness, Response and Co-operation to pollution Incidents by Hazardous and Noxious Substances 2000
OSCE	Organization for Security and Cooperation in Europe
PAL Protocol	Protocol to the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage 1990
PASOK	Pan-Hellenic Socialist Movement
PSF	Pan-Hellenic Seaman Federation
R/St	Delphi Round/Statement
s	standard deviation
Salvage Convention	International Convention on Salvage 1989
SAR Convention	International Convention on Maritime Search and Rescue 1979
SEA	Single European Act
SOLAS	International Convention for the Safety of Life at Sea 1974/1996
SOLAS Protocol	Protocol to the International Convention for the Safety of Life at Sea 1978 Protocol on International Convention for the Safety of Life at Sea 1988
STCW	International Convention on Standards of Training, Certification and Watchkeeping for Seafarers 1978
TAA	Trans-Atlantic Agreement
TACA	Trans-Atlantic Conference Agreement
Tonnage Convention	International Convention on Tonnage Measurement of Ships 1969
UGS	Union of Greek Shipowners
UN	United Nations

UNCTAD
w

United Nations Conference on Trade and Development
coefficient of concordance

Chapter 1. Introduction

The purpose of this chapter is to provide a background to the empirical research enquiry and to demonstrate its development and process. The subject area is that of maritime policy and the Greek ship register (with respect to ocean-going tramp ships) focusing on the Greek ship registers justification of success.

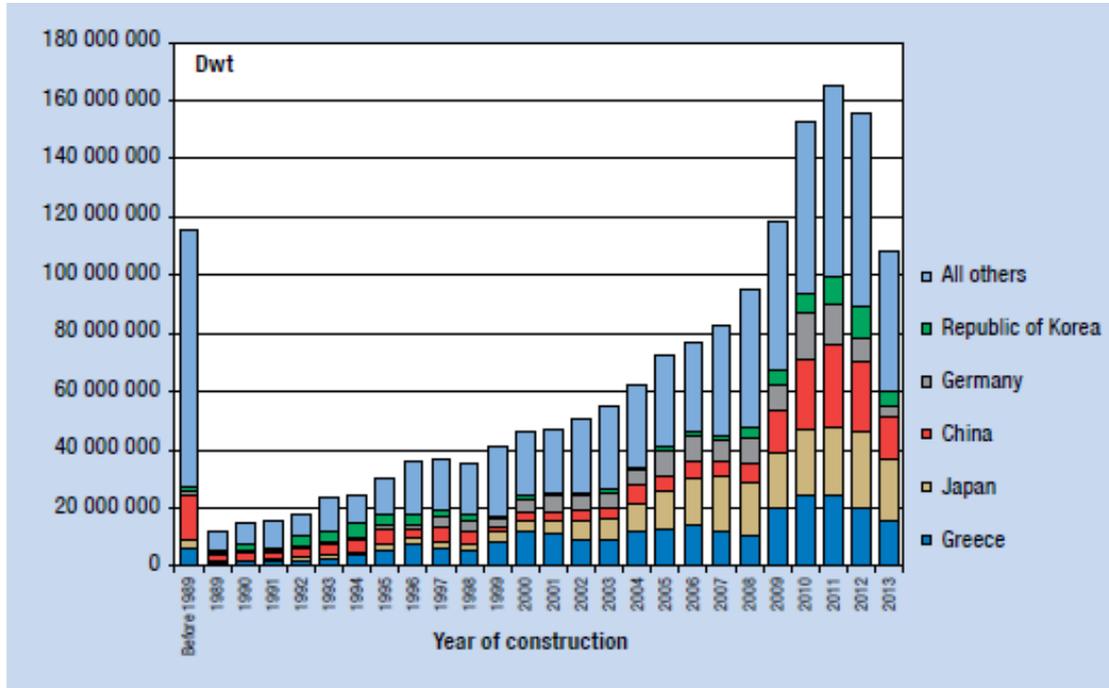
The rationale for the study, as well as the objectives and hypothesis are presented, and followed by the basic definitions, that frame the focus of the study. Finally, the structure of the project is presented.

1.1 Reasoning, Objectives and Hypothesis

There is no disputing the success of Greek-controlled shipping, (Figure 1 and Table 1). Fleets constantly fluctuate and this can be explained by the derived demand and the shipping cycles that characterise the shipping industry (Stopford, 1999). A ship-owner may register their ship under the national register or any other registry, subject to conditions and restrictions. According to UNCTAD (2010), in 2010 the dominant countries of origin of the top 10 global ship-owners¹, were Greece, Japan, China, Germany, Republic of Korea, United States, Norway, China, Denmark, Singapore and China. Also, observable in the following figure (Figure 1), since 1969 ownership of fleets has been globally dominated by Greece, Germany, China, Republic of Korea and Japan. (UNCTAD, 2013) It must be noted that although fleets fluctuate, Greek shipping is the only traditional maritime

¹ In terms of deadweight tonnage capacity (dwt). Deadweight tonnage capacity is the carrying capacity of the ship. In other words is the weight in tons of all the cargo, fuel, dry provisions, supplies, etc. carried on board the ship.

power to have remained consistently at the top of the shipping world ranking, and at the same time has strengthened its position (Theotokas and Harlaftis 2009).



Source: Compiled by the UNCTAD secretariat, on the basis of data from Clarkson Research Services; vessels of 100 GT and above. Permission to reproduce has been granted by UNCTAD

FIGURE 1. OWNERSHIP OF THE WORLD FLEET, 1969-2013

Source: UNCTAD (2014), p.n.32.

This study examines a defined period, 1975-2010, but has implications for policy making in the present day. In order to place this study in the context of the present day, reference will be made to 2016 in this Chapter.

The following table (Table 1), depicts that in 2016 the Greek-controlled fleet has the largest capacity in terms of deadweight (Table 1, column 8). The Greek-controlled fleet encompasses both a) those ships flying the national flag (the Greek-flagged fleet), and b) those Greek owned ships flying other flags (the Greek-owned fleet), these are usually flags of convenience such as Panama and Liberia.

In 2010 the Greek-flagged fleet represented 5% of the total world fleet, the highest capacity of all national fleets. The only fleet nearing capacity to the Greek-flagged fleet was the Chinese national fleet with 3.5% (2,024 ships, 41.026,075 dwt). Greek flagged ships are larger in size, on average (UNCTAD 2016). The majority of the Chinese flagged ships are state owned enterprises (Kane 2002).

TABLE 1. TOP COUNTRIES - SHIP OWNERSHIP 2016 (MILLION TONS)

Country or territory	Number of vessels			Dead-weight tonnage			Foreign flag as percentage of total	Total as percentage of world
	National flag	Foreign flag	Total	National flag	Foreign flag	Total		
1 Greece	728	3 408	4 136	64 704 141	228 383 091	293 087 231	77.92	16.36
2 Japan	835	3 134	3 969	28 774 119	200 206 090	228 980 209	87.43	12.78
3 China	3 045	1 915	4 960	74 106 227	84 778 140	158 884 367	53.36	8.87
4 Germany	240	3 121	3 361	11 315 790	107 865 615	119 181 405	90.51	6.65
5 Singapore	1 499	1 054	2 553	61 763 603	33 548 770	95 312 373	35.20	5.32
6 Hong Kong (China)	854	594	1 448	67 522 162	19 853 100	87 375 262	22.72	4.88
7 Republic of Korea	795	839	1 634	16 107 565	62 726 629	78 834 194	79.57	4.40
8 United States	782	1 213	1 995	8 155 717	52 123 421	60 279 138	86.47	3.36
9 United Kingdom	332	997	1 329	5 247 009	46 194 091	51 441 100	89.80	2.87
10 Bermuda	14	404	418	503 077	47 950 084	48 453 161	98.96	2.70
11 Norway	858	996	1 854	17 576 954	30 610 893	48 187 847	63.52	2.69
12 Taiwan Province of China	122	776	898	5 094 232	41 047 112	46 141 345	88.96	2.58
13 Denmark	398	562	960	16 079 319	22 235 206	38 314 525	58.03	2.14
14 Monaco	-	320	320	-	29 892 471	29 892 471	100.00	1.67
15 Turkey	562	978	1 540	8 311 987	19 639 445	27 951 433	70.26	1.56
16 Italy	575	227	802	15 427 422	7 311 946	22 739 369	32.16	1.27
17 Belgium	93	156	249	7 522 451	14 575 301	22 097 752	65.96	1.23
18 India	815	132	947	15 699 868	5 977 855	21 677 723	27.58	1.21

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Source: UNCTAD (2016), p.n.37.

Certain observations are made when comparing the data from 2016 in Table 1, to the same data from 2010. Although the Greek-controlled fleet evidences a continuing growth, the Greek-flagged fleet has faced a downturn (Lloyd's List 19.5.2016). During those six years the Greek-flagged fleet lost a number of vessels, declining from 741 vessels to 728 vessels, while the Greek-owned fleet raised capacity from 2.409 vessels to 3.408

vessels. However, it is misleading to only consider the number of vessels in a fleet because deadweight capacity supplied to the market is also a critical element. In terms of deadweight the Greek-flagged fleet increased from 58,478.197 to 64,704.141 million tons dwt while the Greek-owned fleet increased from 127,616.965 to 228,383.091 million tons dwt. In 2016, 77.92% of Greek-owned ships are flying foreign flags. Whereas in 2010, this figure represented 69%. Respectively in 2016, 22.08% are flying the national flag. By comparison in 2010, 31% flew the national flag. In 2010 the Greek-flagged fleet ranked first in terms of deadweight, in 2016 it ranks third following the Chinese-flagged fleet and the Hong Kong fleet. The growth of the Greek-flagged fleet in terms of deadweight is evidenced, but still ships are flagging out or they never flag in. Greek ship-owners appear to prefer Marshall and Liberian flags, increasing the use of other flags by 12.03% and 2.21% respectively. (UNCTAD 2010, UNCTAD 2016)

Several reasons are considered for this decline (not accounting for those ships that are sold or go for scrap). Since 2009, following the boom in the freight market, a constant and ongoing through stage is evidenced (Stopford 2016). The political flux in Greece has also impacted decline. Additionally, since 2013 Greek ship-owners are voluntarily paying double the regular tonnage tax. The Greek debt crisis and the collapse of the Greek economy has equally impacted decline. In 2014 Brussels instructed that Greece pay over the quota of shipping taxation. This over payment will last until the start of 2019 and the 'solidarity tax' will be imposed on all companies regardless of the flag used. Greek ship-owners have the option to flag out to another registry, European or otherwise, as demonstrated by German ship-owners

who have already registered their ships with the International Shipping Register of Madeira. (Lloyd's List 10.1.2014, Lloyd's List 19.6.2013, Lloyd's List 4.9.1992, Lloyd's List 21.8.1992, Lloyd's List 19.5.2016, Lloyd's List 22.12.2016).

Further questions to be considered here are; Is the Greek flag losing its sovereignty? What contributed to the success of Greek shipping? Could the same attributes be applied now to affect the size of the national fleet? What is the role of the state? What does the past success period teach us?

Clarkson's Research Studies (1995) referring to the Greek-controlled fleet questioned how a nation with a GDP only 1.5% that of the USA, could be so influential in the global shipping industry. Further explaining the success of Greek shipping as being that of an ancient seafaring nation with a plethora of skilled seaman; having stable requirements; and an entrepreneurship culture. The Greek national fleet capacity triggers interest in an era where national fleets are dying off (Sletmo 2001).

A further question posits; Where the Greek national fleet is concerned is the state playing any role in its development?

Porter in the Competitive Advantage of Nations (1990) stated that; ***“national inheritance is created, not inherent and it depends on the capacity of its industry to innovate and upgrade”*** (Porter 1990, p.n. 73). Further to this, according to Porter (1990) the success of a nations' industry is due to their home environment; ***“the most forward-looking, dynamic and challenging within this environment there is a tendency for***

governments to experiment with various policies intended to promote national competitiveness” (Porter 1990, p.n. 73).

Thus, Is this the case for Greek-flagged shipping?

A debate is evidenced as to the successes of the Greek shipping industry, with authors and market practitioners arguing that the Greek-flagged shipping industry received help from the Greek government to develop. Equally it has been noted that success is due to the entrepreneurship of Greek ship-owners and the skill of the seafarers. Harlaftis (1993) argues that Greek-owned shipping industry would never have increased as much as it did without the support of the state following the Second World War with the 100 Liberties. Thanopoulou (2007) states that the aid provided by the state was not palpable, and only tacit. According to Goulielmos (2001), the increase is due to seamanship, tradition and the peculiar structure of the Greek shipping industry.

Numerous authors have pointed out the success of the Greek shipping industry but no clear evidence is posited (Theotokas and Harlaftis, (2009); Goulielmos, (1997); Thanopoulou, (1994); Harlaftis and Theotokas (2004); Harlaftis and Valdaliso (2012). Goulielmos (1997) refers to the Greek maritime policy and the Greek register in “The management of the administrator and production of shipping companies” in chapter six and seven and in his papers, and partially covers some periods. However, the Greek Maritime Policy and the Greek registry is a theme that is largely missing from the literature. Thanopoulou (2007) suggests that the state assistance to shipping must be evaluated in context. It must further be noted

that there is little research that touches upon or determines the Greek maritime policy, the Greek registry, nor the historical political patterns of the Greek shipping policy and Greek shipping.

Due to the gaps in the literature there are several areas identified as part of this study to be covered. These are presented in Table 2.

TABLE 2. GAPS IN GREEK MARITIME POLICY LITERATURE & QUESTIONS TO BE RAISED

- | |
|---|
| <ul style="list-style-type: none">• Why is Greek-flagged ocean shipping a success story?• What can the success of Greek-flagged ocean shipping be attributed to?• Is success due to the support (policies) of the Greek government and the European Union or is shipping an integral part of the nation's psyche with no need for government support?• Are there any policies or policy patterns that justify a coherent Greek maritime policy?• What factors contribute to the success of Greek registry?• Which are the factors, and interrelations that affected the development and the success of Greek-flagged shipping? |
|---|

Source: Developed by the Author (2012)

Assumptions, about this multifaceted topic of interest are that governments intervene with policies in order, among other things, to assist their industry, foster growth, create new jobs and ensure (in this case) that the country remains a centre for global maritime business (Sturmey 1965; Farthing 1993; Ademuni-Odeke 1984). Is this the case for Greece?

Consequently, in an effort to set a hypothesis, the statement established for this study is:

The success of Greek ocean-going flagged shipping is a blend of a tendency for governments to experiment with various policies intended to promote national competitiveness, individual entrepreneurship, as well as culture, knowledge and skill.

The objectives of the research are as follows:

- To develop a literature review on Greek-flagged ocean-going shipping;
- To identify the attributes which have contributed to the success of Greek-flagged ocean-going shipping;
- To establish relationships that will contribute to the theory of success for Greek-flagged ocean-going shipping;
- To develop a comprehensive structured model that could be used in the interpretation of success for Greek-flagged ocean-going shipping.

1.2 Definitions

1.2.1 Greek-flagged

'Greek-flagged' shipping is the fleet that flies the Greek flag, as opposed to 'Greek-owned' shipping, although owned by Greeks the fleet flies under another country flag. Both the Greek-flagged and the Greek-owned shipping compose 'Greek-controlled' shipping.

1.2.2 Policy

For the purpose of this research, "policy" is regarded as a course of action decided, adopted and pursued by the government. In order to be more specific, it is the public policy for shipping adopted by the Greek government.

This study addresses (a) the Greek shipping policy contents and subject matter, as well as (b) the structure and mechanisms that characterise it within a specific time limit (from 1975 to 2010).

The term "shipping policy" refers to the national policies and not to the regulatory environment. The USA Oil Pollution Act and the International Maritime Organization's MARPOL are international regulations and can be regarded as policies of different shipping blocs or powers. This is outside

the scope of this study but the effect of those regulations on the Greek shipping policy falls within its scope.

1.2.3 Timeframe

This study focuses on the political, economic and social history of Greek shipping from 1975 to 2010.

The starting point is 1975 because after the fall of dictatorship in 1974, a new constitution was ratified and Greece became a Republic. The new constitution was written by the Parliament and came into force on June 11th, 1975, and is currently in force but was revised in 1986, 2001 and 2008 (Nomothesia 2011). This constitution was the starting point for the Greek state. Reference to shipping is made in the Fourth Part of the Constitution in the Special, Final and Transitory Provisions, in Article 107 (Hellenic Parliament).

Greece after 1975 became a democracy and the state went through an era of restructure and constant change. One political party takes the place of the other, society was under constant reform, the economy has its ups and downs, these changes can also be seen globally in other countries (Hellenic Parliament 2011, Lyrintzis and Nikolakopoulos 2011). The shipping industry went through its cycles as well as constant ups and downs being affected by every single event across the world. This period, 1975 to 2010, includes a number of cyclical events as well as the largest market growth in 2004. This was for the researcher a great period of flux and change and a period during which everything that could have happened, indeed happened which is the rationale behind the study.

1.3 Tramp shipping, bulk carriers and tankers.

Since Greece had no other substantial area of trade the main area that service could be offered was in shipping. Namely supplying the world shippers who operated globally, with bulk carriers, liquid cargoes, and general cargoes.

It is to be noted however that, passenger, short sea, auxiliary, miscellaneous and container ships are excluded from this research. Passenger ships are excluded because when operating in the Greek seas they are required to fly the Greek flag during the period and although cabotage has been abolished, this requirement continues as the norm (Lekakou 2007, Lekakou et al 2007b, Lekakou and Fafalioun 2006). Equally, the short sea vessels, auxiliary and miscellaneous ships are excluded from the research. Containers are liner ships and the laws that govern this market are different from the tramp ships. Additionally, Greeks have traditionally operated in tramp shipping.

1.4 Structure of Study

The research is presented in five sections: Introduction, Literature Review, Methodology, Analysis, and Findings, Theory Development, and Conclusions. The purpose of each chapter is presented in Table 3.

TABLE 3. THE STRUCTURE OF THE STUDY & THE PURPOSE OF EACH CHAPTER

Chapter 1: Introduction

The purpose of this chapter is to provide the background to the empirical research inquiry. The subject area is the success of the Greek ship registry. The rationale, questions set, aims and objectives are discussed and explained in this chapter. Also, the definitions and timeframes for the study are set and discussed. Finally, the structure of the study is presented.

Chapter 2: Literature Review

The purpose of this chapter is to develop the literature review on Greek-flagged ocean-going shipping. The development of literature will indicate to an extent the successful attributes of Greek-flagged ocean-going shipping and the establishment of relationships which will further contribute to the theory development of the success of Greek-flagged ocean-going shipping.

The literature review adopting a generic to specific approach and structure, consists of the following notional parts: (a) the discussion of the literature methodology adopted, (b) Porter's theory on the competitive advantage of nations as being fundamental to the hypothesis of this study, (c) discusses the facets of public policy, shipping policy and governance, (d) presents the relevant literature on ship registration and flagging out, (e) provides an overview of the international shipping markets from 1975 to 2010 that Greek shipping operated within, (f) presents the Greek state's representation of shipping and the major policy players (as well as the European Union and other organisations), and (g) finally merges different elements from different disciplines (the Greek political, economic, and socio-cultural environment, the shipping market and international events, the laws, policies and politics affecting the national ship registry) and provides an overview of the national ship registry from 1975-2010

Chapter 3: Methodology

According to Silverman (2011) a methodology is not to provide solutions, but underpin the understanding of the methods that can be adopted into the research. Therefore, the aim of this chapter is to present the research approach on the selected methodology, as well as the process and attitude of the researcher towards the methodology. To provide a clear understanding of the chosen methodology, and to justify the selection of the chosen methodology in order to achieve the objectives of the research questions.

According to Lapan et al (2009), the quality of the methodology adopted refers to firstly how well a study has been designed and secondly how well it has been implemented to achieve its objectives.

The design of the methodology and how it fits to the overall study is conceptualised in this chapter and the implementation is presented in the Analysis chapter.

A mixed, holistic, exploratory, inductive, abductive and overall pragmatic epistemological approach is adopted in order to achieve the objectives set and the hypothesis.

A research literature review is carried out and the innovative combination of the methodology chosen is analysed in depth, in order to address the objectives, set in the question raised. This chapter explains in detail and further justifies the methodology used in this study; the limitations of the methodologies adopted and potential solution to overcome them; as well as the research ethics.

The methodology used is a mixture of three approaches (1) the development of the Timeline Alpha to Omega, (2) the analysis of literature, (3) the Delphi technique and (4) the analysis of the success of the Greek-flagged ocean-going shipping using Porter's Diamond model's factors.

Chapter 4: Analysis and Findings

The purpose of this chapter is to analyse and to execute the three-pronged methodology presented in the previous chapter: The Timeline Alpha to Omega and the analysis of the secondary data, as well as the Delphi method and the application of Porter's theory to the Greek flagged shipping industry.

Please note: The Table continues on the next page

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Chapter 5: Findings, Theory Development and Conclusions

The aim of this section is to present the findings of this study and to discuss the implications from theory to practice emanating from the findings, to exemplify the concluding outcome, to present the theory derived from this study and the original contribution to knowledge, the adequacy of the conceptual model, the limitations and further research prospects.

The findings, conclusion and the original contribution to theory and practice as well as the recommendations are presented against the aim and the objectives of the study. Further the conceptual model of this study is discussed and whether it has succeeded in capturing the complexities that characterise the success of a nation's industry and shipping policy. The limitations of the study are presented and recommendation for further research.

Source: Developed by the Author (2017)

Chapter 2. Literature Review

The purpose of this chapter is to create a literature review on the development of Greek-flagged ocean-going shipping. Aiming to indicate the attributes of success, the establishment of relationships, and to set the grounds for theory development.

By adopting a generic to specific approach, and structure, the literature review consists of the following notional parts: (a) a discussion on the literature methodology adopted, (b) a discussion of Porter's theory on the competitive advantage of nations, as being fundamental to the hypothesis setting of this study, (c) a discussion on the facets of public policy, shipping policy and governance and the examination of the relevant literature on ship registration and flagging out, (d) a presentation of the Greek state's representation into shipping, stakeholders and the major international policy players, and finally (e) the building up of literature on the national ship registry from 1975-2010, merging different elements from different disciplines.

2.1 Literature Methodology

The literature research undertaken is a systematic, explicit and reproductive selection of the documents (Fink 2009) on Greek-flagged shipping that contain related information, evidence, and data (Ridley 2008). The key factors in the development of this research are reliability, and validity in approaches, methods, and contents. Since the degree of consistency, and the reflection of the real meaning are both vital to research (Franzosi 2010, Saini and Shlonsky 2012). In addition, a deep understanding of literature,

and the selections of literature that is relevant, and crucial to the success of Greek-flagged shipping, ensures that the study remains on track (Randolph 2009).

Grounded theory is employed, as an inductive approach to this research. Where theories are generated from an empirical inquiry that explores phenomena, and people's experiences (Charmaz *et al* 2006, Engward 2013, Hammond and Wellington 2013,). In that sense, no assumptions are made, and a more neutral view is adopted (Simmons 2006, Engward 2013). In support of the overall pragmatic approach, this study is adopting a realistic approach to grounded theory (Layder 1998, Morse 2009, Kempster and Parry 2011).

Consequently, the literature review is a result of summarised, compared and contrasted information (Wolcott 2009). Allowing for synthesis of literature to garner a new perspective in the respective field (Hart 1998). It further emphasises the existing knowledge (Ackerson 2007); sets the foundation and context (Hart 1998); evaluates what other researchers have said on the research topic, demonstrating their understanding of the literature in the area under review (Boote and Beile 2005); demonstrates the author's knowledge on the area, vocabulary, theories, key variables, phenomena, methods, and history (Randolph 2009); acknowledges, and addresses important variables to the research question (Gall *et al* 1996); provides reasoning of significance of the question in research (Hart 1998, Dochartaigh 2007); relates ideas to theories (Saini and Shlonsky 2012) and practice (Kempster and Parry 2011); identifies methodologies that have

been used in similar studies (Gall *et al* 1996, Marshall and Rossman 2006), placing the research in historical context (Hart 1998); and significantly contributes to the development of the Round Delphi 1 set of statements, developed further in the Methodology chapter (Overseas Development Institute 2009). Finally, the review on the Greek shipping registry, and policy focuses on the research outcomes, and theory development. The building up of coherent literature establishes the perspectives of previous research, and establishes how this new study advances the previous research (Randolph 2009), and distinguishes what has been done from what needs to be done (Hart 1998), in order to fill gaps, add to knowledge, and identify further research on the subject area.

The methodology adopted for the literature review is acknowledged, and taken into consideration in the choice of the methodological approach of research undertaken in this study (see, Chapter 3, Methodology).

Based on Copper's 1998 Taxonomy of Literature Reviews, the literature review (a) focuses on research finding, and not just bibliographic citations in order to identify a lack of information and to build up literature, (b) aims to integrate, and resolve a debate within a field of study, which explains why the information, and data are merged in literature, and why the meta-analysis of literature is taking place in the Analysis section, (c) takes a neutral perspective, with the author presenting a review of literature by comparing and contrasting, what is found to ensure transparency, and to identify further research required in the future by others (d) covers exhaustively, and selectively citations, with the author locating and

considering every available piece of research on a certain topic, within certain constraints that can be justified, (e) is organised chronologically, emphasising the progression of theories, and change in practices over time. Building up different concepts and variables, presented in a tacit manner, and (f) it is primarily written for an academic audience. The overall aim of the literature review is to discuss what information is found, and to integrate it in order to, develop a solid overview of the Greek Registry from 1975 to 2010. The literature has also been published (Konsta 2013), and this is regarded as a further contribution to knowledge (Gall *et al* 1996). This contribution is discussed in the study's overall contribution to knowledge in the final chapter of the study.

This research incorporates a mixture of inductive, and deductive approaches (Wilson 2010) to the literature, and hypothesis setting. The hypothesis of the study was set in an inductive way. Firstly, the success of Greek-flagged shipping was observed by the author, and then, the literature review was undertaken which justified the rationalisation for this study. On the other hand, the study is written in a deductive way with the theory first presented, and then the observations made. This allowed the author to explore the hypothesis and the reader to obtain a straightforward understanding.

The literature review is produced, and synthesised in detail (Wolcott 2009, Hart 1998). The purpose for this is that every detail counts for the Greek national, the maritime historian, or the political evaluator. For example, it makes a huge difference knowing the name of the Minister, leading the

Ministry in the decision making process. In addition, in order to familiarise the reader with the Greek system, and Greek politics, an overview of the economic, political, and social environment is incorporated in this study.

The literature synthesis is divided into six notional parts: (1) Porter's theory on the competitive advantage of nations, (2) public policy, shipping policy. and governance, (3) the concept of ship registration, (4) the Greek state and the major policy players, the cluster, the European Union and other organisations, (5) the international shipping markets that Greek shipping operated within, from 1975 to 2010, and (6) the Greek ship registry developments alongside the shipping market developments, international events and the Greek political, economic, and socio-cultural environment from 1975-2010. The sections are developed in the sequence as illustrated in Figure 2.

The reason that the research synthesis is divided into six sections is due to the fact that the Greek shipping national policy is a multifaceted issue, being affected by multiple actors involved in governance, and affecting decisions at different levels (Humphrey *et al* 1993, Dubnivk 2005, Stone Sweet and Sandholz 1997). The need for reference to Porter's diamond (Figure 2, BOX no.1), the ship registration (Figure 2, BOX no.3), and the Greek ship registry (Figure 2, BOX no.6), being fundamental to the study is self-explanatory. The state and the actual governors (Figure 2, BOX no.4) are core to the discussion, since they are responsible for governance, and they carry the responsibility to ensure the consideration of public interest (Figure 2, BOX no.2) (Yapa-Senarath, 2014).



FIGURE 2. LITERATURE REVIEW: SYNTHESIS

Source: Developed by the Author (2014)

The Greek shipping related governance issues (Figure 2, BOX no.2) are realised nationally, as well as supra-nationally, and internationally (Roe 2007a), which explain reference to the IMO, the European Union and other organisations (Figure 2, BOX no.4).

The Greek shipping policy formulation depends on the Greek political, economic, and socio-cultural environment (Figure 2, BOX no.6), the Greek state, the market players, the international organisations (Figure 2, BOX no.4). Greek-flagged shipping depends on the derived demand of seaborne trade which explains reference to the international shipping market (Figure 2, BOX no.5) emphasising economic, and political impact.

Since the stages of the research synthesis run in parallel with the process for conducting primary research planning, an overall synthesis plan was developed by the author these included in(Randolph 2009):

- (a) the rationale for conducting the research,
- (b) the hypotheses and research questions setting,
- (c) the mapping for collecting data,
- (d) the mapping for analysing data, and
- (e) the plan for presenting data

The research synthesis is undertaken in four stages; (1) searching for existing research (in both the English and Greek language), (2) collecting secondary data, analysing, (3) interpreting the information, and finally, (4) synthesising the literature.

The primary research synthesis of literature contributed to the establishment of the hypothesis and the objectives (Figure 3). In Figure 3, evidences that the author developed a cyclical procedure, going backwards and forwards in the research synthesis in order to validate the setting of the hypothesis and the objectives As well as demonstrating that all literature available is gathered and considered,.

According to Figure 3, the primary screening of literature is undertaken in order to obtain relevant research in the form of a journal articles, books, and to set the criteria for inclusion and exclusion of the available literature (Cameron and Price 2009).

The same criteria was developed for gathering information, and data, as to the actual content, the validity of the publisher, and the author, the research methods used, and the type of publication, as well as the years and date of collection (Oliver 2012).

Information related to Greek-flagged shipping is limited, mostly in Greek, and there is a difficulty in locating it. The majority of data published refers to Greek-controlled or owned, and not to Greek-flagged shipping.

In addition, it is impossible to separate the two. Since no similar research has been undertaken, the author gathered all relevant information, and data to develop for the first time a literature review on Greek-flagged shipping.

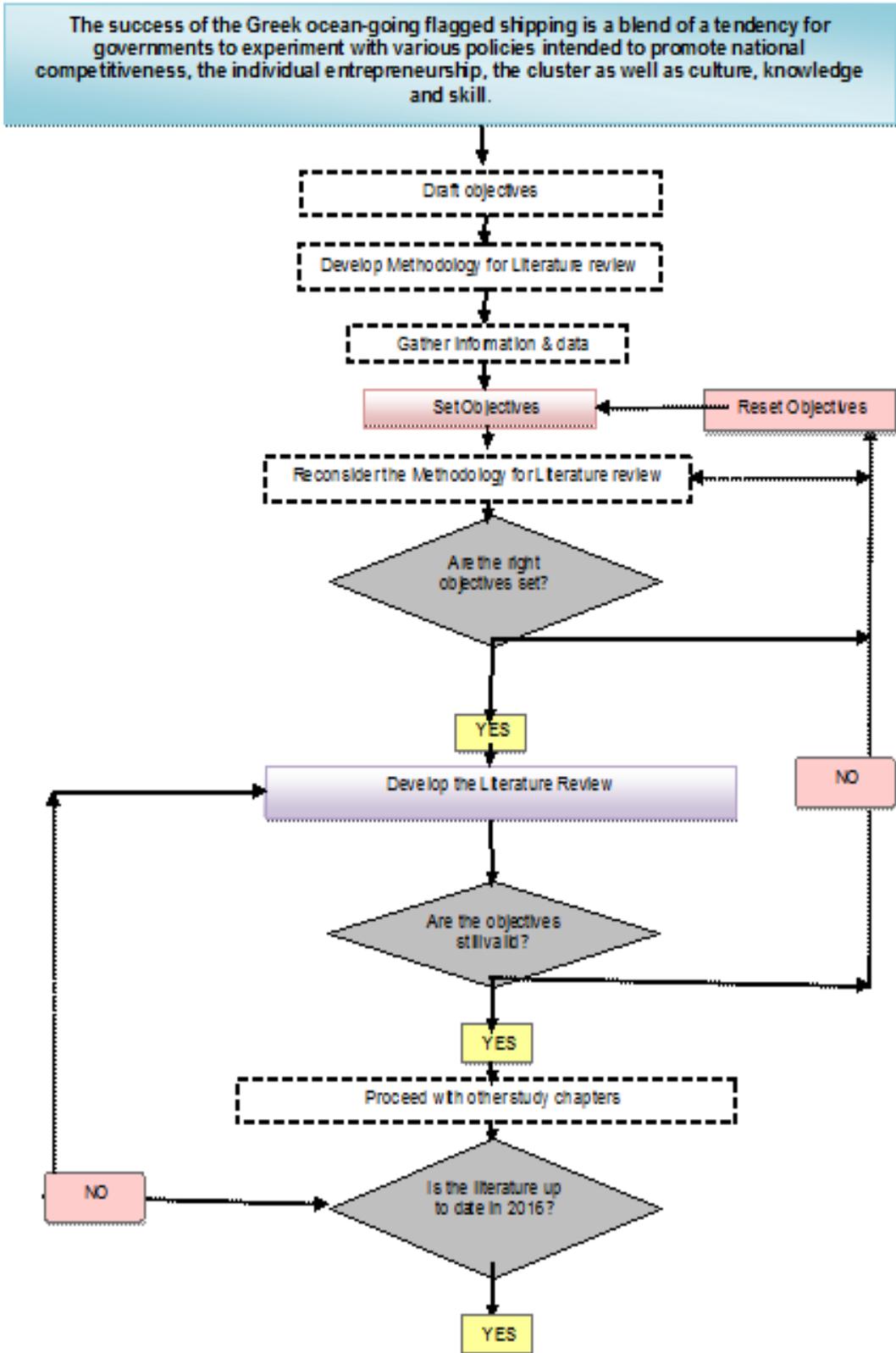


FIGURE 3. LITERATURE REVIEW SYNTHESIS FLOW

Source: Developed by the Author (2014)

Each piece of information is examined, and further discussed taking into consideration all information gathered, and the way it fits to this research. The composition of the research synthesis results in a unique literature review and this fulfils the first objective of this study, and further contributes to the achievement of the other objectives.

2.2 National Competitiveness & Porter's Diamond

2.2.1 From Adam Smith to Porter's Diamond

Although countries do not compete internationally, companies do (Krugman 1994a, Krugman 1994b, Krugman 1995,), the international competitiveness of countries has been a concern (Ketels 2006, Schwab and Sala-i-Martin 2012, Schwab and Sala-i-Martin 2015)

There are several theories developed on national competitiveness. The starting point was in 1776 with Adam Smith, and his book 'The Wealth of Nations'² which emphasises the specialisation and division of labour. This is followed by the neoclassical economists, emphasising investment in physical capital and infrastructure, and finally and more recently, the emphasis is placed on other methods, such as education and training, technological progress, macroeconomic stability, good governance, firm sophistication, and market efficiency. (Porter *et al* 2012, Porter 2003, Schwab and Sala-i-Martin, 2015).

Porter's (1980, 1985, 1990a, 1990b, 1998b, 1998c, 2011) diamond model provides a framework to analyse the competitiveness of a particular industry

² The full title of the book being: "An Inquiry into the Nature and Causes of the Wealth of Nations".

within a country. The hypothesis of this study is based on Porter's theory of the competitive advantage of nations, on what industries nations specialise in, and what the explanation for their international competitive advantage might be. While Barney (1991) and Grant (1991) focus on resource-based explanations, Porter's (1980, 1990) focal point is on purpose industry-based explanations, and the causes of productivity by which companies compete in different countries and regional settings (Ozgen 2011).

The application of Porter's diamond has been used in research examining industry clusters. Establishing that geographic concentration of industry clusters helps ease technology transfer, and innovation (Tan 2006), impacts new business development (Lehtinen *et al* 2006), refers to knowledge institutions (Porter and Monisha 1997, Schwab and Sala-i-Martin 2015), and triggers the opportunity of recognition (Ozgen 2011). The diamond model is also used in establishing the overall national competitiveness of countries (Porter 2011, Herciu 2013), in designing long term development (Mann and Byun 2011), in open and transitional economies (Chobanyan and Leigh, 2006), and in measuring competitiveness (Lin 2011, Moon *et al* 1998). Other studies concentrate on the competitiveness in specific industries, such as the German renewable energy firms in Russia (Dogl and Holtbrugge 2010), the apparel retail sectors in India (Mann and Byun 2011), and Greece (Konsolas 1999, Konsolas 2002), Korea (Jin and Moon 2006), Sweden, South Korea and the USA (Wilson *et al* 2014), Central America (Ketelhöhn *et al* 2015), the successful Canadian resource-based multinationals, foreign subsidiaries and access to the triad market of the United States through the Free Trade Agreement (Rugman and D'Cruz 1993), automotive companies

in different countries (Sledge 2005), the micro credit programmes in Bosnia and Herzegovina (Hamad and Duman 2013), Turkish and Spanish tourism industries (Ozer 2012), a global agribusiness industry in Brazil (Teixeira *et al*/2010), higher education in the UK (Curran 2001), the modelling of optimal city selection for new medical facilities in South China (Lin and Tsai 2010), and has been proved especially applicable to small countries such as Netherlands (Brouthers and Brouthers 1997) ,and Canada (Rugman and D'Cruz 1993).

Schwab and Sala-i-Martin (2015, p.4), in the World Economic Forum report define the overall country's competitiveness as ***“the set of institutions, policies, and factors that determine the level of productivity of a country”***. Competitiveness is related to growth and growth to productivity (OECD 2001). Thus, companies use capital and labour with the aim to be more productive and enable the capability of competing in the world arena. On the other hand, both international trade and foreign investment may be considered at the same time as an opportunity, and a threat. In order to relate productivity to national success, emphasis should be placed on the productivity, and rate of productivity growth in specific industries and industry segments, as well as in how skills and technology are created (Porter 1990a).

2.2.2 How the Diamond of National Competitive Advantage works?

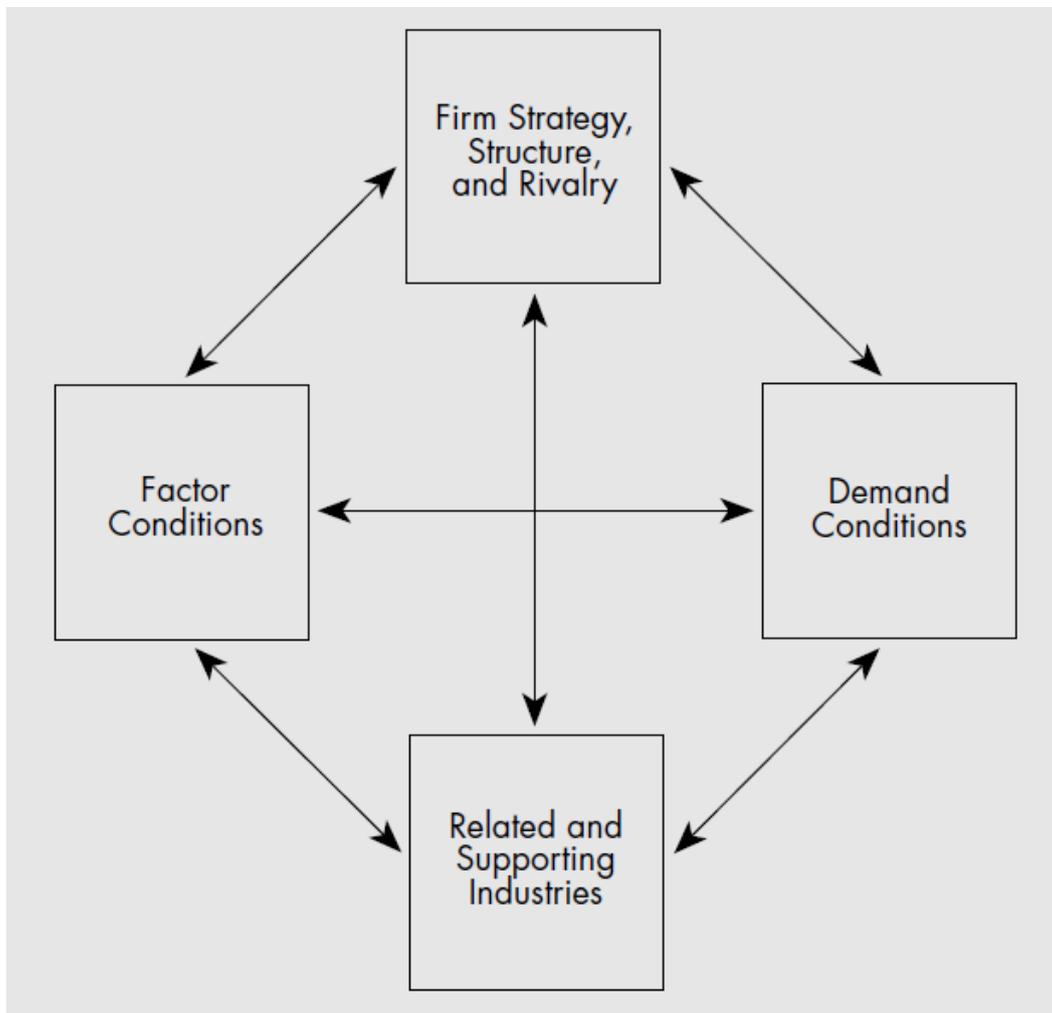
According to Porter (1990a), the reason certain companies in certain countries are competitive is answered by the interrelations and dynamics of certain attributes with emphasis placed on difference and knowledge (Grant

1991). The major distributors of difference and knowledge are the nation's values, culture, economic structures, institution and histories. Those are attributes which cannot be fully copied, and this is a further advantage. At the same time because of these attributes, a nation cannot be competitive in every industry, and choose the most forward-looking, dynamic and challenging (Porter 1990a).

Porter (1990b) establishes that there are certain attributes that determine the national environment in which companies are born, and learn how to compete. The Diamond of National Competitive Advantage model (Figure 4) was developed on the basis that the nation's attributes constitute and determine the diamond of national advantage. Each attribute (factor condition, demand condition, related and supporting industries, firm strategy, structure and rivalry) is interrelated, and as a sole function or as a system is considered as an essential element in the achieving of international competitive success (Porter 1990b).

National competitiveness seems to be a relative concept for Porter (1990), who argues that there is no persuasive theory on national competitiveness or internationally accepted theory and it could be a macroeconomic phenomenon, such as cheap labour. Porter (1990) states that national prosperity is created by the actors of an industry and throughout pressures and challenges companies benefit. This benefit though is backed up by localised processes. The role of government is also crucial, since governments can develop and support particular industries by adopting

policies with the intent to promote competitiveness. (Porter 1980, Porter 1990, Porter 1991, Porter 2011)



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FIGURE 4. DETERMINANTS OF NATIONAL ADVANTAGE: THE DIAMOND OF NATIONAL COMPETITIVE ADVANTAGE – THE 1980’S MODEL

Source: Porter (1990b), p.78

Porter’s original model attributes as illustrated in Figure 4, are presented the Table 4 (in page 50). The updated model of the 1990s (Figure 5), incorporates two other affective sub-determinants, “government” and “chance” (Porter 1990b, 2011). The first additional variable chance (Figure 5) considers exogenous factors, outside the power of influence of companies. Exogenous factors include; national disasters, wars, surge in demand, foreign politics, new inventions, technological discontinuities,

significant shifts of exchange rates and political decisions by foreign governments (Porter 1990, Van den Bosch and Van Prooijen, 1992).

The second additional variable (Figure 5) is the role of government in creating international competitiveness. Porter's (1990) model allows for the government's role to be partial, and indirect working in cooperation with the other diamond's conditions, and creating a favourable environment for the companies to be competitive. Any other approach would result in companies being disadvantaged in the long run, and demand for increased assistance would be created or the legitimate and stimulating role of the government would be lost (Davies and Ellis 2000, Porter 1990a, Smit 2010).

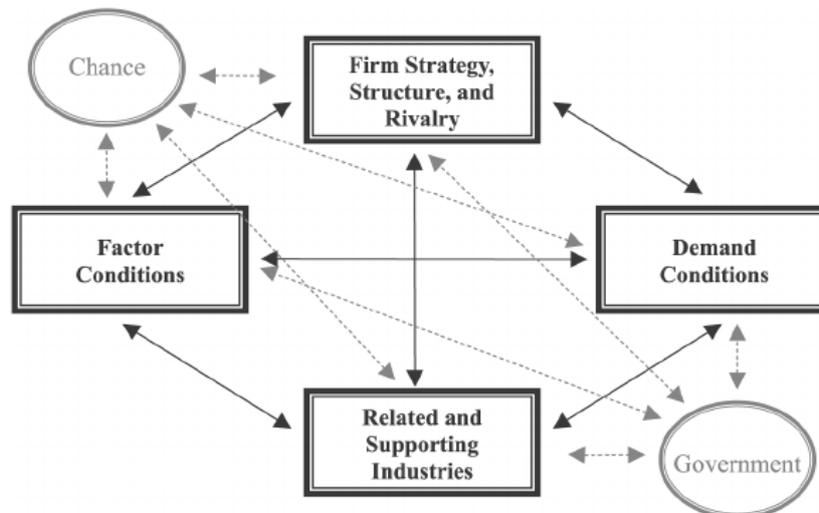
In the long run, the policies adopted by a government should incorporate and encourage change. They should equally promote domestic rivalry, and stimulate innovation. Examples of specific policy approaches provided by Porter (1990) are; focus on specialised factor creation, avoid intervening in currency markets, enforce strict product safety, create environmental standards, sharply limit direct cooperation among industry rivals, promote goals that lead to sustained investment, deregulate competition, enforce strong domestic antitrust policies, and reject managed trade. (Davies and Ellis 2000, Porter 1990a, Porter 1990b).

TABLE 4. PORTER'S ORIGINAL MODEL'S ATTRIBUTES

Conditio	Brief Description	More Analysis
Factor Conditions	The nation's position in factors of production necessary to compete in an industry, for example, factors of production.	The nation in creating the most important factors of productio ³ is the most important factor followed by the trade flow. Companies are provided (within the national environment) with the skill or the allowance of being competitive. The specialized factors of production that a nation has and that that competitor does not commence and it is difficult or expensive to obtain are fundamental to the development of the environment. The nation creates the conditions and this creation factor is important to competition.
Demand Conditions	The nature of home market demand for the industry's product or service.	Home demand is important. The market determines the way companies work towards the buyer. The most important elements for company growth and development are the values and circumstances. Additionally, the nation's values and trends when reaching the international markets can spread.
Related and supporting Industries	The presence or absence in the nation of supplier industries and other related industries that are internationally competitive.	The national advantages needs the backup by the related and supporting industries. That will allow for example for cost effectiveness, efficiency in operations. When the related and supported industries are global players this gives a further push to the national advantage.
Firm Strategy, Structure, and Rivalry:	The conditions in the national governing how companies are created, organized, and managed as well as nature if domestic rivalry.	The national environment and the domestic rivalry develop the patterns companies are set up, organized and managed. Every company is different and adopts differentiated if not unique management practices. These practices and the sources of competitive advantage are the determinants of competitiveness. At the same time, the local rivals and rivalry are stimulus characteristics towards gaining competitive advantage. It is the rivalry that creates pressure for innovation and improvement. In the case of companies, goals reflect the characteristic of national capital markets and the compensation practices of managers. Human resource an individuals is important. The education and career path is chosen by individuals contribute to the nation success. The national provision determines the flow of capital and human resource thus affecting the competitive performance of companies. The locality and the geographic concentration increase the power and intensity of domestic rivalry. Competition gets more personal in such a situation.

Source: Porter (1980, 1990, 1997, 1998a, 2000, 2003), Developed by the Author (2010)

³ Labour, land, labour resources, capital, and infrastructure.



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FIGURE 5. DIAMOND OF NATIONAL COMPETITIVE ADVANTAGE – THE 1990’S MODEL

Source: Porter (1990a), p.127

Reference on the application of Porter’s (1990) diamond model to Greek-controlled shipping is briefly discussed in Harlaftis *et al* (2009), where four elements are distinguished. These include; family run business, business philosophy and organisation, business breaking down, and the networking of business. Harlaftis *et al* (2009) also make reference to the strategies adopted by Greek-controlled shipping such as fleet specialisation.

2.2.3 Criticism of Porter’s Theory

Although research with valid results has been based on Porter’s (1990a, 1990b) diamond model. The diamond model has come under some criticism.

At the time the model was developed the conditions of international business were very different from today. Certain conditions were not fully developed or didn’t exist; the internet did not exist, not the outsourcing of

manufacturing to low cost centres. Equally not in existence were the developments of the BRIC⁴ economies, the central role of the state in the development and competitiveness of newly industrialising countries, the role of multinational companies as a key source of technology transfer and learning, and the role of public private partnerships as a source of competitive advantage (Davies and Ellis 2000).

Further criticism refers to the reduced predictive power of the model, due to the lack of clear definition and determinacy of the four attributes (Grant 1991), lack of attention to the role of national culture (Van den Bosch and Van Prooijen 1992), and that the model is too general (Waverman 1995).

Although the variables of Porter's diamond model are useful in analysing a nation's competitiveness (Porter and Monitor Company 1991, Porter 2011, Crocombe *et al* 1991). Weakness is identified exclusively focused on the home base concept. More specifically in the Canadian case (Porter and the Monitor Company 1991) adequate consideration was not given to the nature of multinational activities, and in the case of New Zealand (Cartwright, 1993) the model could not be used to explain the success of export-dependent and resource-based industries (Rugman 1991).

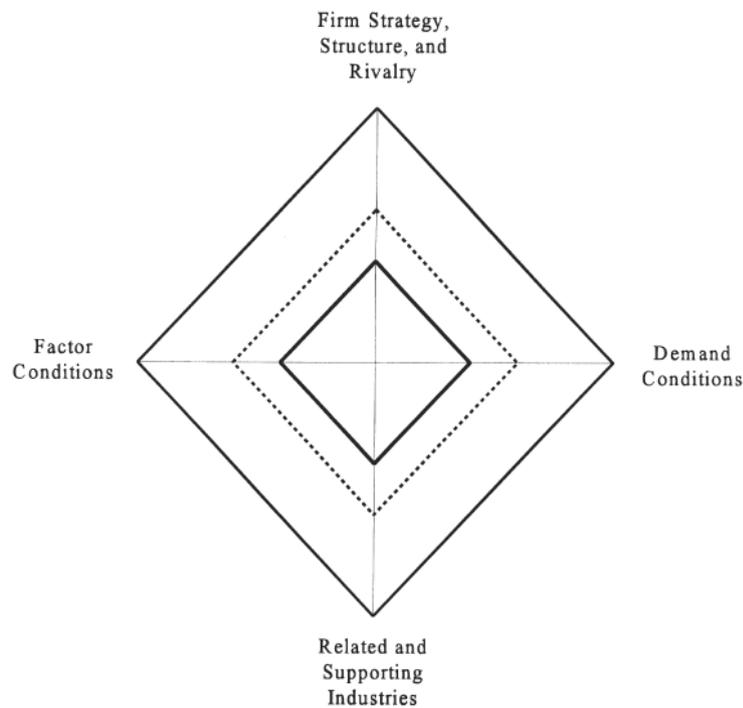
The criticism of the original diamond (Moon *et al* 1998) allowed for further development and extension of the model. Dunning (1992) in modifying Porter's diamond model, treats multinational activities as a third exogenous variable. Further, Rugman and D'Cruz (1993) have developed the double diamond model and suggest that managers build upon both domestic and

⁴ BRIC: Brazil, Russia, India and China.

foreign diamonds to become globally competitive. Moon *et al* (1998) suggest that Rugman and D’Cruz’s (1993) double framework does not fit well for small nations. Further Moon *et al* (1998) have adapted the double diamond framework to a generalised double diamond. The generalised double diamond model is based on the concept that a nation’s competitiveness depends partly upon the domestic diamond, and partly upon the international diamond. The generalised double diamond is presented in Figure 6. The outside diamond represents a global diamond and the inside one a domestic diamond. The size of the global diamond is set within an estimated period, and the size of the domestic diamond varies according to the country size and its competitiveness. Between the two diamonds the diamond of dotted lines is an international diamond which represents the nation’s competitiveness as determined by both domestic and international parameters. The difference between the international diamond and the domestic diamond thus, represents international or multinational activities (Moon *et al* 1995, Moon 1998).

In the generalised double model the national competitiveness is redefined as ***“the capability of firms engaged in value added activities in a specific industry, in a particular country, to sustain this value added over long periods of time, in spite of international competition”*** (Moon *et al* 1998, p.n. 139). The difference between this model and Porter’s model is that (a) sustainable value added activities in a specific country may result from both domestically and foreign owned companies, and (b) sustainability may require a geographic pattern across many countries. Therefore

specialisation combined with location advantages in several nations may complement each other (Moon *et al* 1998).



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INTERNATIONAL BUSINESS REVIEW FIGURE 6. THE GENERALIZED DOUBLE DIAMOND

Source: Moon *et al* (1998, p.n.138)

Daniels (2004), suggests that the existence of the four favourable conditions does not ultimately guarantee that an industry will develop and further Noble (2000) states that foreign companies must have access to market information, production factors, and supplies obtained from operating abroad, since they face more competition. However, if any of these four conditions is missing domestically, companies may remain globally competitive. Noble (2000), also considers as a limitation that Porter's diamond theory is also based on case studies.

The original diamond model has also been further modified to nine-factor model (Cho 1994, Cho and Moon 2000). This model adds four additional human variables: Workers, Politicians and Bureaucrats, Entrepreneurs, and Professionals. The differences with the original model are (a) human variables are considered separately from the physical variables and this provides a clearer perspective on sources of competitiveness, (b) the government variable is incorporated as endogenous in the nine-factor model, and (c) it explains the levels and dynamic changes of economies in less developed or developing countries (Cho *et al* 2008).

2.3 Shipping Polices & Registration

2.3.1 Shipping policies

Traditionally, many nations syllogistically value shipping and thus, adopt shipping policies in order to reflect the national interest (Florence 1975, Sletmo 2001, Danish Shipowners' Association 2010). Shipping policies exist to ensure that all items are included in the social equation, despite market failures. This however, merely explains why policies must be in place they must also be effective. In order to be effective they must be appropriate, directed, and transparent (Roe 2009a, Roe 2008, Torjman 2005)

Roe (2007c) argues that shipping policy making can be equated to a game. The players, the circumstances and the outcome, are the parameters that define the game. The question is who can tell when overall or individual policies are productive and benefit society, after all, policy making ***“is like beauty in the eye of the beholder...”*** (Roe 2007c, p.n. 85)

2.3.1.1 National Policies

“A nation may be said to have a shipping policy when it formulates, or encourages measures to interfere with or control the impact of market forces on the employment of shipping” (Sturmey 1965, p.n. 15). This definition has been criticised for the reference to ***“interference with or controlling the impact of market forces”*** (Sletmo 2001, p.n. 336). National shipping policies were the result of government involvement in shipping (Farthing 1993). Chrzanowski (1979) adds that a national shipping policy is a part of the general economic policy aimed at determining the position of the state towards its shipping sector.

Sturmey (1965, p.n. 15) distinguished short-term measures, that measure to anticipate particular difficulties, and ***“acts of retaliation”*** designed to prevent or secure a change in policy in other countries.

In the 60's, the aims, and objectives of the national shipping policy was (1) to promote and protect the merchant marine, (2) to satisfy national prestige, (3) to fasten trade and communication with other countries, (4) to save foreign exchange, (5) to provide employment for national seafarers or to protect the merchant fleet in times of severe competition, (6) to counter discriminatory practices, (7) to improve the quality of the merchant fleet, (8) to compensate ship-owners for an over-valued exchange rate or other disadvantages (Sturmey 1965). Still, it seems that even today the aims and objectives remain the same, with a more reluctant attitude towards the survival of the national flags.

The methods used in those days to assist shipping were (1) subsidies, (2) direct subsidies for the construction purchase, or improvement of ships, including scrap and build schemes, (3) direct subsidies towards the cost of operating ships, (4) indirect subsidies including, loans at low-interest rates, or interest-free this accelerated depreciation provisions, investment allowances with the exception of income taxation, and other tax privileges, reimbursement of labour dues, pilotage expenses, paid either overseas or in home ports. (4) mail contracts at favourable rates, (5) losses on state-owned fleets or shipyard borne by general taxation (6) payment of freight at above world rates for government cargoes carried under the national flag ships, and (7) flag discrimination (Tennyson 1924) or preference. Additionally (8) preferential treatment in ports including high dues and charges for foreign ships; elaborate documentation for foreign ships; taxes and fees on foreign ships entering ports; taxes and fees imposed on cargoes entering in foreign vessels at higher rates than on cargo entering in nationally owned vessels; priority in berth assignment, or the reservation of superior berths to national vessels, and delays imposed on foreign vessels entering ports by health services, not used by national vessels. Also (9) discrimination in cargoes to be carriers, including bilateral trade agreements limiting the conduct of trade to vessels of the contracting countries; legislation, regulation or informal instruction concerning the carriage of government owned or sponsored cargoes; unilateral assignment of commercial cargo to national ships, either formally or informally; and (10) governmental interference in conferences to obtain entry for national flag ships irrespective of the needs of trade or the possible over-tonnaging of

routes (Sturmey 1965). Sturmey (1965) emphasises that the principal mechanisms for shipping policies are: national requisitions or requirements, subsidies, bilateral agreements and international agreements and conventions. In Table 5, examples of such policies are provided.

In the USA, shipping is considered to be one of the few industries that the federal government has played an active role, since the time of the nation's formation (Jantscher 1974). Measures were taken by the US government to (a) service providing navigational aids, as dredging ports and channels (b) impose regulations, and (c) promote national maritime industries (Sletmo 2001).

TABLE 5. PRINCIPAL MECHANISM FOR SHIPPING POLICIES

National Requisitions or requirements	Denial of access to national shipping markets Restrictions on operations of non-nationals Restrictions on the freedom of non-nationals Extraterritorial application of national laws Restrictions on the prices, charges, conditions for shipping services
Subsidies and other forms of assistance	Investments subsidies Construction subsidies Taxation agreements Beneficial credit agreements than foreigner in the same yards Operating subsidies Income tax and or social security alleviations Political motivated agreements
Shipyards	Straight financial grants or other financial assistance Government sponsored schemes for "selling schemes" Schemes for building ships for stock The promotion of scrap
Bilateral Agreements	Agreement between two countries Protectionism agreements are designed to promote the national fleet 50/50 split 40/20/40 33/33/33 South American Nations and US Other agreements Regional Agreements

Source: Sturmey (1965), Developed by the Author (2011)

Subsidies in general, have been considered to be an important category of policy failures on an international level. That does not mean that all subsidies are negative because of the effects they generate on consumption and production. Subsidies have been implemented with certain objectives and these objectives have changed over time. Consequently, a subsidy is bound to have unintended and often unforeseen effects. The value of subsidies depend on (a) the trade-off of the subsidies contribution to the intended goal, b) their unintended and undesirable impact on the other fleets and economies, and c) the human health and welfare⁵. In practice, it is very hard to assess this trade-off (Van Beers and Van den Berg 2001). Additionally discrimination plays a role, flag discrimination is a discriminatory policy that restricts and even destroys the workings of international shipping and trading (Ademuni-Odeke 1984).

Over the last number of years the European Union, has shown a tendency to exclude shipping from any discriminatory policies. Article 81 of the European Community Treaty prohibits all agreements between undertakings, decisions of associations of undertakings and concerted practices which may affect trade between the Member States and which have as their object or effect the prevention, restriction or distortion of competition within the common market. There is a provision under Article 81(3) for exemption under certain strictly defined conditions. Such exemption can either be on an individual basis (individual exemption) or by category of agreement (block exemption). Article 82 provides that any abuse

⁵ In case of shipping the unintended and desirable impact on human health and welfare is caused by the emission greenhouse gases, contribution to acid, other air pollution, noise and accidents.

by one or more undertakings of a dominant position within the common market or in a substantial part of it shall be prohibited as incompatible with the common market insofar as it may affect trade between Member States (Marlow and Nair 2006).

According to Peeters *et al* (1994), 70% of the value added by the shipping industry actually came from on-shore activities related to shipping. Li *et al* (2007), suggest that in the today's shipping maritime policies can be considered in four categories (Table 6)

TABLE 6. FOUR CATEGORIES OF MARITIME POLICIES

CATEGORY	DESCRIPTION
Direct and indirect financial support:	Includes direct financial subsidy and indirect subsidies in order to increase competitiveness, support specific maritime sectors, e.g. shipbuilding industry, state guarantees, reduced taxation, or elimination of taxation etc.
Administrative, social and legislative measures:	Includes the adoption of measures in order to create a stable economic environment and the creation of "clusters" that increase the productivity of the industry through synergies. There are also included measures for labor conditions, salaries, welfare funds, and flag registration terms in order to match those of the competitors.
Infrastructure development measures:	These include the direction of the necessary funding towards the development of maritime infrastructure.
Cargo reservation measures:	These aim to reserve the cargoes for transportation of a certain nation for the ships flying the flag of the State in order to secure employment.

Source: Li *et al* (2007), Developed by the author (2009)

Is the national fleet more competitive when the right maritime policies are in place?

The flag competitiveness lies on productivity of the fleet, but profitability in shipping is a relative aspect determined by the derived demand and the fluctuations in the freight rates. Thanopoulou (1998) identifies the competitiveness of the fleet being affected by factors such as (1) specialisation of the fleet in the context of demand development patterns;

(2) the technological level of the specific fleet, (3) fixed factors as determined by (a) differences in acquisition prices and timing of the investment, (b) ways and terms of financing, (c) average duration of exploiting of ships, and (4) variable cost factors affected by policy measures such as taxation, subsidies, arbitration, manning scales, foreign seaman's quota. **Further**, Thanopoulou (1998) suggests that the declining financial performance of vessel operations seem to allow for government intervention on the form of measures to reduce manning costs, but she emphasises that the role of governments should be to ensure the framework within which, ship-owners operate and to make up for financial mistakes. Goulielmos (2001) adds that the shipping policy of a state should not affect the decisions of the ship-owner, as to what he will do and when he will do it, but to regulate the framework.

According to Grinter (2007) supporting flags and making flags competitive and viable can be found in all countries. For example, Singapore operates the Approved Shipping Logistics Enterprise Scheme to use Singapore as a base for the provision of ancillary logistic services⁶, and the Block Transfer Scheme offered volume discount for ship registration fees. The Hong Kong Shipping Register introduced a range of schemes to attract quality tonnage, among them a 6-month annual tonnage charge reduction scheme every 2 years provided their ships have not been detained. (Grinter 2007, Price Water House Cooper 2006, Danish Ship-owners Association 2007)

⁶ which offers a 10% concessionary tax rate for a 10-year period

2.3.1.2 Does globalization imply the end of national policies?

According to Roe (2007b), shipping is a highly international industry working in an increasingly globalised environment. Policy making in shipping continues to be formulated within a traditional nested hierarchy of jurisdictions. Decision making of different jurisdictions with regard to registration, has an effect only if it refers to fiscal and financial incentives. Sletmo (2001) states that (a) the national policy becomes international, when it takes under consideration, what other flags are doing for their fleets and also that (b) the national shipping policy is coming to an end.

According to Selkou and Roe (2004) and Roe and Selkou (2006) since the introduction of the four Council Regulations in 1986⁷, the EU has developed an important and comprehensive set of common binding rules in the maritime transport sector. According to Sletmo (2001, p.n. 333), **“globalization is often said to be the triumph of makers over governments”**. For example, due to globalisation ship-owners can register their ships under a flag of convenience such as the flag of Panama and Liberia. They are not requested to be Panamanian or Liberian citizens since there is no “genuine link” and all gain by the free trade. Sletmo (2001) further argues that national shipping policy is, or should be dead since managers are able to fulfil global responsibilities, and act accordingly (Sletmo 2001). Global trade is mostly deregulated, in the sense that flags of convenience offer the same service traditional flags offer but they are cheaper.

⁷ The first regulatory package for European shipping and the turning point in systemized EU shipping policy.

Still, there remains reasons/externalities in having a national maritime policy such as (1) the infant industry argument; (2) import substitution in order to develop new industries in developing countries; (3) shipping capacity is needed to carry trade; (4) contribution to balance of payments; (5) defence purposes; and (6) the need to be present in international organisations in order to participate in international policy decisions (Goss and Marlow 1993).

Sletmo (2001) suggests that shipping policy must be placed squarely in the global trade perspective, and adds another point, to the Goss and Marlow (1993) six factors/externalities. The enabling of world trade and at the same time to protect the safety of seafarers and the environment. Further Sletmo (2001) argues that it is not whether to have a shipping policy, but which shipping policy to have since private enterprises always depended on the policy framework governments set. For example, in the Middle Ages, pirates received licenses to operate, as long they committed themselves not to attack ships flagged with the national flag (Beckman 1945).

The literature reflects that, in most cases shipping capability equals power, power to influence, to control, to develop, and to progress. That does not mean that a maritime nation may or may not be a maritime power, since maritime power is built on a policy of creating power. It is historically proven that most nations consider sea and shipping as a source of livelihood. Greece and Norway are considered to be free traders surrounded by strong fleets (Harlaftis, 1993, 1996). The globalised shipping environment places severe limits on a country's ability to pursue national policies in global

markets (Sletmo 2001, Goulielmos 2006). On the other hand, Iheduru (1996) supports the need for national policies for shipping, as he considers them a key source of influence in world politics and a key instrument. Still, there is an extent that national policies can affect foreign policies in order to anticipate, protect, or over protect their industries due to the internationalisation of the market. Thus, some nations in order to protect their own, end up having a shipping sector that is highly regulated (Sletmo 2001).

Shipping is considered to be a highly regulated industry with policies that seem to have failed significantly during the last 25 years (Roe 2009b, Roe 2009c, Roe 2010a, Roe 2010b, Roe 2012, Nordquist and Moore 1999). There are examples of inconsistent policies being applied to shipping coupled with problematic relations with the European Union (EU), the International Maritime Organization (IMO), and the Organization for Economic Cooperation and Development (OECD). EU members are member states to IMO. Problems in policy making for the shipping industry are raised when the EU adopted single representation with the IMO. The EU argues that this will allow its member states to have a balanced and strong say in the IMO, in reply to the US pressures. That argument remains widely unsupported by member states and the IMO (Roe 2009b, 2009c, 2010b). Problems reflect in the difficulties with the hierarchical dimension in policy making for an international industry that incorporates different trading zones and blocs (Roe 2013). According to Roe (2007a) examples of policy conflict emerged with disputes between the European Union (EU) and the International Maritime Organization (IMO), industry representatives, and

various nation states on issues like tanker safety, taxation regimes, subsidy, vessel construction regulation and representation across jurisdictional regimes. An example that reflects this is within the EU the safety issues that arose with the introduction of the Oil Pollution Act in 1990 by the USA. While the IMO had already developed relevant regulations (MARPOL), and they had announced plans for auditing (subject to STCW). Many EU countries disputed these moves by the IMO as being intrusive of individual governments. Globalisation has altered the role of the state alongside maritime policy but it cannot be said that the role of the state is obsolete (Roe 2013).

The structure of policy making and implementation is dominated by jurisdictional considerations (Stone *et al* 1997). Globalisation brings forward the concept of multilevel governance (Humphrey *et al* 1993, Roe 2007b, Yapa-Senarath 2014, Roe 2007a, Roe 2007b, Roe 2007c) and tops up the jurisdictional policy issues (Roe 2007a). The United Nations (UN) and OECD set the broad policy contents on an international level, and the member states consider policy implementation locally. Whereas, the IMO forms policies and sets regulations with the consent of states, then the states must incorporate these regulations into their legislation. Thus, the policies will be delivered to the lowest levels of jurisdiction (Roe 2007c). The importance of multilevel governance becomes obvious for the member states of the EU. Hatzaras (2005) connects multi-level governance with the growth of the EU. Whereas Hooghe and Marks (2003), stress that the structures of multilevel governance are ill-defined, and these jurisdictions must change in terms of numbers, and character. On the other hand Pallis

(2006) argues that the concept of polycentric governance becomes a viable alternative. Where the responsibility of each layer of jurisdiction is the responsibility of agreeing, implementing and enforcing policies relevant to their level and allows crossing of many boundaries (Pallis 2006). Marks (1993), points out that multilevel governance can go beyond the territorial definition, and Pallis (2006), stresses that multilevel politics must go hand in hand with multilevel governance. Additionally, Pallis (2006) emphasises the incorporation of private interest, in a fluid economic environment, operating through a non-hierarchical informal network of actions. Roe (2001), emphasises the need for multi-level governance in shipping but believes in nation states remaining central to shipping policy determination. The models of multi-level governance that do not concentrate upon strict jurisdiction delineation are not appropriate (Roe, 2001). In practice, the mismatching of policy making and enforcement authorities causes problems in country. Finally, Roe (2001) develops a guide for the development of shipping policies that contains four points, policies should (a) take into account jurisdictional constraints without being entirely constrained by them; (b) be characterised by flexibility; (c) allow jurisdictional definitions to change with circumstances; and (d) facilitate the redefinition of jurisdictions.

2.3.2 Ship Registration

2.3.2.1 Registration

Registration means *“the entering of a matter in a public record”* (Ready 1994, p.n. 25). Hart *et al* (1993), refer to the rule of international maritime law where a ship must be registered under the law of the state and fly the flag of that state in order to gain the advantages of nationality. Further,

under this law, all nations have unrestricted access to the high seas subject to rules which allow ship-owners to exercise this freedom (Coles and Watt 2009).

Laws that state the right of registration are the 1982 Law of the Sea Convention, and 1986 United Nations Convention on Conditions for the Registration of Ships. The first, in Art.91.1 states: ‘***Each State shall fix the conditions for the granting of nationality to ships, for the registration of ships in its territory, and for the flight of its flag. Ships have the nationality of the State whose flag they are entitled to fly...***’ which is similar to Art.8 of the latter (Treves and Pineschi 1997).

The fundamental importance of the law of the flag is provided in the decision taken in 1953 by the US Supreme Court for the case Lauritzen v. Larsen which states that “... ***Each state under International Law may determine for itself the conditions on which it will grant nationality to a merchant ship, thereby accepting responsibility for it and acquiring authority over it***” (p.n. 345).

The flying of the national flag is the visual evidence, and symbol of a ship’s nationality. The 1982 Geneva Convention on High Seas, article 2, states that a ship will have the nationality of the State with the flag they are entitled to fly. By using the term ‘flag’, reference is made to the allocation of nationality to the vessel, and the assumption of exclusive jurisdiction and control by a State over the vessel. A stateless ship has no protection under international law (Churchill and Loewe 1988, Mansell 2009).

States that want to register ships under their flag must undertake the obligation (Corres and Pallis 2008, Porter 1994) to ensure that the ships are subject to its effective jurisdiction and control and they must or usually provide fiscal and legal regimes, bilateral or multilateral agreements, manning requirements, and jurisdiction (Table 7) (Ready 1994).

TABLE 7. FIVE POINTS TO REGISTRATION

Points	Explanation
Fiscal regimes	for example tax exemption, foreign exchange control, fees etc
Legal regimes	for example limitation of liability, mortgage laws, litigation laws, ownership requirements
Bilateral or multilateral agreements	which give special rights to its ships (for example Cargo sharing, taxation, e right of entry)
Manning requirements	for example nationality, recognition of certificates, manning scale, wage scales
Jurisdiction	the state must ensure that the ships under its flag are subject to its exclusive jurisdiction on the high seas ships have jurisdiction under the state's internal law over each ship and its master, officers, and crew in respect of administrative, technical and social matters concerning the ship.

Source: Ready (1994, Developed by the author (2009)

Ready (1994) explains that states have developed, or adopted laws, and regulations covering the standards of construction, equipment, and survey of their ships; the manning of ships, labour conditions, the training of crew, safe navigation of ships, reduction, and control of marine pollution, and investigation of casualties involving their ships (Ready 1994).

2.3.2.2 Factors Governing the Shipowner's Choice of Flag

The ship-owner's choice of flag is determined by the economic, and political initiatives the country concerned offers. These initiatives rest on the legal framework of the registry itself, and the legislation of the country to which the vessel belongs. As well as financing and access to capital markets,

subsidisation, operational costs, taxation, the reputation of the flag, and legal advances. The flag itself denotes nationality, legal regime, jurisdiction, and control over the vessel and the crew. (Ready 1994, Spruyt 1994)

Thus, it is derived from the literature that the selection of a flag has a great impact on the running costs of ships, as it affects crew wage levels, ships' maintenance, level of taxation etc. The role of the flag is also underlined by the increased competition in shipping that calls for the minimisation of costs in order to survive.

A ship-owner's decision to choose a flag is based not only on economic factors (Ready 1994, Spruyt 1994), but equally on: political, strategic, defensive, legal and institutional factors imposed by for example banks and insurers (Stopford 2009a, Goulielmos 1998).

In order to choose a flag, a shipowner considers the 3 main factors depicted in Table 8 (Ready 1994, Stopford 2009a, Spruyt 1994) and are illustrated in Table 8.

TABLE 8. FACTORS OF CONSIDERATION FOR REGISTRATION

FACTOR	BRIEF EXPLANATION
Cost	registration fees and annual tonnage taxation
Acceptability	not every flag is welcomed in every country
Commercial or political reasons	why a particular flagged vessel should be used in a particular trade

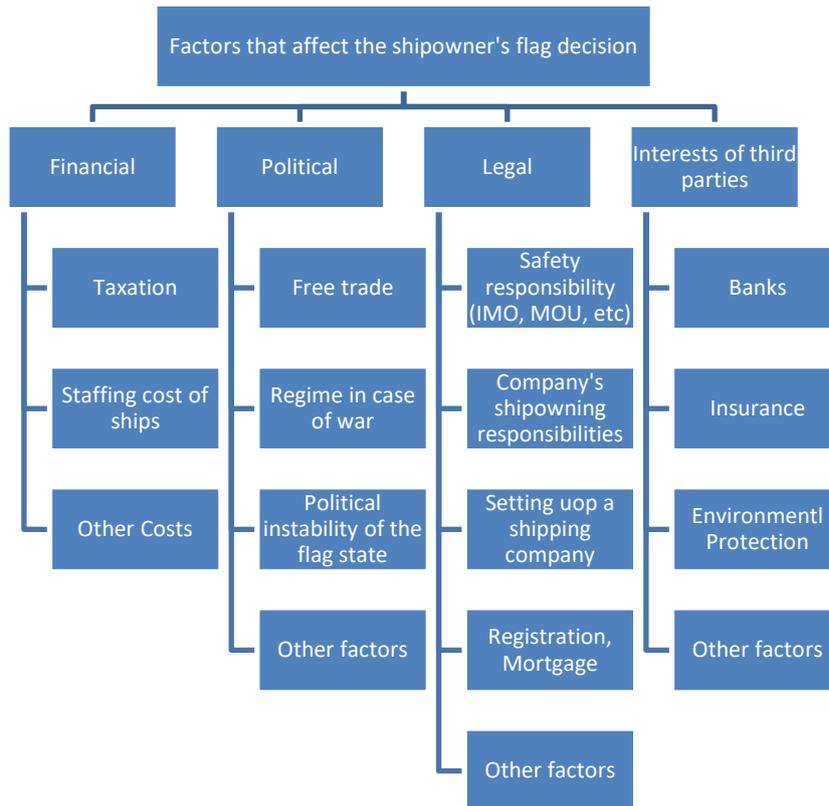
Source: Ready (1994), Developed by the author (2009)

The choices available to ship-owners, who do not wish to register their ships under their own flag, are to use either an off-shore register or a flag of convenience (Mansell 2009). According to Goulielmos (2001) the factors that affect the decision can be categorised into four areas. These are; financial, political, legal, and interests of third parties and are presented in Figure 7.

Goulielmos (2001) refers to taxation and applies the factors in Table 7 to the Greek flag⁸. Noting that registration of a ship in the national register automatically enters the ship into the taxation system of the state. This applies internationally in the USA, United Kingdom, Japan, Norway, Spain, and Sweden.

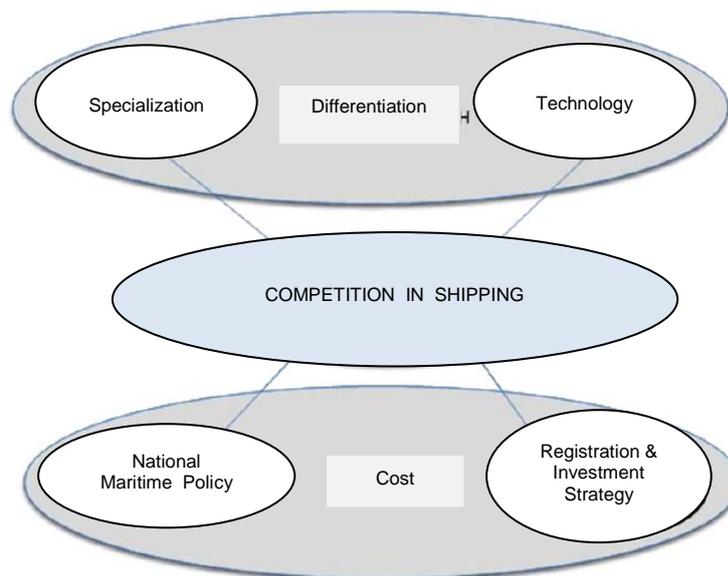
Thanopoulolou (2002) further verifies the effect of external factors affecting the bulk sea trade, and Harlaftis *et al* (2008) state the competitiveness of fleets in such seaborne trades is determined (as presented in Figure 8) by differentiation (through technology and specialisation) and cost (defined by national maritime policy, registration and investment strategy). Emphasis is placed on the cost determinant affected by the national maritime policy, and the registration terms being directly related to the variable cost, along with the terms and conditions of financing, which form the fixed costs of the business (Harlaftis *et al* 2008).

⁸ Further discussion on taxation is undertaken latter on this chapter at The Greek Ship Registry.



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FIGURE 7. SETS OF FACTORS THAT AFFECT THE SHIP-OWNER'S CHOICE OF FLAG
 Source: Goulielmos (2001), p.n.257, Translated from Greek into English by the author (2013)



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FIGURE 8. FLEET COMPETITIVENESS' DETERMINANTS
 Source: Harlaftis *et al* (2009), p.n. 34. Translated from Greek to English by the author (2012).

2.3.2.3 Flagging out

Ship-owners in the ocean going trade gain power from capital mobility and flagging out (Aspinwall 1996). At the same time the globalised nature of shipping creates problems with the increased use of flags of convenience, and flagging out (Roe 2007b). Flagging out is associated with the flags of convenience, as well as other flags and this is commonplace (Economist 2007).

Flagging out is primarily related to ship-owners attempting to minimise costs (Downard 1994). By placing the vessel under a relatively lower cost regime, and considering the crew cost differences between selected EU flags, and lower-cost flags of convenience (Bergantino *et al* 1998). Financial considerations, and the economic environment are key aspects of the ship registration process. Whereas the priorities of ship-owners' flagging selection process are that of tax-related expenses, and bank finance opportunities. While increased expectations in Port State Control inspections, are also considered. In this case, the age of the ship and flexibility in tonnage seem to be significant factors (Celik and Kandakoglu 2012).

Bergantino *et al* (1998) state that there are various factors that affect the choice of the flag on tankers and general cargo vessels. Stating the reason ship-owners flag is not just related to costs, and restrictions on operating freedom (crew costs, availability of skilled labour, search for less external control, high compliance costs of flagging back in, and fiscal reasons). Consideration is also given to the age of the vessel, the trade it is engaged

in, basic wage, repair and maintenance costs, national insurance payments, and training costs.

Since 1973 to 1986 the OECD fleets and Japan have lost 20% of the total fleets (Thanopoulou 1998). From 1981 to 1987 the severe shipping crisis has forced almost all European maritime nations including Greece, to flag out to percentages that vary from 50% to 95%. Greek shipping in 1980 had almost 80% of the tonnage (GRT⁹) under the Greek flag. While in 1997 this fell to 38% (Goulielmos 1998). In 2010, 69% of the Greek-owned fleet was registered under a foreign flag (UNCTAD, 2010). There are a number of factors that determine the decision to flag out if low freight weights were a factor then ship-owners would return to their national flag once the rates go up, but they rarely do (Goulielmos, 1998). Although shipping is a globalised industry, the links to national economies are reflected in registration (Haider 2013).

Retaining the fleet, and the national shipping industry depends on a country's comparative advantage. This is governed by a number of country-specific factors relating to the financial system, international trade, cost advantage, shipping policy, shipping history, shipbuilding capacity and technological advancement.

The cost advantage is considered to be the most influential in retaining the fleet (Nguyen 2011). Luo *et al* (2013), in their study on the behaviour of decision-makers with regard to ship registration and flagging out emphasise

⁹ Gross registered tonnage is a measurement of volume of all enclosed spaces on a ship with 100 cubic feet = to one ton.

the differences between the traditional registries, flags of convenience and quasi flags with respect to the traditional flags. The flags of convenience are differentiated from the quasi flags and the traditional flags by efficient safety control without giving up the benefits provided to ship-owners.

The behaviour of states, flags, and ship-owners determine not what a state offers but also affects the decisions made by the competitor and what he offers. Hoffmann *et al* (2005) suggest that there is a tendency for older vessels and not International Association of Classification Societies (IACS) classed ships to be nationally flagged as opposed to foreign flagged. Luo *et al* (2013) adds that vessels flagging out from traditional registries tend to be high-quality ships, and this is evidenced by the ship classification certificate. Luo *et al* (2013) states that ship-owners are more inclined to flag out due to trade flexibilities, and lower operating costs. The behaviour of the state depends on the policy aims and objectives and further it is suggested that if the state's aim is the income derived from feet registration then, a viable solution might be the induction of its own second register.

Celik and Topcu (2014) identify from their research on the Turkish National Ship Register, ten elements that should be incorporated as short and long term strategies in order to anticipate flagging out, (see Table 9).

TABLE 9. TEN STRATEGIC ELEMENTS AS SOLUTION TO THE FLAGGING OUT PROBLEM

No.	Element
(1)	Enhancing the bank finance opportunities ship-owners.
(2)	Reducing the tax-related expenses on ship management process.
(3)	Arranging flexible payment options for existing capital and insurance costs.
(4)	Reducing the cost of the manning process such as certification, documentation, an implementation.
(5)	Improving the existing auditing mechanism to enhance the safety standards and requirements in operations on-board ships.
(6)	Increasing the number of qualified seafarers who are being employed in the shipping sector to prevent personnel shortage in this sector.
(7)	Reducing the level of bureaucracy during implementation of the process to the acceptable level by establishing a new implementation system; particularly based on information technology.
(8)	Enhancement of flag state prestige at port state controls to verify the degree of control.
(9)	Improving the comparative advantages of the country by emphasizing the geographic location and strategic importance of Turkey in the transportation network.
(10)	Cooperation with the related stakeholders and NGOs to improve environmental culture in shipping industry.

Source: Celik and Topcu (2014), Developed by the author (2015)

2.4 The Greek State, the market stakeholders and the international organisations

The outcome of the literature discussion to this point suggests that shipping policy is affected by endogenous factors (the state and the home practitioners – home based cluster) and exogenous factors (the world economy, the seaborne trade, other organisations, other countries and flags). The state regulates policy, and the major players in the policy formulation are primarily the ship-owners and then the seafarers followed by the cluster.

2.4.1 The State

The Greek government intervention is evidenced in all Greek shipping sectors, as the ocean going sector (Goulielmos 1998). This study focuses on the policies which apply, and affect the Greek-flagged ocean-going sector, but it must be noted that the ocean sector is almost impossible to organise, and police (Corres 2007).

Greek maritime policy, as it stands is based on the dynamics of the nation's shipping industry, and the EU effect since the accession of Greece to the EU in 1981. The overall Greek shipping policy seems to be traditionally based on two main pillars, which are (a) the creation of a stable legal environment and (b) the application of the principles of free competition in shipping.

As to the international policies adaptation, the attitude of the Greek State is that it does not matter what the measure adopted is as long as it is adopted globally. The reason behind this doctrine is the fact that the Greek ships act as cross traders and any unilateral legislation creates a barrier to entry in the market and a competitive disadvantage for Greek vessels. (Goulielmos 1998).

The Greek national shipping policy is aimed at determining the sector's impact on the national economy. It is also desirable by any state to be able to influence the international markets and freights, although this is the most difficult as the forces of demand and supply cannot be easily influenced (Goulielmos 1997).

The Greek shipping industry is characterised as being well organised and influential, both domestically and internationally with a strong commitment to quality (OECD 2010). The fundamental responsibilities of the Greek state are presented in the Table 10 (Corres 2007).

TABLE 10. THE FUNDAMENTAL RESPONSIBILITIES OF THE GREEK STATE

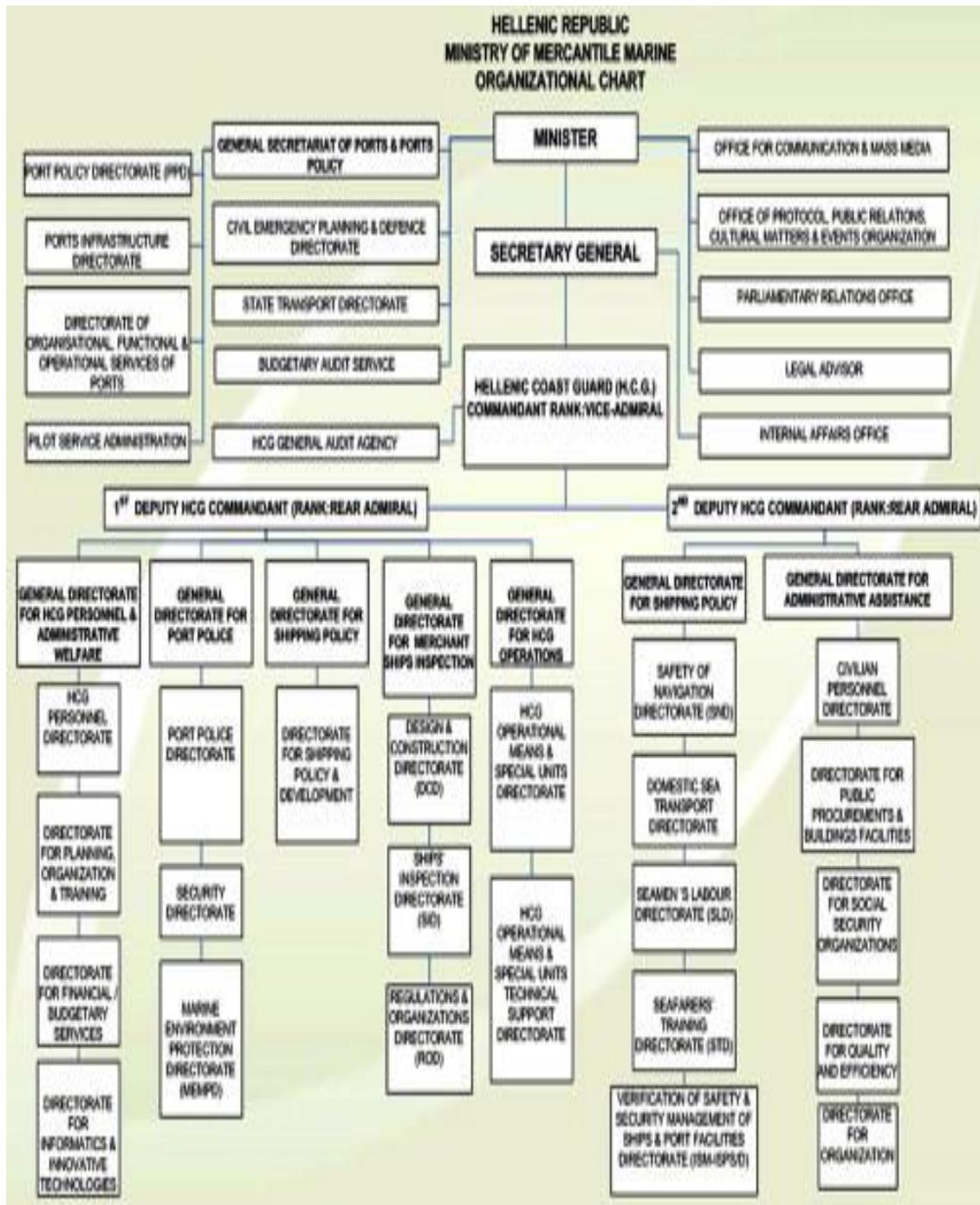
No.	Responsibilities^a
1	Running the Greek Registry and flag
2	Preparations of laws and decrees of the Greek Parliament
3	Representation in international policy formulation
4	Maintenance of the Registry of Law 959/79 companies
5	Liaise with the private sector through the Hellenic Chamber of Shipping
6	Fundamental objectives of the policy
7	Attraction of school leavers to the nautical profession
8	Running of the Marine Academies
9	Maintenance of a register for the marine service of officers and crew
10	Maritime courts for serviceman and seaman
11	Supervision of the Seaman's Pension Fund and related institutions
12	Policy watch of ships, ports and sea space and national borders
13	Supervision of the management of the Greek ports

Source: Corres (2007), Developed by the author (2011)

The importance of shipping for Greece is obvious just by the establishment of a government agency, the Hellenic Ministry of Shipping (hereafter Ministry of Shipping)¹⁰ having a wide range of responsibilities that no other agency has (Corres 2007). The Ministry of Shipping performs tasks such as: coast guard duties, flag obligations, traffic control in Greek ports, and management of ports. It is also considered to be a hybrid between the military and a civil department of the state (www.yen.com). Most importantly it represents Greece at international forums, at the International Maritime Organisation, the European Union, and their constitutional bodies and committees (Corres 2007).

As presented in Figure 9, the Ministry is a vertically organised body with the Minister on the top of the hierarchy, who is also a member of Parliament. The Ministry has always been under the threat of falling victim to another ministry's expanding nature.

¹⁰ Although the Ministry has changed several names hereafter it will be referred to as the Ministry of Shipping in order to avoid confusion.



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FIGURE 9. MINISTRY OF SHIPPING: ORGANIZATIONAL CHART UP TO 2007

Source: Corres 2007, p.n. 224, Ministry of Shipping 2017 (in Greek)

<https://www.yen.gr/web/guest/organose#>

The Ministers that served since 1977 are presented in Table 11.

TABLE 11. GREEK SHIPPING MINISTERS, 1977-2010

Name	Duration of Service		Political Party
	From	To	
Emmanouil Kefalogiannis	28 November 1977	10 May 1980	New Democracy
Ioannis Fikioris	10 May 1980	21 October 1981	New Democracy
Efstathios Yiotas	21 October 1981	5 July 1982	PASOK
Georgios Katsifaras	5 July 1982	5 June 1985	PASOK
Gerasimos Arsenis	5 June 1985	26 July 1985	PASOK
Efstratios Alexandris	26 July 1985	23 September 1987	PASOK
Evaggelos Giannopoulos	23 September 1987	18 November 1988	PASOK
Vasileios Sarantis	18 November 1988	17 March 1989	PASOK
Antonios Dedidakis	17 March 1989	2 July 1989	PASOK
Aristotelis Pavlidis	2 July 1989	12 October 1989	New Democracy
Nikolaos Papas	12 October 1989	11 April 1990	National unity government
Kosntantinos Mitsotakis	11 April 1990	1 October 1990	New Democracy
Aristotelis Pavlidis	1 October 1990	3 December 1992	New Democracy
Alexandros Papadoggonas	3 December 1992	13 October 1993	New Democracy
Georgios Katsifaras	13 October 1993	22 January 1996	PASOK
Kosmas Sfyrios	22 January 1996	25 September 1996	PASOK
Stavros Soumakis	25 September 1996	13 April 2000	PASOK
Christos Papoutsis	13 April 2000	24 October 2001	PASOK
Georgios Anomeritis	24 October 2001	7 July 2003	PASOK
Georgios Paschalidis	7 July 2003	10 March 2004	PASOK
Manolis Kefalogiannis	10 March 2004	19 September 2007	New Democracy
Georgios Voulgarakis	19 September 2007	13 September 2008	New Democracy
Anastasios Papaligouras	13 September 2008	7 October 2009	New Democracy
Louka Katseli	7 October 2009	7 September 2010	PASOK
Michalis Chrisochoidis	7 September 2010	30 September 2010	PASOK
Giannis Diamantidis	30 September 2010	27 June 2011	PASOK

Source: Several series from Naftika Xronika, Developed by the author (2012)

The Ministry, with the quasi-military coast guard developed policies in the form of laws and regulations. It was always under the threat of being merged with another Ministry, transport, environment and economics were considered (Corres 2007). The Ministry has changed names, merely

because it has been either integrated into other ministers or other functions were added to it (Table 12).

TABLE 12. SHIPPING MINISTRY- SOLE & MERGED

THE MINISTRY	TIME PERIOD
Ministry of Mercantile Marine	up to 2007
Ministry of Mercantile Marine, the Aegean and Island Policy	2007-2009
Ministry for the Economy, Competitiveness and Shipping	2009-2010

Source: Several series from Naftika Xronika, Developed by the author (2012)

The Greek coast guard was always an integral part of the Ministry of Shipping. The presence of the Greek coast guard in the Ministry of Shipping assisted the political leaders (Ministers and General Secretaries) into the formulation of policy. This presence developed power for the Greek coast guard. The political parties had the control the succession of officers and their changes in the hierarchy (Corres 2007).

2.4.1.1 Ship owning or ship-owners' unions

Ship owning or ship-owners' unions are the professional organisations that prevail the interests of ship owning companies. Their members are companies or vessels. Former Greek Coastguard members after retirement are employed by the unions to manage them, which is considered as a political move to allow the unions to have access and networking in the Ministry of Shipping (Corres 2007). The ship-owners' unions have two roles acting as interest groups, which promote collectively the interests of their

members, and as secretariats that are responsible for informing their members. (Corres 2007).

The Union of Greek Ship-owners was established in 1916 and strictly represents the interests of the deep-sea sector, and does not include the owners of passenger or small cargo vessels. The Union represents the Greek ship-owners in their relations with the State, the Ministry of Shipping, and the seafarers' organisations, as well, as in any organisation, ensuring the protection and promotion of the interests of its members (Ronit 1995).

Greek ship-owners concerns are the attraction of new seaman; training and certification; representation at policy meetings abroad, and the running of the flag and ports (Corres 2007). They represent their interests at the IMO, EU and all shipping related organisations and forums. The ship-owners political expectation from the state are presented in Table 13.

TABLE 13. WHAT SHIP-OWNERS EXPECTATIONS

1	Greece to become more shipping influential power in the EU and the world, which it is not the case, as for example, Greece although in EU presidency, in 2003 did not manage to postpone the face out of the single hulls.
2	Greece to support them and do not allow for measures to be taken after any other accident or terroristic attack takes places, with no full investigation.
3	Closer coordination with the EU.
4	Do not allow the double hull legislation to apply to bulk carriers.
5	Avoid regional solutions that decrease the competitiveness of the fleet, for example, transparency issues rose from ISPS that was applied alongside the Olympic Games.
6	Consulting the ship-owners before agreeing on IMO regulations
7	Shipping is overregulated and this needs to be considered by central decision-making organisations .
8	EU and State aid for shipping
9	The crimination of seafarers and shipping activates must not be adopted in the EU.
10	Review of Basil II agreement, which makes small companies vulnerable when small companies represent the 80% of the Greek shipowning companies.
11	Modification of the US tax reform of 1986, to support the Greek interest involved in trading with the US.

Source: Several series from Naftika Xronika, Goulielmos (2001), Developed by the author (2010)

At an EU level, in 1962 the European Community Ship-owners Association (ECSA) was established. This association, which is based on EU membership, represents collectively the interests of ship-owners and it has been argued that it is an individualistic secrecy regarding commercial practices (Ronit 1995). The Union of Greek Ship-owners is the only ECSA member from Greece (Corres 2007).

2.4.1.2 Seafarers' Union

The PanHellenic Seaman Federation (PSF) represents several seafarers' federations¹¹ (Panhellenic Seaman Federation 2011).

The Federation collectively protects, and promotes the interests of seafarers, but the association represents specific rank, and equally protects and promotes the specific interests of the rank.

2.4.1.3 Greek Chamber of Shipping

The Hellenic Chamber of Shipping has the role of advising the Ministry of Shipping. It is a governmental organisation, and its members are all ship-owners with vessels under the Greek flag. It represents a number of unions¹².

¹¹ Pan-Hellenic Association or Pan-Hellenic Union of Merchant Marine Captains, Pan-Hellenic Union of Merchant Marine Engineers, National Association of Internal Combustion Engine Engineering Merchant Navy, Pan-Hellenic Union of Merchant Marine Radiotelegraph Radioelectronics, Hellenic Association of Finance Officers of Merchant Marine, Pan-Hellenic Union of Merchant Marine Carers, Pan-Hellenic Union of Merchant Marine Electricians, Pan-Hellenic Union of Merchant Navy Seaman, Pan-Hellenic Union ratings Merchant Marine Engine "The Stephenson", National Union chamberlain chambermaid Merchant Marine, Pan-Hellenic Union of Merchant Marine Naftomageiron, Pan-Hellenic Union of Merchant Marine Personnel Supply, Pan-Hellenic Union of Captains Minutes and Rulers Merchant Marine, Pan-Hellenic Union sailors M / S - P / K - O / C.

¹² Union of Greek Ship-owners, Hellenic Short Sea Ship-owners Association, Greek Ship-owners Association for Passenger Ships, Union of Coastal Ship-owners, Panhellenic Association of Tug Boats and Salvage Vessels (St. Nicolas), Ship-owners Association of Tug Boats and Salvage Vessels, Panhellenic Union of Ship-owners of Coastal Cargo Vessels and Hellenic Professional Yacht Owners Association

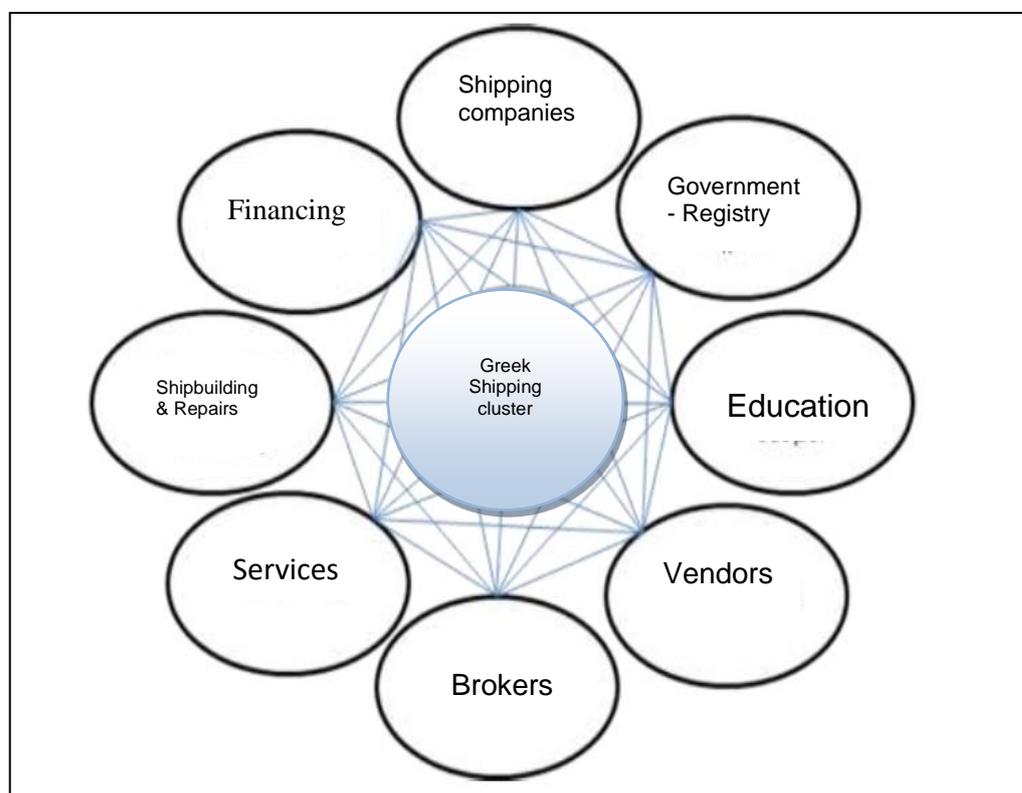
2.4.1.4 The cluster

Porter defined clusters as “**geo-graphic concentrations of interconnected companies, specialized suppliers, service providers, firms in related industries, and associated institutions in particular fields that compete but also cooperate**” (Porter 1998, p.n. 78). The concept of clusters has been widely integrated into the conduct and political governance of maritime activities (Danish Shipowners’ Association 2010). The heterogeneous activities of the cluster increase its value, and enables the specialisation of companies (Wijnolst *et al* 2003). Different theories define clusters (Porter 1990, Porter 1998b, Porter 1998c, P. Krugman 1991) as a stable base for economic development and competition. The common element in all theories is that for clusters to be successful they must provide competitive advantage to the companies involved within the cluster. These advantages result from the proximity of customers, competitors, suppliers and other relevant actors in the market, and are increasingly linked to the promotion of innovation (Tallman *et al* 2004).

The Greek cluster (Figure 10) is located in the Port of Piraeus and the suburbs of Athens. The development of Piraeus (Piraeus, Athens and suburbs) as a maritime centre started with Greek ship-owners being located in maritime centres abroad made they realised that the complete dependence on foreign shipping centres posed problems for Greece (Harlaftis *et al* 2009).

In 1974, the decision by the British government to tax Greek ship-owners 52% on all profits motivated the Greek ship-owners to move to Piraeus. This

was coupled with a favourable legal system in Greece. Although two years later the tax requirements were withdrawn, Greek ship-owners still returned to Greece in 1986, 1990 and towards the end of the 2010s. The 89/1967 law allowed ship-owners to partially move their activities to Piraeus, starting with crews and technical activities followed by the moving of all operations. Apart from the legal and tax advantages, the proximity to the Greek seafaring labour market, and the low cost labour market, resulted in Greek ship-owners moving back to the homeland (Harlaftis *et al* 2009).



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FIGURE 10. THE GREEK SHIPPING CLUSTER

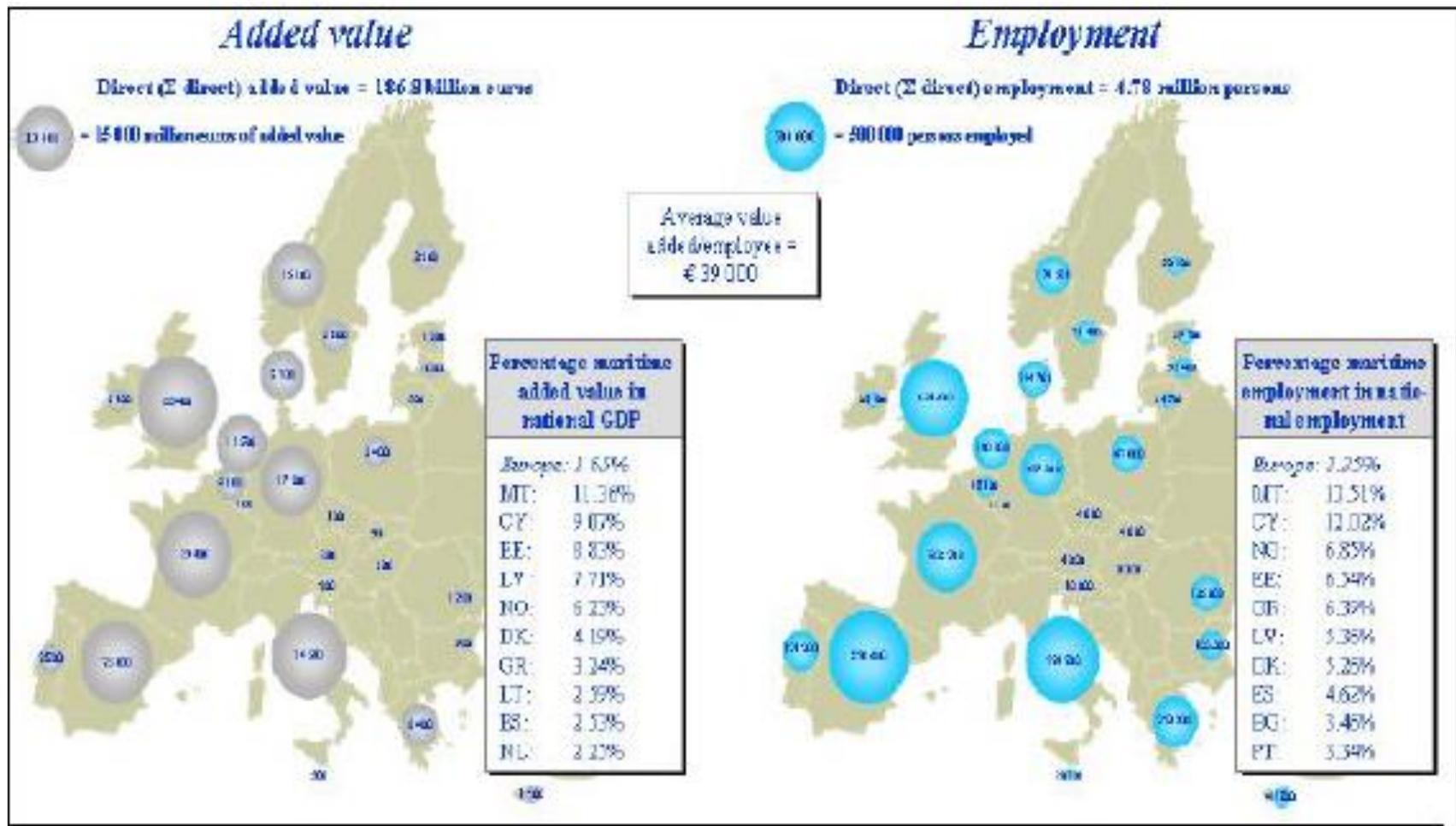
Source: Harlaftis *et al* (2009) p.n. 136. Translated from Greek into English by the author (2014)

In 2000 there were 194.000 people working in shipping with 11.000 working in shipping companies, 60.000 seafarers and 123.000 in other shipping companies, agencies, insurance and so on (Harlaftis *et al* 2009). There were

800 ship operators characterised as highly competitive, with a multitude of small, family-owned firms, 1200 companies offering maritime services and 600 suppliers (University of Piraeus 2014). Overall the maritime organisations consisting the cluster are presented in the following table. The nature of shipping is international however the activities they create remain to an extent domestic (Figure 11). The contribution of the Greek maritime cluster represents a contribution of 3.24% added value in GDP and in employment accounts for 6.39% (European Commission, 2008).

The move of ship-owners to Greece is the key contributor to the cluster development. As well as the company rivalry fostered by the; large number of small companies, the favourable tax regime for the ship-owner and the supporting companies, the strong informal networks and institutions for collaboration, and the educational institutions ((Harlaftis *et al* 2009, University of Piraeus 2014).

The concept of maritime clusters goes beyond geographical proximity, and the connections, and relationships develop an international cluster. As post war shipping flagged in Greece after being developed in countries with the flags of convenience (Thanopoulou 1998) all the international connections and networks remained, and were further developed over the years.



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FIGURE 11. EU MEMBER STATES' MARITIME CLUSTERS AS ADDED VALUE AND CONTRIBUTION TO EMPLOYMENT, 2008

Source: European Commission (2008), p.n.8

2.4.2 Why Greek-flagged shipping should be considered as important in the Greek maritime policy making

The Greek-flagged fleet contributes hugely to the economy and society, as presented in the Table 14.

TABLE 14. CONTRIBUTIONS OF THE GREEK-FLAGGED FLEET

No.	Contribution
1	It transfers 90% of the export trade of Greece;
2	It brings shipping maritime exchange raised from wages of seafarers, the amounts for repairs and alterations, contributions to the NAT and taxes to the State;
3	It creates jobs both on board and ashore in shipping companies and other companies such as repairs and shipbuilding companies.
4	It activates the development of other companies;
5	It enhances the sovereignty of Greece in international shipping, each ship acting as an ambassador of the state;
6	it strengthens the negotiating power of Greece in international organisations and fora;
7	it is dynamic and autonomous, in the sense that it does not absorb resources from the domestic economy. This means that shipping does not require full currency outflow from Greece. The only output is the replacement of older vessels and operating costs for companies for moving abroad.

Source: Papagiannoulis (2002), Sabrakos (2003), Goulielmos (2001), Developed by the author. (2012)

The shipping sector is characterised as the most internationalised branch of the Greek economy, and decisive in its development. The contribution of shipping to the Greek economy, is the income produced outside of Greece that then flows into Greece. With limited input into the productive structure (Theotokas and Harlaftis 2009). Another parameter is noted by Harlaftis (1993) and Harlaftis et al (2009) that the history of Greek tramp-shipping is also inseparably linked with certain families, and intermarriage within the Greek islands shipping industry, which may merely explain the retention of shipping and business expansion. There are other reasons however, to

explain the retention of Greeks in the shipping industry. These are; the peculiar company structure and the organisation of the shipping offices, the ship administration and operation and the company methods that exploit and anticipate the international market fluctuations. (Harlaftis 1993, Harlaftis et al 2009).

According to Sabrakos (2003) the Greek shipping industry contributes to the economy in a number of ways. These include; direct employment onshore and offshore, indirect employment (insurance etc), production of employee turnover. contribution to the Gross Domestic Product (GDP), and national insurance contributions. GDP¹³ is the broadest measure of a) a nation's economic output, and b) the size of a nation's economy (Brezina 2012). Taking at random the financial year 2006, the net revenue from shipping accounts for 4.23 of the gross domestic product (GDP), foreign exchange inflows from shipping reached \$15 billion, direct employment is provided for Greek seafarers, and about 150.000 onshore employees are employed in maritime companies and in general in the maritime related sector (OECD 2010). Additionally, there are benefits that cannot be captured by the direct analysis of a given financial year. These include; ex-seafarers working as experts in many shore based role and Piraeus being developed into a world leading centre/cluster in the provision of maritime services due to the geography of Greece. Shipping is a crucial part of the nation's transport infrastructure also and this delivers benefits to the economy enhancing

¹³ Gross Domestic Product is defined as an estimated value of the total worth of a country's production and services, within its boundary, by its nationals and foreigners, calculated over the course for one year. This may be expressed as the GDP equals the sum of consumption plus investment plus government spending plus the amount of exports minus imports (Brezina 2012):

competition and raising productivity. Shipping is an important source of ships for use in defence or natural disasters and are a more environmentally friendly mode of transport (Sabrakos 2003).

The net receipts (Table 15) from sea transport, as a percentage of the GDP, were for 2000 3.4%, 2001 2.9%, 2002 2.6%, 2003 3%, 2004 4.3%, 2005 4.4%, 2006 4%, 2007 4.6%, 2008 4.8%, 2009 4.8%, and 2010 3.2%. Net revenues from sea transports contribute positively to the increase in services, and thus, to the improvement of the current account balance. Since 2003, the contribution of net revenues increased significantly mainly due to the increase in trade activity and freight rates. In 2009, net revenues declined as a result of the global economic crisis which consequently affected the shipping demand and the freight rates (Prandeka and Zargos 2014). But it is to be mentioned that this accounts for the total shipping activities in Greece, and remains an important contributor compared with tourism and agriculture which are viewed as the important pillars of the Greek economy.

The national shipping policy is aimed at determining the sector's impact on the national economy. The impact of shipping on the national economy was primarily recognised as a significant foreign exchange contributor (Corres 2007). The actual contribution of Greek shipping to the Greek economy is considered by Reuters Investigation (2015) as a myth, since the billions flowing into Greek companies never enter the Greek economy. Further, it is debatable whether the contributors to the competitiveness of Greek shipping were; the ship-owners, the loyal and highly productive Greek seafarers

(Pallis 2007), the Greek ‘flag-state’ policies (Grammenos and Choi 1999), or even the ‘timing’ in decision making of ship-owners (Thanopoulou 1966, Thanopoulou 2002).

TABLE 15. RECEIPTS FROM SEA TRANSPORTS AND MAIN FIGURES IN GREEK ECONOMY

Receipts from sea transports and main figures of Greek economy														
billion €	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
GDP (current prices)	136.7	145.1	155.2	170.9	183.6	193.1	208.6	223.2	233.2	231.1	222.2	208.5	193.4	182.1
- Trade balance	-21.9	-21.6	-22.7	-22.6	-25.4	-27.6	-35.3	-41.5	-44.1	-30.8	-28.3	-27.2	-19.6	-17.2
from which: ships' balance	0.0	0.0	0.4	0.1	0.1	-0.7	-3.4	-5.5	-4.7	-3.4	-3.6	-3.3	-1.0	-1.5
Export of goods	11.1	11.5	10.4	11.1	12.7	14.2	16.2	17.4	19.8	15.3	17.1	20.2	22.0	22.5
Imports of goods	33.0	33.2	33.1	33.8	38.1	41.8	51.4	58.9	63.9	46.1	45.4	47.5	41.6	39.8
- Services balance	8.7	9.2	10.8	11.5	15.5	15.4	15.3	16.6	17.1	12.6	13.2	14.6	15.1	17.0
Tourism receipts	10.1	10.6	10.3	9.5	10.3	10.7	11.4	11.3	11.6	10.4	9.6	10.5	10.4	12.2
Tourism revenues	4.9	4.7	2.5	2.1	2.3	2.4	2.4	2.5	2.7	2.4	2.2	2.3	1.8	1.8
Tourism balance	5.2	5.9	7.8	7.4	8.0	8.3	9.0	8.8	8.9	8.0	7.4	8.2	8.6	10.4
- as % of GDP	3.8	4.1	5.0	4.3	4.4	4.3	4.3	3.9	3.8	3.5	3.3	3.9	4.4	5.7
- as % of services balance	59.8	64.1	72.2	64.3	51.6	53.9	58.8	53.0	52.0	63.5	56.1	56.2	57.0	61.2
- as % of imports of goods (coverage ratio of imports)	15.8	17.8	23.6	21.9	21.0	19.9	17.5	14.9	13.9	17.4	16.3	17.3	20.7	26.1
Annual % change of tourism balance		13.5	32.2	-5.1	8.1	3.8	8.4	-2.2	1.1	-10.1	-7.5	10.8	4.9	20.9
Receipts from sea transports	8.2	8.5	8.0	9.0	12.4	13.0	13.3	15.7	17.6	12.3	14.0	12.7	11.8	10.7
Payments for sea transports	3.6	4.3	4.0	3.8	4.5	4.6	5.0	5.4	6.5	4.8	5.9	5.1	4.4	3.1
Net receipts from sea transports	4.6	4.2	4.0	5.2	7.9	8.4	8.3	10.3	11.1	7.5	8.1	7.6	7.4	7.6
- as % of GDP	3.4	2.9	2.6	3.0	4.3	4.4	4.0	4.6	4.8	3.2	3.6	3.6	3.8	4.2
- as % of services balance	52.9	45.7	37.0	45.2	51.0	54.5	54.2	62.0	64.9	59.5	61.4	52.1	49.0	44.7
- as % of imports of goods (coverage ratio of imports)	13.9	12.7	12.1	15.4	20.7	20.1	16.1	17.5	17.4	16.3	17.8	16.0	17.8	19.1
Annual % change of net receipts from sea transports		-8.7	-4.8	30.0	51.9	6.3	-1.2	24.1	7.8	-32.4	8.0	-6.2	-2.6	2.7

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Source: Bank of Greece, published information from various sources found in the official site: <http://www.bankofgreece.gr/>, Developed by the author (2015)

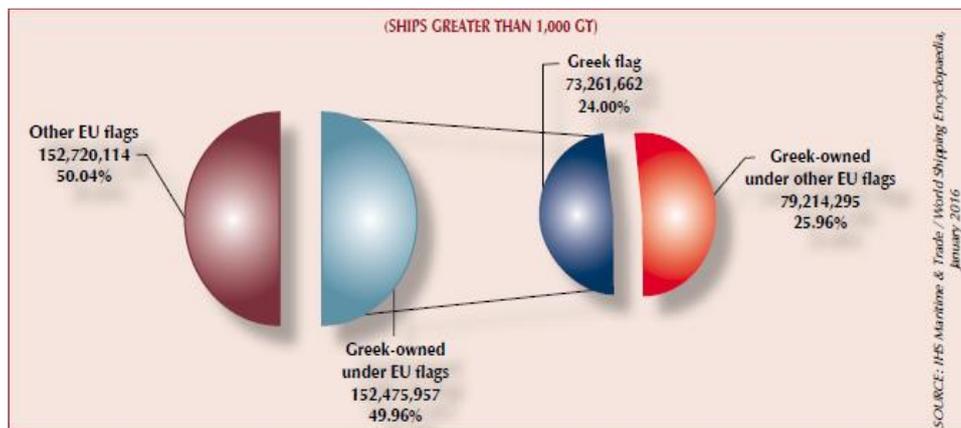
The different political parties in power, and the continuous change of the entire political leadership provided only temporary involvement in policy formation. Among the most important factors that affected the shipping policy formulation were personal friendships, corollary networking, political affiliations, lobbying of organised interest and ambition (Corres 2007).

2.4.3 Other organisations affecting the Greek shipping policy

2.4.3.1 European Union

The European Union (EU)¹⁴ is a unique economic and political partnership between 28 democratic European countries¹⁵ (European Union official site).

The significance of Greek owned and flagged shipping in the EU is reflected in Figure 13 where in 2016, Greece owned ships under EU flags represent the 49.96%, and under the Greek flag the 24% Union of Greek Shipowners (2016).



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FIGURE 12. WORLD FLEET, EU, GREEK-OWNED AND GREEK-FLAGGED IN 2013, (SHIPS GREATER THAN 1000 GT, IN MILLION DWT)

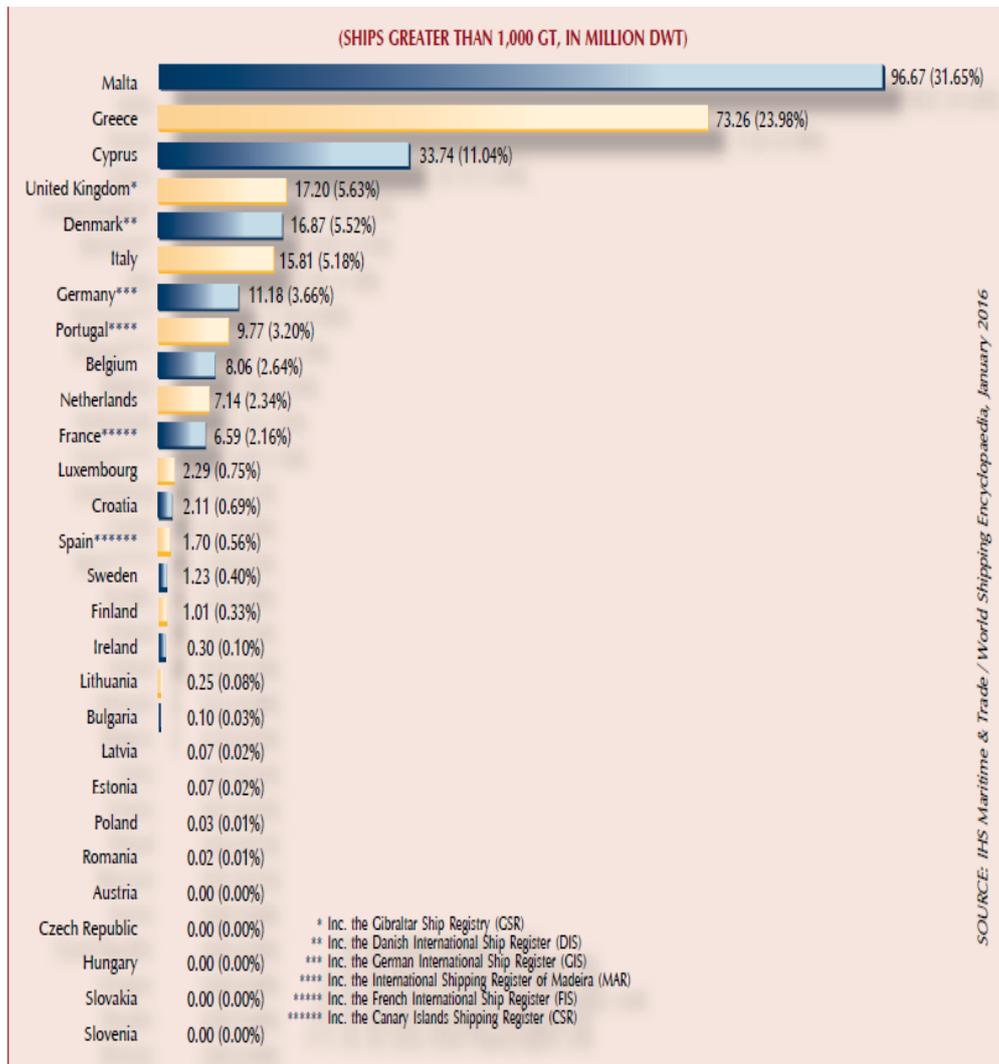
Source: Union of Greek Shipowners (2016), p.n.8.

The importance of Greek shipping is also reflected in Figure 13, where the fleets of the 28 member state European countries are presented. On the top is Malta with 96.67 million dwt followed by Greece with 73.26 million dwt and Cyprus with 33.74 million dwt, UK together with Gibraltar 17.20 million

¹⁴ Note: The European Union changed names through its development. For avoidance of discussions the name European Union will be used throughout the discussion.

¹⁵ As in 2016, Austria (1995), Belgium (1957), Bulgaria (2007), Croatia (2013), Cyprus (2004), Czech Republic (2004), Denmark (1973), Estonia (2004), Finland (1996), France (1957), Germany (1957), Greece (1981), Hungary (2004), Ireland (1973), Italy (1957), Latvia (2004), Lithuania (2004), Luxembourg (1957), Malta (2004), Netherlands (1957), Poland (2004), Portugal (1986), Romania (2007), Slovakia (2004), Slovenia (2004), Spain (1986), Sweden (1996), and United Kingdom (1973)

dwt, Denmark including the Danish International Ship Register with 16.87 million dwt and other counties Union of Greek Shipowners (2016).



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FIGURE 13. EU FLEETS, 2016 (IN MILLION DWT)

Source: Union of Greek Shipowners (2016), p.n.10

The EU delayed actions, and policies for shipping. Several reasons contributed to the developments' delay for shipping within the EU, such as member states lack of interest in shipping and other competing priorities. Other reasons include: the initial requirement for unanimous voting, the immaturity of the EU organ, the member states having their fleets under

non-EU flags. Most of all what seems to be missing is the initiative, and prioritisation towards shipping which merely explains why the EU followed the initiative of other bodies (Goulielmos and Lun 2012).

Apart from the delays and other obstacles the European Union has attempted to develop integration (Stone *et al* 1997) however it remains that some shipping sectors, such as as the ocean bulk has been neglected. According to the literature (Hart *et al* 1993, Stone *et al* 1997, Fafaliou *et al* 2006, Theodorakopoulos *et al* 2006, Theodorakopoulos *et al* 2010, Lekakou *et al* 2007b) it seems that developments in the EU shipping policy included four successive stages (a) from 1959 to 1985, (b) from 1986 to 1992 (c) from 1993 to 2001, and (d) from 2001 to 2005. Between 1957 and 1977 the Community lacked shipping legislation and shipping was mentioned only in Article 84 of the Treaty of Rome. Article 84 initially excluded sea transport from its provisions, the Community shown no interest in regulatory intervention in shipping and member states had to decide individually on their shipping policy. Greaves (1977) notes that the EU by exempting shipping from the Treaty of Rome avoided conflicts between the Community and international law (Official Journal of the European Communities 1985 and 1986).

The EU economy, and its shipping fleet make the EU a major player in the shipping world (Power 1992, Browning 1994). Therefore having no reference to shipping can only be explained by (a) the four¹⁶ out of the six original member states¹⁷ were continental which prioritised the development of land

¹⁶ Germany, France, Belgium and Luxembourg.

¹⁷ Germany, France, Belgium, Luxembourg, Italy, and the Netherlands.

and inland waterway policies, (b) according to Bredima (1981) the Dutch did not want any Community intervention in shipping, and (c) according to Paixao and Marlow (2001) shipping being an international industry required international regulation, and the EU was prevented for acting unilaterally although most of the members were members to the International Maritime Organization, and had already ratified the international conventions.

The initial move towards the development of a European shipping policy was made after the first enlargement of the EU to include maritime nations such as the UK, Denmark and Ireland. Later, the accession of Greece in 1981 added further weight to the movement (Paixao and Marlow 2001).

In 1977 the Community due to (a) the cyclical nature of shipping markets, and (b) the restrictive practices adopted by the governments of certain non-member countries, adopted the Decision 77/587/EEC, in order to facilitate confidential discussion internally but to deal with the third countries too (Bredima 1981). In 1979 the EU brought into its legislation the United Nations Conference on Trade and Development (UNCTAD) Code of Conduct for Liner Shipping, and the so-called Brussels Package (Butcher 2010). Due to the acknowledgement of the EU shipbuilding industry allowed for subsidising (Ross 1998). The decision was made in 1973 to develop stated shipping policies when the UK proceeded against the Council Ministers of the European Court of Justice on a seafarer case and won¹⁸. According to Hart *et al* (1993) between 1977 and 1985 little work was carried out.

¹⁸ Case 167/73, Commission of the European Communities v French Republic, 1974, ECJ 359

The need to focus on shipping became more apparent with the decline of the fleet in the 1980s (Hart *et al* 1993). The overall Community fleet started declining (Lloyd's Register 1992) since every member state lost tonnage (EU Maritime Affairs official site). The Community lost its sovereignty over the flags of convenience because the Community had higher wages than those paid under the flags of convenience, higher Social Security contributions, strict manning regulations, higher taxation on profits, higher safety standards, and "free and open competition". Whereas other countries adopted a number of protectionist measures for their fleets such as cargo reservation and cargo sharing systems.

By 1986, more shipping countries joined the EU and the Single European Act (SEA) was signed aimed at the creation of the 'Single Market' (EU Maritime Affairs official site). During 1985 - 1991, two major steps were made towards shipping in the common European policy: (1) the 1986 package and (2) the 1989 positive measures. (EU Maritime Affairs official site). The Community Ministers of Transport agreed on a maritime package of four directives (combined with the measures of 1977) on the; freedom to provide services, competition rules, unfair process practices, and coordinated action (EU Maritime Affairs official site, Power 1992). The 1986 package was very important. Council Regulation (EEC) No. 4055/86 developed the idea of an open, liberated market of maritime services, by allowing international shipping services to be carried out within the Community and be performed by any registered operator on an equal basis. The 4056/86 regulation established the rules by which maritime nations should compete and made a distinction between tramp vessel services, liner

conference, transport user, and conceded a block-exemption on agreements involving shipping companies operating under conferences or consortia agreements. Whereas the other two Regulations can be seen as political instruments for external relations, this move was to handle the severe unfair pricing competition practices from ex-Soviet bloc countries. These countries saw the shipping business as a way to earn western hard currency and to solve any problems arising from the non-compliance of the UNCTAD rule 40:40:20 respectively (Paixao and Marlow 2001, EU Maritime Affairs official site).

The Community was trying to ensure that competition was not distorted, to keep trade open, benefit practitioners, and discourage unfair pricing practices (Paixao and Marlow 2001). On the contrary, Greaves (1977) believes that this legislation package focused on the threat caused by protectionist policies and practices of non-Member-States to the Community shipping industry. Ross (1998) sees this package as a step towards the development of the shipping policy, without actually establishing that policy. Although the second move comes about in 1989 no legislative inaction occurred until 1992. The reasons behind these proposals were the losses of capacity, employment and slow rate of modernisation (Pallis 2002). The maximizing of manpower on board the Community ships was recognised to be a limited task, since the previous levels of ships being manned by nationals would not be reached again, and the use of foreigners was a predetermined solution (Hart *et al* 1993). The proposals on maritime policy were aimed at both maintaining the EU shipping fleet and maximizing the

seafarers skills and were produced in two documents¹⁹: (EU Maritime Affairs official site)

The 1989 package of positive measures included the Regulation for the Community ship register (EUROS) and the Regulation defining the concept of Community ship-owners. The documents set proposals for legislation development which included the European Ship Register (EUROS), and a legal definition of a ship-owner that mainly concerned the issue of subsidy and was drawn up on an advisory basis (EU Maritime Affairs official site). Paper I of EUROS was not well received and was criticised by the member states and ship-owners. Further research estimated that in terms of costs and benefits, operating costs would rise with EUROS and member state flags would be harmed (Kiriiazidis and Tzanidakis 1995). The EUROS was dropped in 1996 due to lack of interest from the member states. The definition of the Community ship-owners was also discussed as an important issue for the transportation of food aid by Community ships. The proposal developed the criteria but was not adopted and review by the Commission was requested by the Council (EU Maritime Affairs official site).

In Paper II, in 1989, the Commission issued guidelines for the assessment of State aid to the shipping sector. The Commission regarded that state aid could bridge the cost gap between operating a ship under a state member traditional flag and a flag of convenience. (EU Maritime Affairs official site).

¹⁹ Paper I: "A Future for a Community Shipping Industry: measures to improve the operating conditions of Community Shipping" (COM89), and Paper II: "Financial and Fiscal measures concerning shipping operations with ships registered in the Community" (COM89)

During the 1990s, several initiatives were discussed without a comprehensive strategy being decided. In the 1991 Communication on 'New Challenges for Maritime Industries', the objective was to strengthen the competitiveness of the maritime industries via a global and horizontal approach. The 1992 Communication concentrated on the industry actions and the Member States and Commission actions (Butcher 2010).

The issues of safety and pollution at sea were addressed during this decade due to a number of disastrous events including the Herald of Free Enterprise in 1987, and Scandinavian Star in 1990. The Community presented a Communication resulting in two resolutions on preventing accidents causing marine pollution, but no regulation was passed until 1992 (EU Maritime Affairs official site). The development of a maritime safety policy really starts in 1993 (Goulielmos and Lun 2012) with the Common policy on the Safe Seas aimed at providing relevant regulations and directives (EU Maritime Affairs official site). The directives included;

- convergent securing and the convergent application of the international safety standards in European waters;
- strengthening the role of Port State inspections on all flags;
- fostering an adequate and technologically advanced maritime safety infrastructure;
- supporting international organisations in their primary role in international standard setting;
- removing substandard crews;
- enhancing maritime training and education;
- developing common standards on a minimum level of training for seafarers.

In 1994 and 1998 the Commission showed how practices in contrast to the fundamentals of the Community would be approached. The decisions taken in relation to the Trans-Atlantic Agreement (TAA) and Trans-Atlantic

Conference Agreement (TACA) where conferences abusing their dominant position in the North Atlantic container trades with their practices were noncompliant with Article 85 (3) of the Treaty of Rome. Moreover, this move provided a good indication of the power that the Commission had in approaching these problems (Paixao and Marlow 2001).

After 1995, the European Union, with the intention of making the EU shipping ship building and maritime industries more competitive set up a forum, the Maritime Industries Forum, (MIF). Showing interest among other things to sustainable mobility, maintaining quality of life, ensuring the natural resources and minimisation of environmental damage (Paixao and Marlow 2001). In an attempt to adopt a systematic approach towards shipping a set of three Commission Communications followed. The three Community Communications' attempted once more to touch on issues such as: safety, flagging out, decline of EU seafarers and overall strengthening the competitiveness of the EU fleet. Shipping would be also enhanced by the replacement of the normal corporate taxation by a tonnage tax, reduced social contributions for employers, investment aid, restructuring aid and public service obligations and contracts (EU Maritime Affairs official site).

In March 1996 two communications were resent aimed at promoting the quality of the entire European shipping industry and quality in shipbuilding, ports and other related activities. In this communication reference was also made to EU ownership, registration, flagging of ships and the labour. The EU focused on promoting; safe navigation, the retention of maritime know-how within the industry, safe and fair competition, the enforcement of a

safety policy, and the continued education and training of young seafarers. The 1996 second Communication, emphasised connecting shipping policy to industrial policy within the European Union (EU Maritime Affairs official site).

Following these Communications a number of legislative tools and political actions were adopted in order to realise the shipping policy objectives. For example the campaign on Quality Shipping, alongside a Green paper on ports, and directives on maritime equipment (EU Maritime Affairs official site). The Erika disaster in December 1999, enacted the Erika, and Erika 2 package setting measures to improve and prevent accidents, and enhance protection of the marine and coastal environments. Focusing on surveys for ro-ro ferries, working hours of seafarers and port reception facilities (EU Maritime Affairs official site), Further developments took place in 2001 in training and qualifications safety, and quality with the banning of ships over 15 years of age from all EU ports. Logs were kept of ships that had been detained more than twice in the previous two years, and logs of black listed ships were published every six months. Further emphasis was placed on the procedures of changing class, regulation on single hull tankers introducing phasing out measures for those tankers. A system of financial incentives providing for a reduction on port and pilotage dues was introduced as well as EU-wide vessel traffic monitoring systems (Urrutia, 2006). Meanwhile, the White Paper of 2001 contributes strategically to the development of shipping, since it was examined through a wider transport and supply system (Humphreys 2010).

The Prestige sinking enacted further regulatory action on single hull tankers and the EU enlargement aimed to amend Annex 1 of MARPOL with the relevant measures on single hull tankers adopted at EU level which resulted in the introduction of a system of sanctions (Urratia 2006). Further to the EU enlargement in 2004 with Finland, Sweden, Cyprus, Malta, and the Balkan countries joining the EU, shipping as an industry attracted more attention (Roe 2007d, EU Maritime Affairs official site).

The 2004 White Paper reviewed the 1986 regulation on competition rules to maritime transport with the intention of ending the shipping exemption from competition rules with regard to liner trades. Reference was made to tramp shipping and brought this within the EU regulations (EU Maritime Affairs official site). The 2005 Green paper incorporated the standards of stemming, investigation on new casualties, civil liability and financial securities of ship-owners. As well as revisions of instruments on classification societies, port state control regimes and traffic monitoring (Urratia 2006). All the proposals were presented in the 2007 'blue book' with the draft regulations and allowed for further consultation on the green paper (Butcher 2010, Lekakou *et al* 2007a).

In an attempt to develop a more integrated maritime policy, the EU invited all member states to draw up their own integrated national maritime policies, and in 2008 the Commission issued a set of guidelines on common principles and stakeholder involvement (Butcher 2010). In 2009 the Commission published an action plan on a 'European maritime transport space without barriers', aimed at maritime employment, quality shipping,

international co-operation, exploitation of short sea shipping and research and innovation. The relevant Directive was entered into force in 2010. This initiative simplifies and harmonises administrative procedures so as to boost intra-EU maritime transport (EU Maritime Affairs official site), and maintains an officer Registrar (Hellenic Ministry of Shipping official site).

Overall the literature demonstrates that the Community went through two main phases, in the attempt to incorporate shipping into EU policies. First the learning phase from 1958 to 1991, and then the mature phase from 1991 to 2010. The learning stage took 33 years, and this can be considered a major drawback to the prospects of the EU shipping.

2.4.4 Other Organisations

Greece is a member of the World Trade Organization, (WTO), the North Atlantic Treaty Organization (NATO), The United Nations (UN), The Organization for Security and Cooperation in Europe (OSCE), the Western European Union (WEU), the Black Sea Economic Cooperation (BSEC), and The United Nations Organization for Education, Science and Culture (UNESCO) (Hellenic Parliament 2011).

Additionally Greeks assumed the leadership of the top industry associations (BIMCO, INTERTANKO, INTERCARGO, International Chamber of Shipping, and The International Shipping Federation) (Pallis 2007).

2.4.5 IMO membership

Apart from the EU and other organisations, Greeks have been more active in the international shipping policy scene. Greece became a member of The International Maritime Organization (IMO) in 1958. The IMO is the regulatory

body for shipping. As a member, Greece has been a member of the Council, and is a permanent member of the Board of IMO due to its fleet size. (www.imo.org)

The IMO developed out of the United Nations Maritime Conference, on 17 March 1948, by means of the Convention for the Establishment of an Inter-Governmental Maritime Consultative Organization, IMCO. The name of the organisation changed to IMO in accordance with an amendment to the Convention which came into force on 22 May 1982 (www.imo.org). The primary purpose of the organisation is to ***“encourage and facilitate the general adoption of the highest practicable standards in matters concerning the maritime safety, efficiency of navigation and prevention and control of marine pollution from ships”***. (<http://www.imo.org/en/About/HistoryOfIMO/Pages/Default.aspx>)

Maritime regulations are discussed in, and developed by the IMO, and then ratified by the member states who incorporate them into their own legislation. (www.imo.org). The Regulations that have been accepted and incorporated into legislation are presented in Table 16. Those regulations refer and apply to the ship, the seafarer, the environment and safety and apply to the member state (the state and the registry) who has ratified them as property titles, measurement certificate, and other relevant documents. After the ship is successfully registered it is issued with the ship nationality document, and other shipping documents (Hellenic Ministry of Shipping official site).

According to the Hellenic Ministry of Shipping, the procedures for the registration of ships in the Greece are short, and simple with the aim of achieving direct service to the individual, and the quick use of the ship. In addition to the central office of the Ministry of Shipping - DNPA 4th, all Harbour Authorities contribute to registration and keep registers, and mortgage books of all categories of ship. Also, all twenty-two Consular Authorities abroad may issue provisional documentation for ships to be registered in the Greek register, while registers, and mortgage books are kept in three consular Port Authorities (New York, London, Tokyo) (Hellenic Ministry of Shipping official site).

The documents required for registration are presented in the following Table 16.

TABLE 16. IMO REGULATIONS APPLYING TO THE GREEK FLAG

• IMO REGULATIONS
• 1948 IMO Convention
• 1965 Facilitation of Maritime Traffic Convention (FMT)
• 1969 International Convention on Civil Liability for Oil Pollution Damage (CLC Convention)
• 1969 International Convention Relating to Intervention on the High Seas in Cases of Pollution Casualties (INTERVENTION)
• 1969 International Convention on Tonnage Measurement of Ships (Tonnage Convention)
• 1971 Civil Liability in the Field of Maritime Carriage of Nuclear Material Convention (Nuclear Convention)
• 1971 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (Fund Convention)

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• 1971 Special Trade Passenger Ship Agreement (STP Agreement)
• 1972 International Regulations for Preventing Collisions at Sea (COLREG Convention)
• 1972 International Convention for Safe Containers (CSC Convention)
• 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention)
• 1973 Protocol Relating to Intervention on the High Seas in Cases of Pollution by Substances other than Oil (Intervention Protocol)
• 1973 Protocol on Space Requirements for Special Trade Passenger Ships (Space STP Protocol)
• 1973/78 International Convention for the Prevention of Pollution from Ships MARPOL (Annex I/II, Annex III, Annex IV, Annex VI)
• 1974 Athens Convention Relating To The Carriage Of Passengers And Their Luggage By Sea, (PAL Convention)
• 1974 International Convention for the Safety of Life at Sea (SOLAS Convention)
• 1976 Protocol to the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (FUND Protocol)
• 1976 Convention on the International Maritime Satellite Organization (IMSO Convention - INMARSAT OA)
• 1976 Convention on Limitation of Liability for Maritime Claims (LLMC Convention)
• 1976 Protocol to the Athens Convention relating to the Carriage of Passengers and their Luggage by Sea (PAL Protocol)
• 1977 International Convention for the Safety of Fishing Vessels (SFV Protocol)
• 1978 Protocol to the International Convention for the Safety of Life at Sea (SOLAS Protocol)
• 1978 International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW Convention)
• 1979 International Convention on Maritime Search and Rescue (SAR Convention)
• 1988 Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation, Protocol for the Suppression of Unlawful Acts Against the Safety of Fixed Platforms Located on the Continental Shelf (SUA Convention)
• 1988 Protocol on the Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation, Protocol for the Suppression of Unlawful Acts Against the Safety of Fixed Platforms Located on the Continental Shelf (SUA Protocol)
• 1988 Protocol on the Convention on Loadlines (Loadline Protocol)
• 1988 Protocol on International Convention for the Safety of Life at Sea (SOLAS Protocol)
• 1989 International Convention on Salvage (Salvage Convention)
• 1990 International Convention on Oil Pollution Preparedness, Response and Co-operation (OPRC Convention)
• 1990 Protocol to the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (PAL Protocol)
• 1992 Protocol on the International Convention Civil Liability for Oil Pollution Damage (CLC Protocol)
• 1992 Protocol on the International Oil Pollution Compensation Fund (FUND Protocol)
• 1993 Amendments to the International Convention for Safe Containers (CSC amendments)
• 1993 Protocol on the Convention for the Safety of Fishing Vessels (SFV Protocol)

Please Note: The Table continues on the next page

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<ul style="list-style-type: none"> • 1995 International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessel Personnel (STCW-F Convention)
<ul style="list-style-type: none"> • 1996 International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea (HNS Convention)
<ul style="list-style-type: none"> • 1996 London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention Protocol)
<ul style="list-style-type: none"> • 1996 International Convention for the Safety of Life at Sea (SOLAS)
<ul style="list-style-type: none"> • 2000 Protocol on Preparedness, Response and Co-operation to pollution Incidents by Hazardous and Noxious Substances, 2000 (OPRC/HNS)
<ul style="list-style-type: none"> • 2001 International Convention on the Control of Harmful Anti-fouling Systems on Ships (AntiFouling Convention)
<ul style="list-style-type: none"> • 2001 International Convention on Civil Liability for Bunker Oil Pollution Damage (Bunkers Convention)
<ul style="list-style-type: none"> • 2002 Athens Convention relating to the Carriage of Passengers and their Luggage by Sea ((PAL Protocol)
<ul style="list-style-type: none"> • 2003 Protocol on the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage (FUND Protocol)
<ul style="list-style-type: none"> • 2004 International Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM or BALLASTWATER)
<ul style="list-style-type: none"> • 2005 Protocol on Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation, Protocol for the Suppression of Unlawful Acts Against the Safety of Fixed Platforms Located on the Continental Shelf (SUA Convention)
<ul style="list-style-type: none"> • 2006 Amendments on the Convention on the International Maritime Satellite Organization (IMSO amendments)
<ul style="list-style-type: none"> • 2007 Nairobi International Convention on the Removal of Wrecks (NAIROBI WRC)
<ul style="list-style-type: none"> • 2008 Amendments on the Convention on the International Maritime Satellite Organization (IMSO amendments)
<ul style="list-style-type: none"> • 2009 The Hong Kong International Convention for the Safe and Environmentally Sound Recycling of Ships (The Hong Kong Convention)
<ul style="list-style-type: none"> • 2010 Protocol on the The Nairobi International Convention on the Removal of Wrecks (HNS PROT)

Source: IMO official site, Developed by the author (2014)

2.5 The Greek Ship Registry

2.5.1 The registry

The registry, or book of registry is a public book kept of ports (port of registry) where ships are registered. The Greek Registry book is made up of 300 pages and is signed, and countersigned by the President of the Court of First Instance of the region of the port authority. Each registered ship details occupy two pages (left and right) in which the act of registration is recorded. This details the owners name, and nationality, appointed attorney, whether resident of Greece, whether entitled to the acquisition, the ship

name, the call sign, the dimensions and tonnage, the type of propulsion, and the horsepower of the engine (Hellenic Ministry of Shipping official site). Also, any note relating to the ship (for example mortgage and seizure) is recorded, and if more notes are needed references are entered (Hellenic Ministry of Shipping official site). In order to register a ship the ship-owner must provide all necessary information as presentd in Table 17.

TABLE 17. DOCUMENTS REQUIRED FOR SHIP REGISTRATION

Documents Required for registration	
-	Shipowner's application;
-	Evidence of vessel's ownership (e.g. bill of sale);
-	Declaration of appointment of a representative or guarantor and a process agent in Greece;
-	No deletion certificates required except for the registries of Egypt, Albania, Bulgaria, Germany, Georgia, Estonia, Jordan, Italy, China, Croatia, Cyprus, Russia, S. Africa, Tunisia (mandatory by bilateral agreements);
-	Certified copy of vessel's existing certificate of registry/certificate of nationality;
-	Certified copy of vessel's tonnage certificate and applicant's written statement that no changes have been
-	Effectuated to the ship's particulars;
-	Vessel's customs clearance certificate (not required in case of a vessel flying an EU flag prior to registration);
-	Applicant's written statement that the ship is not registered in another Greek registry (whether domestic or abroad) and that all relevant certificates will be replaced in due course.

Source: Hill Dickinson (2008), Developed by the author (2013)

2.5.1.1 The procedure for ships to be registered under the Greek flag

Figure 14 presents the steps a ship-owner must undertake in order to register a ship under the Greek Flag. First the Ministry of Shipping, and the Aegean receives the application for registering the ship and the authorising act is issued. At the same time the drafting of the Authorising Act begins, and the issuing of the registration number.. For the issuing of the registration number the shipowner requires (a) the import declaration by the Clearance Office, and (b) the registration of a ship and the issuing of the nationality document from the Coast Guard (Hellenic Ministry of Shipping 2013).

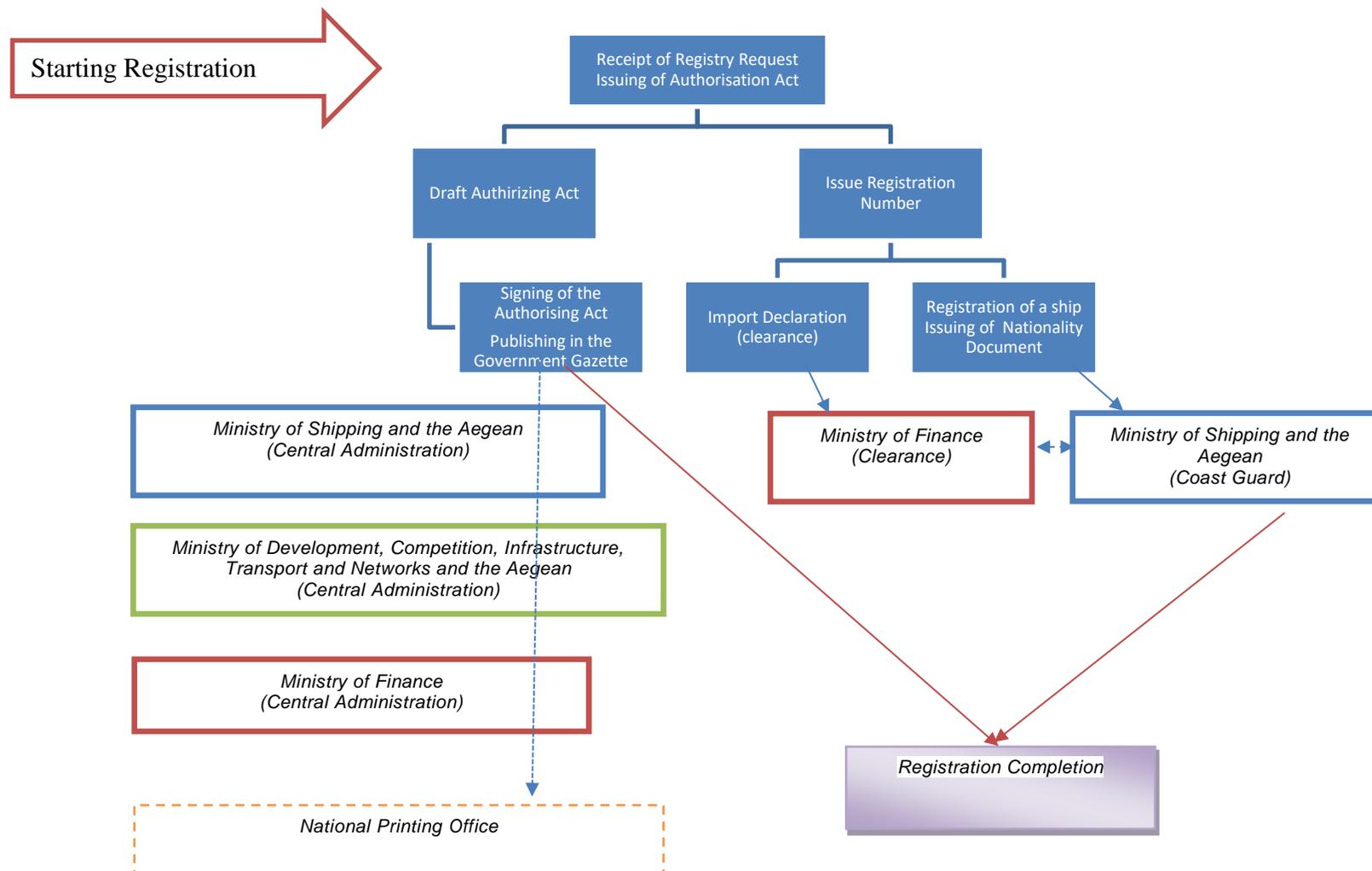
As presented Figure 15, three Ministries are involved in the approving and signing of the authorising acts. First the Ministry of Shipping, and then the Ministry of Aegean check, approve and sign, both on functional and higher levels. The document is then forwarded to the next Ministry (Ministry of Development, Competition, Infrastructure, Transport and Networks), which follows the same procedure and then the document is forwarded to the Ministry of Finance. After all 34 signatures are gathered, the authorising act is edited and formatted and finally is printed and published by the National Printing Office (Hellenic Ministry of Shipping 2013).

The procedure has been highly criticised over the years. The Ministry in 2013 detailed the problems with registration as presented in Table 18.

TABLE 18. GREEK REGISTRY & PROBLEMS OF THE REGISTRATION

Many contact points with the authorities in different stages in the existing procedure;
Extremely large number of signatures required for the authorisation acts (34 signatures from three Ministries);
Lengthy, handwritten and bureaucratic procedures (average adoption time of the authorising acts 5- 6 months);
Increased administrative burden for those want to register their ships under the Greek flag;
Fragmentation of registration involved in a large number of organisational units, within and not within the Ministry of Shipping and the Aegean;
Lack of a common approach and understanding regarding the objectives effectiveness of ship registration process;
No liability for the overall coordination and monitoring of all the stages adoption process of approval of registration of vessels act;
Lack of IT support / computerisation of the existing procedure;
Lack of exploiting the potential of new information technologies and communications (e-Government)

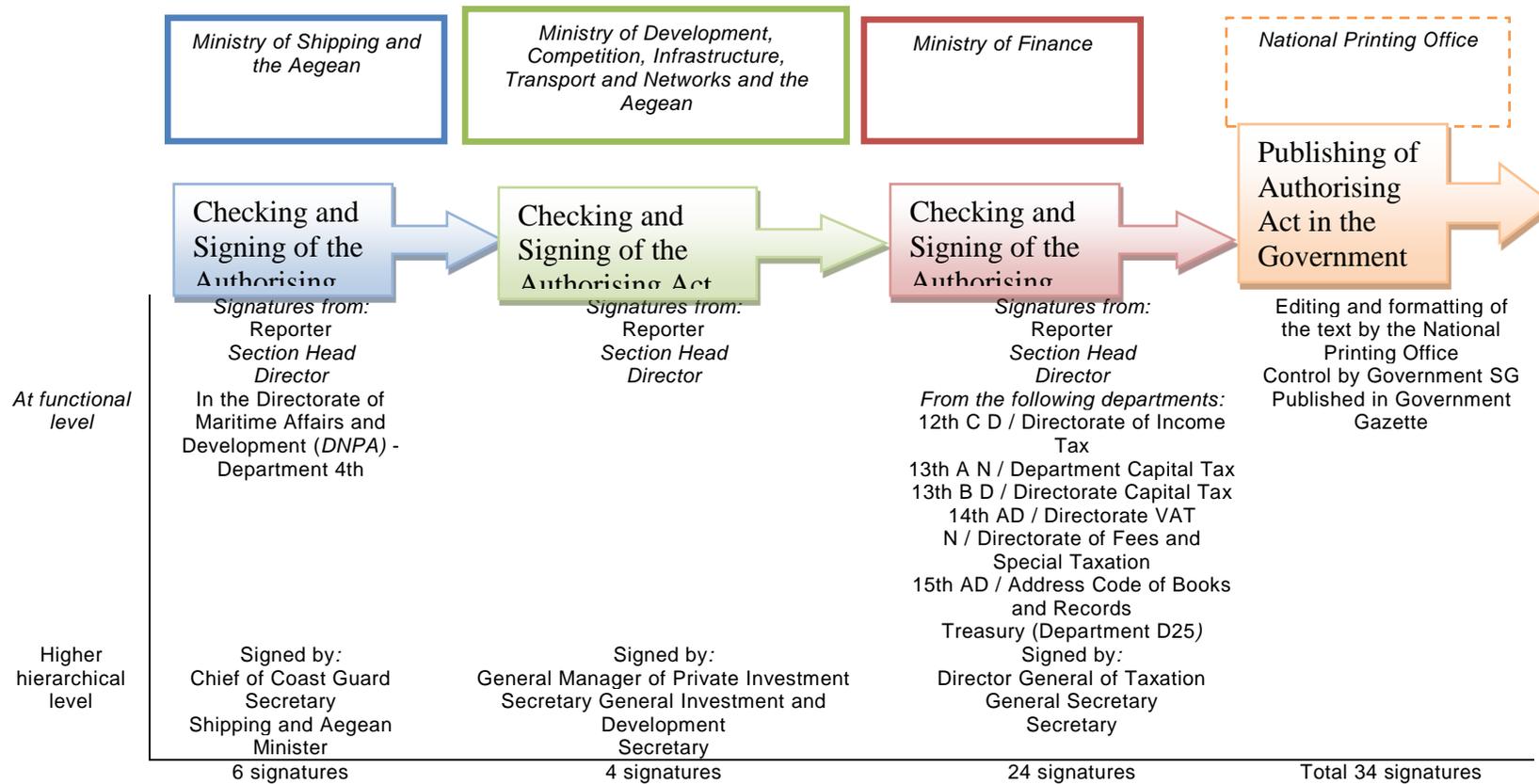
Source: several sources from the Hellenic Ministry of Shipping (2013), Developed by the author (2013)



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FIGURE 14. THE PROCEDURE FOR REGISTERING SHIPS UNDER THE GREEK FLAG

Source: Translated by the author, (Hellenic Ministry of Shipping (2013), p.n. 5, Translated from Greek to English by the author (2014)



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FIGURE 15. ISSUING OF AUTHORISING ACTS

Source: Translated by the author, Hellenic Ministry of Shipping (2013), p.n.6, Translated from Greek to English by the author (2014)

2.6 An overview of the Greek flag

2.6.1 *The seaborne trade framework*

Traditionally, Greek shipping serviced world shippers (Goulielmos 1998), operating their ships on the spot (Theotokas and Harlaftis 2009), on a global scale, and serving the transportation needs of countries all over the world (Grigoropoulos 2013). Operating ships on the spot refers to the tramp market and not the liner market. The tramp service operates on a fixed sailing schedule, at regular intervals, between named ports in contrary to liner services (Lu *et al* 2006, Scarsi 2007). Tramp service ships can be hired as a whole, by the voyage, or a specified period of time to load cargo and take cargo from one port to the other, in accordance to the requirements of the charterer and the contract of carriage. (Fayle 1933) Tramp ships can trade all over the world searching for cargo, such as grain, steel, coal, grain, timber, sugar, fertilisers, ore, crude oil and products (Branch and Roberts 2014), and can be chartered on the spot. The author of this thesis, often uses the taxi and bus example to explain the difference between the two markets. Based on that, Greeks have always been the taxi drivers of the seas.

The tramp shipping freight market operated by the Greeks is characteried by the interaction of supply, and demand for freight services. As a result of derived demand there are shipping market cycles allowing for those with large ships or fleets to gain benefits derived from the economies of scale (Stopford 2009, Stopford 2009a). The demand for shipping services is a derived demand and depends on the economics of the commodities transported, world economic activity and the related macroeconomic

variables of major economies. Demand for shipping services comes from global economic growth (derived demand) and the need to carry international trade. The changes in global GDP and exports/imports affect the shipping demand and traffic flow (Pantuso *et al* 2014). The trend of the leading indicator of demand for shipping, the world industrial production is high correlation of the world GDP (UNCTAD 2011).

Further, bulk cargoes carried in tramp shipping are characterised by a) highly volatile freight rates; b) partial market integration of dry (e.g. grains) and wet (e.g. crude oil) sectors; c) capital intensity and capital restraints; and d) optimal timing of investment as a crucial success factor (Stopford 2009).

As presented in Table 19, the bulk trade decreased from 1980 to 1985. Since 1985 to 2008 there has been a constant increase, and both oil, and the five major bulks (iron ore, grain, coal, bauxite, alumina, and phosphate) had an ongoing increase. In 2008, the volume of international seaborne trade was estimated by UNCTAD at 32,746 ton-miles, representing an increase of 4.8%. In terms of tons loaded, world seaborne trade continues to grow and was estimated at 8.17 billion tones with a 3.6% slower growth rate than in 2007 (4.5%). In 2010 the world seaborne trade increased from the previous years by 7% with containers and major bulks driving the increase followed by the oil trade (OECD 2009, UNCTAD 2011). Iron ore was the most important dry bulk cargo until 1980 followed by coal in terms of volume. The use of coal increased due to the decline of petroleum as an alternative and cheap source. Before the first oil crisis (1973-1974) investing

in tankers was a secure decision after 1974 liquid cargoes changed dramatically when the market collapsed. The crises of 1973-1974, 1978 and 1981-1986 forced Greek owners to reduce their participation in liquid trade (Thoetokas and Harflaftis 2009).

As presented in Table 19 and Figure 16, between 1975 and 2010, the world seaborne shipments grew at an annual average rate of 3% and seaborne trade was affected by a number of factors.

Factors, such as; (a) the globalisation of production processes, (b) the increased trade in intermediate goods and components, and (c) the deepening and extension of global supply chains (Vincent *et al* 2013).

	<i>Oil and gas</i>	<i>Main bulk commodities (iron ore, coal, grain, bauxite and alumina and phosphate rock)</i>	<i>Dry cargo other than main bulk commodities</i>	<i>Total (all cargo)</i>
1970	1 440	448	717	2 605
1980	1 871	608	1 225	3 704
1990	1 755	988	1 265	4 008
2000	2 163	1 295	2 526	5 984
2005	2 422	1 709	2 978	7 109
2006	2 698	1 814	3 188	7 700
2007	2 747	1 953	3 334	8 034
2008	2 742	2 065	3 422	8 229
2009	2 642	2 085	3 131	7 858
2010	2 772	2 335	3 302	8 409
2011	2 794	2 486	3 505	8 785
2012	2 841	2 742	3 614	9 197
2013	2 829	2 923	3 762	9 514
2014	2 825	2 985	4 033	9 843

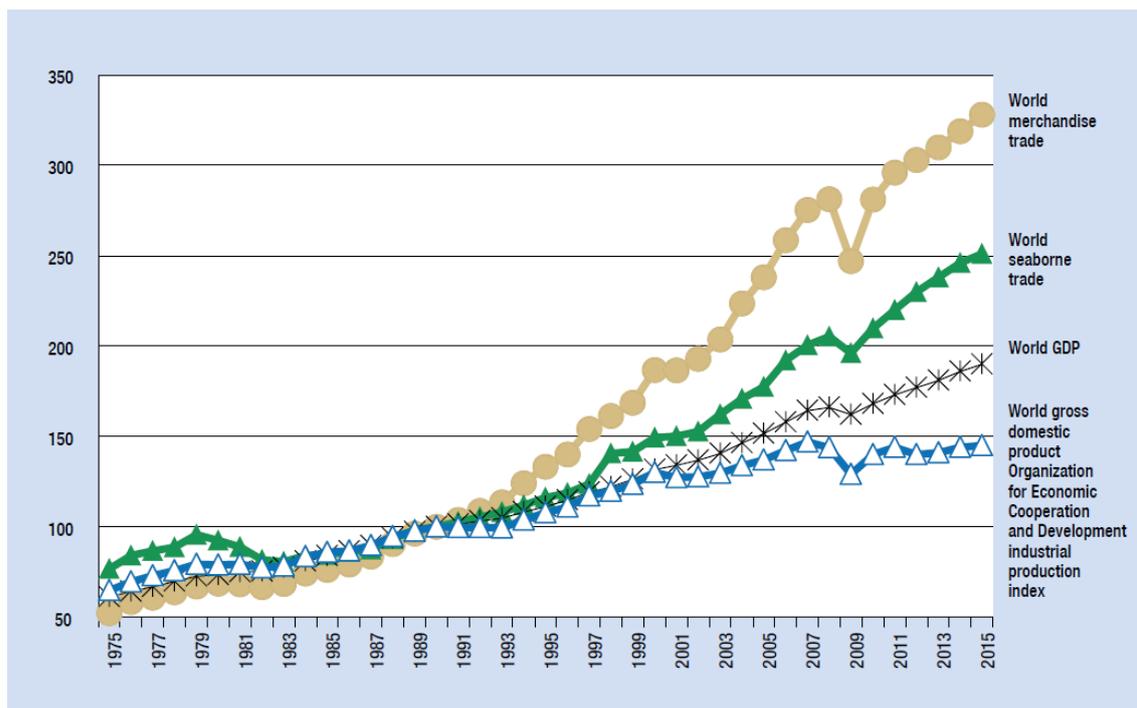
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TABLE 19. WORLD SEABORNE TRADE, SELECTED YEARS (BILLIONS OF TONNE-MILES)

Source: UNCTAD (2016), p.n.6

As seen in Figure 16, the prosperity occurring at the end of the 1960s and the increased figures of the world output and the seaborne trade lasted until

the early 1970s. Setting aside the short-lived recession in 1971, the seaborne trade grew significantly and rose to the record level in 1974, from 1165 million tons in 1970 to 1472 million tons in 1974. Overall the world seaborne trade grew at an average annual growth rate of 4.2 % from 1975 to 1980. During this period, the tanker market was heavily shocked by the oil crisis, starting on October 17, 1973, which was a result of the ongoing Yom Kippur War (Stopford 2009a). Dry bulk commodities in the period 1979 to 1982 boomed. The economy went into another severe recession with the second oil crisis, which put the tanker market into depression (Stopford 2009a).



Source: UNCTAD secretariat calculations, based on Organization for Economic Cooperation and Development, 2016; UNCTAD, *Review of Maritime Transport*, various issues; UNCTAD, 2016a; World Trade Organization, 2014; and World Trade Organization, 2016.

Note: 1990=100. Indices calculated based on GDP and merchandise trade in dollars and seaborne trade in metric tons.

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FIGURE 16. INDICES FOR WORLD GDP, THE OECD INDUSTRIAL PRODUCTION INDEX, WORLD MERCHANDIZE TRADE, AND WORLD SEABORNE TRADE, (1975-2015) (1990=00)

Source: UNCTAD (2016), p.n.2

According to Thanopoulou (1994) shipping had been inevitably marked by two interrelated phenomena (a) the ascent of developing countries to shipping; and (b) the persistence of the maritime crisis of the 1970's and the 1980's. In 1982 and 1983 dry cargoes dropped to 1793 million tons and 1770 million tons respectively. In 1984, there was a considerable increase in world seaborne trade (6.55% up on year-to-year basis). Seaborne trade grew after 1984 (Stopford 2009a, Vincent *et al* 2013). The economy moved into recession in 1992 (Stopford 2009a), and then the world output increased in 1996 by 2.8 per cent over 1995. In 1996 it reached a new record high of 4.76 billion tons but the actual growth held up at a rate of 2.3 %, which was the lowest since 1987, and below the average annual rate of growth of 3.3 % over the period 1987-1995. In 1997, the world output continued to increase, and grew by 3.2% but remained threatened by the crisis in the Asian economies, and the rise of the United States dollar. The growth of the mercantile trade increased to 10%. In 1998 world trade increased by 2% over the previous year and growth of the world merchant trade declined to 3.5%. The world seaborne trade recorded its thirteenth consecutive annual increase in 1998, breaking the level of 5 billion tons for the first time, reaching 5.064 billion tons (UNCTAD 2009). World output grew in 1999 by 2.7 % with a growth of world merchandise. Exports continued to slow in 1999, to 3.9% while that of imports increased slightly to 5.3 % from 4.5%.

In 2000 the world output increased to the height of the decade and seaborne almost doubled. This was mainly due to the developing countries and North American growth, which in 2001 slowed down, followed by the seaborne

trade with 1.3%. However, seaborne trade is steadily increasing (UNCTAD 2001, UNCTAD 2002). The USA bursting of the information technology bubble has affected the markets negatively. China's WTO accession since 2001, and the Chinese market opening to the world has significantly boosted world trade. China's rapid economic rise overtook former leading exporters (such as Japan and Germany), with a 5.9 % in 2003 share in global exports (UNCTAD 2002). In 2002 the growth of world output trade slightly increased and in 2003 (UNCTAD 2003). During 2003 continued with growth reaching 2.6%, which is almost a 1% increase from 2002 (UNCTAD 2004). The recovery continues in 2004 with 4.1 per cent, and the world seaborne trade increased by 4.3 per cent (UNCTAD 2005). The growth in 2005 is a fifth less than in 2004 (UNCTAD 2006). In 2006 the world economy expanded strongly. Growth was broad-based, with rapid growth in China and India (UNCTAD 2007). Although growth in 2007 was moderate, it was mainly driven by China and emerging developing economies. The elements that challenged the world output are rising oil and non-oil commodity prices, the USA mortgage lending crisis, the credit crunch, the depreciation of the dollar, the food crisis, and environmental issues (UNCTAD 2008).

The turning point of the market is the year 2008, where the global GDP expanded by only 2.0%. Although at the beginning of the year it seemed to have potential growth, towards the end the market revealed the worst expectations (UNCTAD 2009). The year 2009 was when the deepest drop was recorded since the 1930s (with a GDP of 1.9% growth). The slowdown was due to slower exportation in transition economies and developing countries, with the Chinese-boom coming to its blowout (UNCTAD 2010).

In 2010, the world economy showed signs of recovery with GDP growing at 3.9% over 2009. During the same period unexpected natural disasters²⁰ and political instabilities further affected the world GDP (UNCTAD 2011).

On the other hand, ships in terms numbers and tonnage, in other words, capacity were increasing as seen in Figure 17 . The world fleet through the decades was getting bigger and bigger. As seen in the following graph the development from the 1970s onwards was enormous. Did capacity match with the increase of the seaborne trade? Did the supply of ships match the demand of carrying capacity? The answer lies in the shipping cycles.

The shipping cycle is a mechanism which co-ordinates supply and demand in the shipping market. It is a cyclic repetition of peaks and troughs in demand and freight rates which explains the imbalances between supply and demand (Chistè and Van Vuuren 2013).

Figure 18 illustrates the developing of supply and demand and its imbalances by main ship type from 1963 to 2008. The demand for ships is determined by trade. The green shaded scheme in the graph represents the ship supply for bulkers, and whereas the blue line is the demand. The demand increased progressively since 1983, but the supply did not follow, which explains the high rates of 2003 onwards (Stopford 2009a, Stopford 2002).

²⁰ Floods and cyclones in Australia, earthquake tsunami and nuclear crisis in Japan, political unrest in Western Asia and North Africa, and increased oil priced and energy insecurity

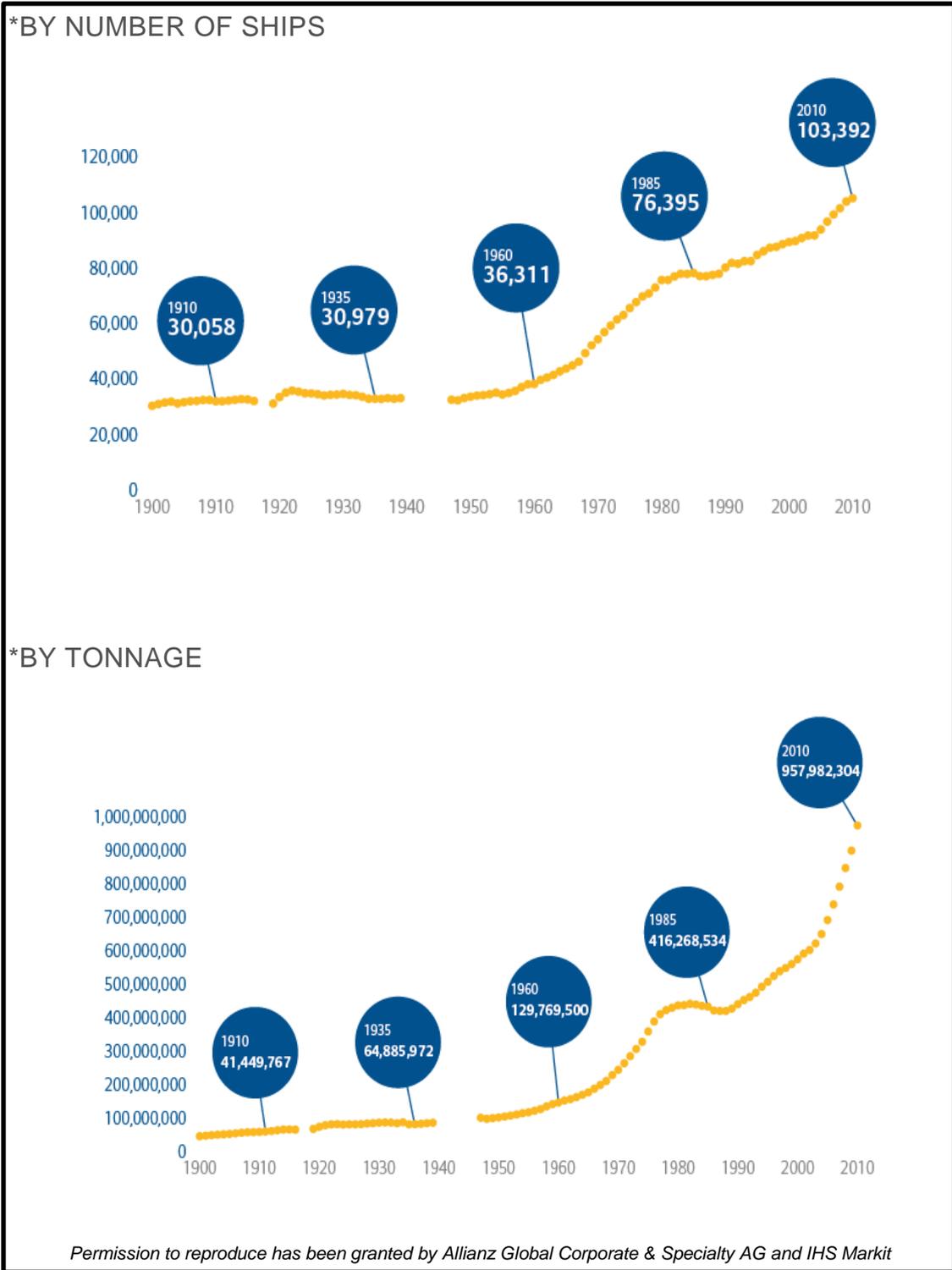
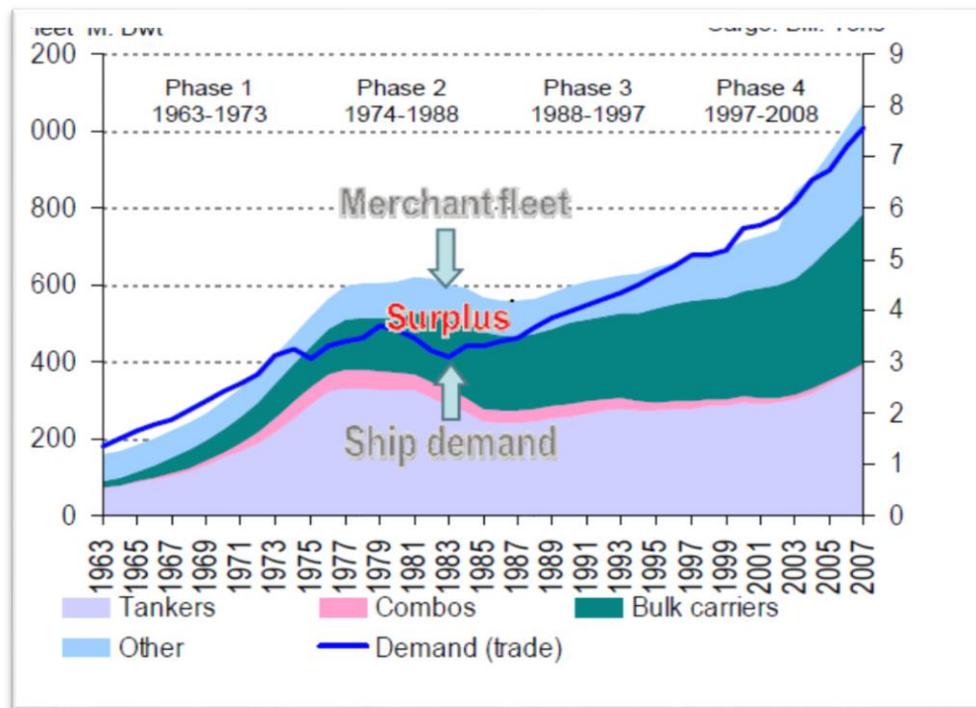


FIGURE 17. WORLD FLEET SIZE BY NUMBER AND TONNAGE OF SHIPS, 1900-2010

Source: Lloyd's Register Fairplay, World Fleet Statistics 1900-2010, within Allianz Global Corporate & Specialty AG. (2012), p.n.12

Note: Tonnage is in Gross Tonnage (GT) for all years except 1900-1916 where figures are a mixture of GT and Net Tonnage (NT). For this period World Fleet Statistics lists GT for steam vessels, and NT for sailing vessels, thus world tonnage is a combination of the two.

According to Stopford 2011, there are four phases that are indicated in long shipping cycles. The relevant phases to this study are **Phase 2**: 1974-1988, **Phase 3**: 1988-1997, **Phase 4**: 1997-2008 (Figure 18).

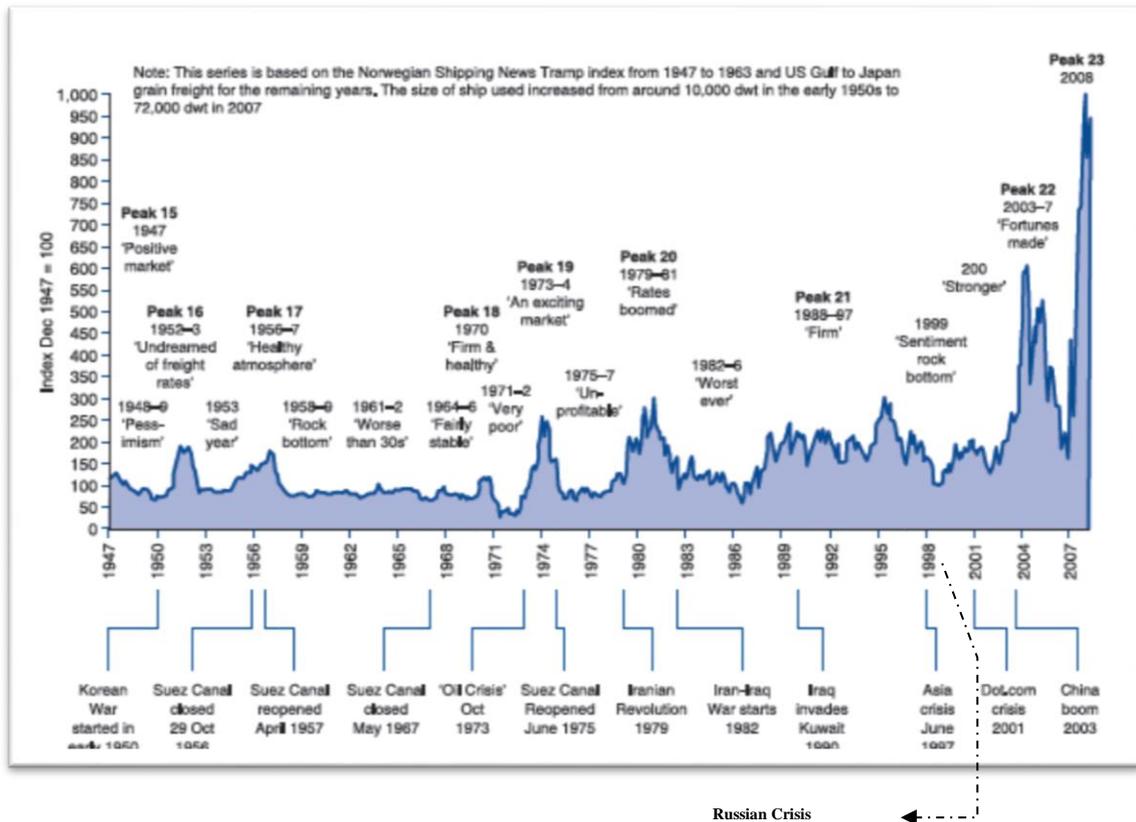


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FIGURE 18. SUPPLY AND DEMAND IMBALANCES

Source: Stopford (2009e),p.5

The shipping market can change phases from competitive to weak, and depressed, to prosperous. The period up to 1973 was characterised by fast-growing demand, and expansion. The oversupply of vessels in 1973 affected freights negatively and the market was depressed. From 1988 to 1997 the markets were trying to match supply, and demand, but the returns were low.



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Figure 19. Bulk carrier shipping market cycles, 1947-2008

Source: Stopford (2009d), p.n. 118.

Note: The author of this study added the Russian Crisis in the graph.

During the period 1998 to 2008, the demand growth was 1% per year, on the supply side there was a shortage of ships and the market was prosperous. After 2008, the market fell with ship supply higher than demand, which lowered the freight rates and the market got weaker by the day (Stopford 2009a). Using different sources from the literature, and in an attempt to apply theory to practice, the above theory can be illustrated in Figure 19, peak and trough stages for the bulk market, for the period 1979-2011. This is also illustrated in Table 20.

TABLE 20. PEAK AND TROUGH STAGES FOR THE PERIOD 1979-2011

Trough Stage:1973-1979
Peak Stage: 1979–1981
Trough Stage: 1982 – 1986
Trough Stage: 1989 – 1993
Peak Stage: 1993–1995
Trough Stage: 1995–1998
Peak Stage: 1998–2000
Trough Stage: 2000–2002
Peak Stage: 2002–January 2005
Trough Stage: 2005–2006
Peak Stage: 2006–2008
Trough Stage: 2008–2011

Source: Stopford (2009c), Chistè and Van Vuuren (2013), Developed by the author (2013)

Reference to the world economy or trade decline is made several times in the above text. That was due to many factors. Most importantly the major factors were international, political and economic events that affected the bulk shipping cycle from 1970 until 2008 (Table 20, Figure 19) are the following.

TABLE 21. MAJOR INTERNATIONAL & POLITICAL EVENTS AFFECTING SHIPPING

DATE	EVENT
1973	Oil Crisis in October
June 1975	Suez canal reopened
1979	Oil Crisis
1979	Iranian Revolution
1982	Iran-Iraq war
1990	Iran invades Kuwait
June 1997	Asia crisis
1998	Russian Crisis
2003	China boom

Source: Stopford (2009c), Developed by the author (2010)

Please Note: The author of this study added in the Table the Russian crisis

2.6.2 Greek shipping and the Greek flag

Greece having with no other substantial trade, and with a large shipping sector in relation to its own foreign trade, grew, and prospered mainly outside of Greece, with funds provided by the world equivalent to 95%. Greek-flagged shipping did not enjoy any direct state financial support or any sizeable national trade volumes (Thanopoulou 2007). This explains why Greek shipping always had “*a deep sea flavor*” (Corres 2007) and always supported protection free trade and shipping, free selection of ships by the world traders without cargo reservations or flag discrimination or cargo sharing, avoiding regional solutions like the USA Oil Pollution Act, and opposing to the UNCTAD’s Code 40-40-20 due to the fear that it would be applied to tramp shipping (Goulielmos 1998).

Goulielmos (2001), details the success of Greek shipping emphasizing the peculiar structure of Greek shipping companies. Harlaftis and Theotokas (2004) state that Greek companies were free standing and international. Developed by the internationalisation process, drawing resources from the international market, motivated to search for factors adding to competitiveness, easily adapting to transformations. Further, Harlaftis and Theotokas (2004) identify that these ship-owners adopted three dynastic approaches:

1. Preservation of the traditional tramp structure, cooperation and networking with companies of similar structure;
2. Internal company development and internationalisation of transactions;

3. Concentration on activates that they are competitive

Specific emphasis should be given to the Greek shipping culture and approach to shipping. The fundamentals of this culture seem to be like seeds well planted and although culture goes through struggles and develops through revolution and evolution. At the same time the seeds seem to be always there. Certain elements are related to the success in long run shipping corporate performance of Greek companies. These elements being (1) the culture which is open to network and flourish, (2) the strong culture and cultural responsiveness, (3) the reputation of the ship-owner, combined with trust and networking, (4) the size of firms, small firms being more flexible and large gaining from the economies of scale, (5) ability to reduce cost and risk in business transactions with relationships based on trust, (6) obtaining information on time resulting lowering operating cost and increasing reliability, (7) the ship-owners not regarding shipping as just a source of income but as a profession, (8) the technical and operating know how which led to integrating activities backwards and forward, (9) activities being outsourced when needed, (10) the family based companies and dynastic motivations, supporting family members to start their own business, (11) differentiation and specialisation, (12) and flexibility and adaptability. (Harlaftis and Theotokas 2004 and Harlaftis and Valdaliso 2012).

Harlaftis et al (2004), state that the history of Greek tramp shipping is connected in an indistinguishable way with the history of families involved in shipping for several generations. Further stating that intermarriage within

the Greek isles' shipping families has been used as a method of retaining and expanding the business (Harlaftis and Theotokas 2004). Greek ship owners originating from areas as Chios, resulted not just weddings but antagonizing to each other (Lekakou *et al* 2015). What the authors identified, also supports the idea of the close society.

Although the shipping community was not capital rich they relied on the strong relationships they had and most importantly their ability to adapt to the new requirements of the industry (Harlaftis 1993). The Greek shipping industry both owned and flagged shows particular characteristics in terms of financial sources, specialisation, and spatial activities. According to Samiotis *et al* (2008), Greek ships specialise in the bulk transportation of dry and liquid cargoes and general cargoes and usually the activities such as chartering, ship building and financial take place abroad. Furthermore, according to Clarksons (1995), the factors that affect the development of Greek controlled shipping overall are the structure, strategy and rivalry. Greek shipping has a pool of talent for seafarers and managers (Theotokas *et al* 2014). Captains becoming ship-owners have adopted tight decision practices resulting in lean and innovative management practices (Theotokas and Tenold 2013). The intense local rivalry has also boosted improvement (Clarksons Research Studies 1995).

In the first Shipping Congress held in 1964 in Athens, the Prime Minister of Greece, George Papandreou said that '***Greek shipping was more than developed and was struggling to fit in the frames of the Greek state***' (Foustanos 2013). In an attempt to fit it in to the frames of the Greek state

all postwar governments have supported Greek shipping and managed to maintain and increase its capacity (Theotokas and Harlaftis 2009).

The first time the state supported shipping in Greece was after the Second World War, when the Greek state – under the persuasion of the owners - guaranteed the purchase of 100 Liberties and 7 T2 tankers from the United States. The Second World War eliminated the Greek fleet by 75% (Clarksons Research Studies 1995). Harlaftis (1993) states that without the support of the state Greek-owned shipping would never have increased as much as it did in the years to come. Although Greek shipping companies could have survived independently of the state, Harlaftis (1993) explains that Greek shipping received no help. The assistance for the 100 Liberties was not in the context of *‘a clear vision of the state of the sector’* (Thanopoulou 2007). Further, Foustanos (2013) states that the case of 100 Liberties while important it was not the core of the Greek shipping reconstruction since Greeks at that time had at least 50 Liberties under other flags.

According to Gouliemos (1998), the Greek economy during the whole post-war era suffered from a chronic trade deficit. Shipping was considered as a sector that has helped the Greek economy during difficult times. From the government’s perspective, it attempted to balance the competitiveness of the Greek fleet and while at the same time to maximise foreign exchange inflow from shipping. After 1953, while the state was setting the legal, fiscal, labour and other frameworks, the ship-owners’ attitude was *“keep away from shipping”* (Gouliemos 1997). After the Liberty vessels acquisition, the

Greek state was reactive rather than proactive in shipping policy and focused on attracting tonnage to the national register (Thanopoulou 2007). There was no systematic plan (Harlaftis 1993) and the approach of the Greek state could be characterised as passive (Thanopoulou 1994).

Ship-owners as important players in the development in the post war period acquired powers from the state. The Greek state gave ship-owners enormous powers and they enjoyed privileges the land based investors did not. Consequently, they influenced the policies developed by post war governments with the aim of adopting policies in their favour. (Theotokas & Harlaftis, 2009) Ship-owners' attitude towards the state was ***“do not touch shipping”*** (Goulielmos 1998). In 2012 according to a Reuters Investigation (2015) on the first day for K. Moussouroulis as Minister, a 90-year-old ship-owner said to him: ***“Don't forget, the best minister of shipping and maritime affairs is the minister who does nothing against the shipping industry. He is the one who leaves us alone”*** (Reuters Investigation 2015).

On the other hand, Greek seamen are considered the most valuable factor for Greek-owned shipping (Theotokas and Harlaftis 2009, Theotokas 2006) and their contribution to industry development is recognised. (Sabrakos and Stiaparikou 2001, Theotokas and Progoulaki 2007b). Greek seaman had the knowhow, talent and will to make unseaworthy ships seaworthy (Theotokas 2007) and Greek ship-owners who traditionally acquired second hand vessels wanted to employ such crew (Theotokas and Progoulaki 2007a, Tsamourgelis 2007).

Since the Second World War the Greek government has tried to attract young Greeks to the nautical profession (Theotokas 2006, Corres 1978). The reason being **“opportunities of employment ashore, education and the closing of the gap between salaries onboard and ashore, the growth in availability and ease in procurement of cheap lower crews from low-cost countries have increased the cost/benefit ratio of Greek ratings”** (Corres 1978, p.n. 9). Greek-flagged shipping went through several fluctuations in terms of both number of ships and the tonnage capacity (Figure 20).

According to Thanopoulou (1994), there are two periods that characterise the Greek flag; (1) the increase of the flag period from 1973 to 1981 period and (2) the decline of the flag period from 1981 to 1989. In Figure 20 the number of ships (of all ship types) flying the Greek flag is illustrated. In terms of numbers of ships the bulk carriers declined several times from 1983 to 2008, which is due to the increase in ship sizes.

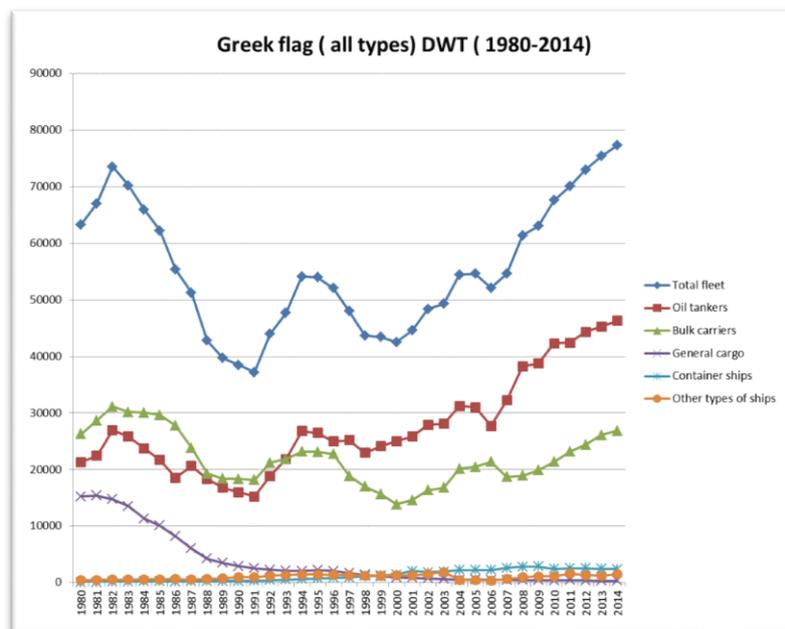


FIGURE 20 THE GREEK FLAG 1980-2014, ALL SHIP TYPES AND TOTAL, (DWT)

Source: UNCTADStat

(<http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=80100>), Developed by the author

The tankers increasing tonnage follow the pattern of the world fleet whereas, the bulk carriers go in the opposite direction. Although since 1994, Greeks traditionally invested in bulk carriers it seems that they also invested in tankers. Equally or even more than before. Once more the increase in tanker ships is obvious with Greeks owning more tankers in total than bulk carriers.

The contribution of the Greek-flagged and the owned tonnage is what contributes to Greek-shipping being at the top ranking of the world tonnage.

However, is the percentage of Greek interests, either in the Greek or any other flag, a criterion for reconsidering the national maritime policy? There were times when Greek-flagged shipping amounted to around 50% of the total owned fleet. That 50% was the border line and an arbitrary criterion. Consequently, when the percentage fell under the border line the need to redefine the shipping policy was raised. Redefining was not a success, due to policy makers always taking into consideration the border line, during 1986-1993 and 1994-1999. In 1994 only 6% of the Greek-owned vessels represented the 50% in terms of grt (Goulielmos 2001).

Key performance indicators are used by shipping companies (Konsta and Plomaritou 2012, Dubnick 2005) The literature does not reveal the existence of any key performance indicators adopted by the Greek government.

A farrago of elements made Greek shipping attractive and not just one individual element. According to Goulielmos (2001) Greek-flagged shipping up to 1998 owes its success to six factors, namely: (a) taxation, (b) legal framework, (c) ITF's actions, (d) the political situation in Greece, (e) embargos over the world, and (f) the political situation in other flag states.

2.6.3 The origins and the existing legal shipping system

The legal framework reflects the Greek maritime policy during the post-war years until this day (Goulielmos 1996a).

2.6.3.1 Code of Private and Public Maritime Law

The Code of Private Maritime Law, Law 3816/58 regulates the provision of registers (Official Gazette 32 / 02.28.1958 Issue A) and the Code of Public Maritime Law Decree 187/73 (Official Gazette 261 / 03.10.1973 Issue A).

The condition of compliance is regulated by the registry B/D 10/17 July 1910 (Official Gazette 241A / 1910) as amended by the subsequent orders and remains valid to this day.

2.6.3.2 Law Degree 2687/53

In 1952 the Greek state in order to attract foreign investment, legislated and regulated. A legislative decree was issued which regulated the investment and protection of foreign capital in Greece. In 1953, based on art.112 of the 1952 Constitution, the Law Degree 2687 was issued after the provision of art.107 of the Constitution of 1975; Law Degree 2687 on 'Reinvestment and Protection of Foreign Capital' retains its validity to this day. The state was not only trying to attract but to protect foreign capital. Thus, shipping

companies that register under the Greek flag (vessels over 1.500 tons) can benefit from the special tax exemptions regime (Nomothesia 2011). The Legislative Degree of 1953 (No 2687) allows ship-owners to register under the Greek flag even for vessels that belong to foreign companies provided these companies are owned by Greek citizens but incorporated in foreign countries (Treves and Pineschi 1997).

Law 2678/53 implies that Greek-controlled shipping companies (50% or more) and Greek-flagged ships of 1500 grt plus, have the protection of the state's contribution (Nomothesia 2011, Deloukas 1979). In the case of ships that are registered fail subsequently to meet the required conditions they automatically lose the nationality (Treves and Pineschi 1997). According to article 13, the privileged environment of applying to foreign investments in the country extends to ships over 1500grt provided they register under the Greek flag. With this article foreign legal entities can register their ships in the Greek registry provided their capital belongs to local interests as a percentage over 50%. This is monitored by a committee of the Union of Greek Ship-owners (UGS) and the Ministry of Shipping (Nomothesia 2011). The statute provided the legal environment to attract vessels belonging to Greek interests to fly the Greek flag. Thus, it was made possible for foreign companies established in Panama or Liberia to register their ships under the Greek flag (Nomothesia 2011).

Using the criterion of 50% ownership by Greek citizens it has proven that the shipping policy up to 1985 was successful. In the latter years this law was resisted by some Member States who believed that it opposed the

status of beneficiaries of the Common Shipping Policy. This was overcome in 1985 when Greece came to an agreement with other countries for ***‘the alternative criteria’*** for ships within the Community namely a company incorporated in the Community or flag of a member state (Treves and Pineschi 1997, Bredima-Savopoulou and Tzoannos 1994, Bredima-Savopoulou and Tzoannos 1990).

Moreover, registration is generally (but not always) a precondition for, and a test of, a vessel's nationality. The Law Decree 2687/53 had no direct and immediate effect of attracting ships in the former years of its adoption (Goulielmos 2001). On the contrary its success is evidenced in the years to come using subjective criterion that states that 50% of the total Greek-controlled shipping must be under the Greek flag (Goulielmos 1996). In the same period the Law 3899/58 resulted in banks taking over ownership of ships where ship-owners could not repay the loan (Goulielmos 2001).

In 1967, the Law 89/67 was ratified which set the conditions for the establishment of foreign commercial and industrial companies in Greece. For those foreign companies who wanted to establish branches in Greece, as long as their main activities were outside Greece, article 2 of 89/67 states all privileges are given tax and tariff relief. The reason this law was developed was that many companies in the Middle East were looking for alternative places of establishment due to the 1957 crisis (Goulielmos 2001).

The right and privileges of Law 89/67 were extended to shipping companies with Law 378/68, where foreign shipping under any legal system could operate and offer their service from Greece. Under the laws of equal

opportunity between Greek and foreign companies, shipping companies were treated in the same way as foreign companies. A minimum threshold of currency was set to enter the Greek system every year and bank guarantees enacted to secure the public from any breaches in this law (Goulielmos 2001).

Greek legislation does not provide for any expense and or any fees for registration. This is in addition to the rule that no tax is paid on profits or dividends. Equally no tax is payable on the purchase or transfer of a Greek ship or the transfer of shares in a shipping company. All mortgages of Greek ships should be recorded in mortgage books held in the Registry. The recording of maritime loans and the registration of the mortgage is made without paying duty (Article 5-1, 4419 SW / OG 204 A). Law 1642/86 applies VAT contributions (Goulielmos 2001). Dry and wet ocean carriers are liable to pay tonnage tax by Law 27/1975, Class A. (Table 22)

TABLE 22. TONNAGE CATEGORIES BY LAW 27/1975

Class A	<p>Motor vessel bulk carriers, tankersvessels with gross tonnage of 3,000 metric tons or more; Steel bulk carriers of dry or wet cargo and refrigeration vessels with gross tonnage between 500 and 3,000 metric tons that travel between Greek and foreign ports or between foreign ports only;</p>
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Source: Derevakis and Bei (2012), p.n. 7, Developed by the Author (2013).

2.6.3.3 Authorising Acts, non-Discrimination and Minister’s responsibility

The introduction of foreign capital must be under the authorisation of the Greek state Legal Degree 2687/53, article 13. That was covered under the “authorising acts” which is published in the official Government Gazette and

allows a legislative resolution capability outside the parliament (Goulielmos 2001). Table 23 presents the rules applied in the first Authorising Act (Goulielmos 2001).

TABLE 23. AUTHORISING ACTS AND FUNDAMENTAL RULES

1	The ship to be sold to foreigners without the authorisation;
2	The ship to be mortgaged to foreigners without the authorisation, the nationality of whom is identified in the authorising act (later the nationality restriction was abolished); The no restriction disposal of the sale amount of the ship in exchange currency, (without the obligation of introducing the amount which was in exchange currency in Greece);
3	The no restriction disposal of insurance compensation amount in case of a shipping accident (without the obligation of introducing the amount which was in exchange currency in Greece);
4	The no restriction disposal of the loan amount of the mortgaged ship, (without the obligation of introducing the amount which was in exchange currency in Greece);
5	The no restriction management of the income (freight);
6	The limitation of contributions Navy Retirement Fund (NAT), were the State undertook the obligation to subsidize NAT since the benefits thus the contributions to the seaman where increasing constantly;
7	The determination of the tax and transfer fee of the ship that is sold to foreigners according to the gross tonnage to \$2 per gross ton;
8	The determination of the compensation when the requisition of ship by the State;
9	The dispute resolution procedures of the implementation of the Authorising Act by arbitration;
10	Every other rule that could serve the purpose of article 13 and provide penalties to secure the compliance of the Authorising Acts.

Source Goulielmos (2001), Developed by the Author (2013)

Goulielmos (2001) also stresses the importance of the certain elements reflected from the Authorising Acts and the maritime policy In Table 24.

TABLE 24. UNDERLINING ISSUES IN AUTHORISING ACTS

1	Law 2687/53 article 10 with the instruction of non-discriminating among ships, when a ship agreed and an Authorising Act is approved the same kind of special treatment extends and applies to all other ships as long as this is requested by the other shipowner(s)
2	The introduction of foreign capital and the Authorising Acts are approved according to the importance of investment by the Ministers (Minister of National Economy, Economy, and Shipping) or Presidential Degree (never the case) and are published in the Governmental Gazette.
3	The authorisation given is irrevocable with the rules that each time is authorized. It also guarantees of the Greek state to the importer of foreign capital (ships) that are subjects of the irrevocably statutory scheme of LD 2687/53.
4	Change in the rules is allowed only with the consent of the importer and it is conducted to completion or amendment
6	There is no time limit for the investments.

Source Goulielmos (2001), Developed by the Author (2013)

Article 13 of Decree 2687/53 interpreted in an original way article 13 of the Degree 2687/53 which states that permitted derogation from the provisions of article. That means that the authorisation acts can incorporate any term (Goulielmos 1996). For example free sale and mortgaging the ship, freely available exchange currency, the limitation for NAT contributions, tax determination and fees. Consequently, it is on the absolute discretion to choose which terms will incorporate in the authorising acts provided only that these conditions serve the purposes of Article 13, which is to help attract ships to the Greek flag (Markianos-Daniolos, 2013). The Authorising Acts do not affect the taxation. The taxation is not reduced for any reason. The incorporations into the authorising acts up to 2010 is included in Table 25.

TABLE 25. TERMS INCORPORATED IN AUTHORISING ACTS UP TO 2010

1	Reflagging, free sale, deletion from registry.
2	Free available exchange (unless the ship was acquired by the state or foreign GRD).
3	Freedom management revenues / profits.
4	Exemption from requisition except clash of the Great Powers
5	Free insurance.
6	Prohibition seizure by government (apart from debts of the ship).
7	Crew Composition.
8	Stamp Duty Exemption for contributions receipts for insurance institutions Merchant Navy.
9	Ship measurement from recognized classification societies.
10	Specifications ship auditing by classification societies.
11	Taxation
12	Income tax exemption for owners and shareholders .
13	Exemption from transfer tax and stamp duty in case of transfer or contribution.
14	Exemption from stamp duties, levies and charges of any contract or transaction for the placing the ship in Greek flag and sign the mortgage, establishing the company, and so on (Article 5 SW 4419/1964).
15	Special Shipping Enterprise.
16	Responsibility for Social Security contributions for repairs bears the repairer (not the owner).
17	Preference mortgages, preference of privileges (except for Brussels and if recognized by Greek law).
18	Ability for owner concession (SW 2687/53) for mortgagee.

Please note: The Table continues on the next page

Please note: The Table continues from the previous page

19	Arbitration in disputes with the State.
20	Modification only with the consent of the lenders and extendable any more favourable terms granted to another vessel.
21	Limitations in case of funding from the Greek market (or national bodies Banks).
22	Validity of the authorising act in case of transfer of the ship to another domestic or foreign legal person covered by majority Greek interests, ability of deletion there is no majority of Greek interests.
23	Exemptions from VAT (Article 27 of Law 2859/2000)
24	Ability allotment of shares in the shipping portfolio company for admission to official listing

Source: Markianos-Daniolos (2013), Developed by the Author (2014)

2.6.3.4 Seafarers

The LD 2651/53 related the composition of the crew of Greek-flagged ships and allowed for the organic synthesis of crews in terms of quality and quantity. Notwithstanding LD 2651/53 foreigners with no qualifications were allowed on board. In the same year, the foundations of maritime education were set with the Law 1894/51 which refereed to maritime education and allowed for public Maritime Schools (Goulielmos 2001).

In 1960 the Greek legal maritime system, rule 8, sets the manpower onboard of Greek ships with respect to the Greek and foreign seafarers. It allowed the use of Greeks or foreigners with no qualifications in cases where it is proved that qualified and capable seafarers are difficult or impossible to find or if requirement made by the Greek seaman are contrary to the Greek laws, especially those connected to the payroll. The percentage of foreigners according to LD 2651/53 was up to 25% of the organic synthesis of the crew (Goulielmos 1998).

2.6.4 The Greek-flagged ocean shipping, the development of the Greek state and the international seaborne trade

Greece is considered to be the birthplace of democracy. The country's political system is Parliamentary Democracy with a President as Head of

State. As a typical democracy it claims that all powers derive from the People for the People (Hellenic Parliament 2011). The Constitution was ratified in 1975 and amended in 1986, 2001 and 2008. The Greek government structure has been described as a compromise between the French and German models (Hellenic Parliament 2011) or as others argue that the presidency was not designed according to the French model but it was closer to the Italian or German model (Lyrintzis and Nikolakopoulos 2011). The Hellenic Parliament consists of 300 members (MPs) elected every four years directly by the people. The Prime Minister and the cabinet play a central role in the political process. The 1975 Constitution states that the political system is a parliamentary democracy with the Prime Minister and the cabinet on the top and that the President is elected by the parliament (Lyrintzis and Nikolakopoulos 2011). The President is elected every five years by the parliament and can be re-elected just once. The role of the President is to perform the same governmental functions in addition to ceremonial duties (Hellenic Parliament 2011).

Greece suffered during the Nazi occupation and after liberation experienced an equally bitter civil war²¹. The regime that was established after the civil war (1946-49) was closely fitted to the victors; the armed forces, the monarch, and the parliamentary right (Hellenic Parliament 2011). Constantinos Karamanlis was the prime minister from 1955 to 1963. In 1963 Georgios Papandreou formed his first short lived government. In 1967, the Greek military overthrew the centre right government of Panagiotis

²¹ between communist insurgents and government forces

Kanellopoulos and established the Greek military junta from 1967 to 1974. The Junta made all political parties illegal, and was particularly oppressive on members of leftist parties, sending thousands of leftists to jail or forcing them into exile (Norwegian Center for Retrieving Data). During the dictatorship, 1967-1974, the shipping policy was based on three axes: (a) to increase capacity under the Greek flag; (b) to provide a favorable and stable institutional framework and (c) to develop Piraeus as a maritime center (Theotokas and Harlafti 2009). According to Harlaftis (1993), that was the first time the state developed an integrated shipping policy which targeted the repatriation of Greek ship-owners.

The postwar period was a success story for Greek shipping. In the 1950s, the Greek-owned fleet represented 3.5 percent of the world's capacity and in the 1970s 13.6 percent (Theotokas and Harlaftis 2009). During the periods 1957-1962 and 1966-1980 there was no significant flagging out (Goulielmos 2001). This development did not correlate with the Greek economy with only 5 percent of the Greek fleet being involved with Greek cargoes and only a small percentage of the profits flown by Greece (Harlaftis 1993). Before 1968 ships were taxed on the gross income of chartering the ship. But taxation was not the only initiative and political reasons contributed to the choice of flag. Greece at that time gained from the political embargo of the USA towards China from 1951 where the flags of convenience like Panama, Liberia and Honduras were not allowed to use Chinese ports. Additionally, Greece gained from the international war against the flags of convenience at that time, especially in the Australian and Swedish region (Goulielmos 2001).

The post 1974 period was a new political period and a “*new political order*”²² (Voulgaris 2002), Featherstone and Katsoudas 1987). The turning point for Greece is considered to be the fall of dictatorship in 1974. Parliamentary elections were held in November 1974 with the participation of four major parties (Table 26), (Lyrintzis and Nikolakopoulos 2011). The “New Democracy” political party was a newly formed party representing the right wing. The political center was a revival of the old center, named Center Union – New Forces (EKND) and the left was an alliance of the left wing parties (Lyrintzis and Nikolakopoulos 2011). The communist party (left) was recognised as a political party in 1974, as the Communist party of Greece (KKE). Another communist party emerged from the communist left side, and was called “Synaspismos” (Clogg 1993). The fourth and last party was a new party, a socialist movement, “PASOK”, its founder Andreas Papandreou (Lyrintzis and Nikolakopoulos 2011, Lyritzis 1984, Lyritzis 2005).

TABLE 26. GREEK POLITICAL PARTIES, 1974

	Political Party	Party Leader
Right Wing	New Democracy	Constantinos Karamanlis
Political Center	Centre Union – New Forces (EKND), (the reveal of the former Center Union)	
Center	Panhellenic Socialist Party (PASOK)	Andreas Papandreou
Traditional left	EDA (representing the Greek left when KKE was illegal)	

Developed by the author from several sources (2013)

The New Democracy party representing the right wing of the political spectrum easily won the victory in the 1974 elections. The Greek Parliament and Greek politics are characterised by a three block configuration, left

²² “metapolitefsi” in Greek

wing, center and right wing parties. New Democracy is the party that dominated the Greek political era before and after the dictatorship. The prime Minister was Constantinos Karamanlis, who played a predominant role in restoring democracy. In 1977, Karamanlis won the elections again (Lichbach 1979, Featherstone and Katsoudas 1985, Pappas 1999). Karamanlis introduced the concept of 'radical liberalism' as the party's ideological platform (Alexakis 2001, Harlaftis 2007).

Table 27 presents the Greek controlled, flagged and owned fleet in deadweight tons from 1975 to 1980. The percentage of the fleet under the Greek flag is presented in column four. As can be observed the Greek-flagged fleet ranged from 52% and achieved 77.2% at the end of the 1970s.

The international shipping markets in the 1970s were characterised by the situation in the Middle East and the oil crisis. As presented in Table 27 the Greeks registered their ships under the Greek flag and from the 1975-1980 there were no significant flag outs (Goulielmos 2001).

It has been noted that the Greek ship-owners' decision varied depending on the circumstances (Theotokas and Harlafti 2009). After the 1975 new political era the trust in the democratic state and political stability was paying off in flag registration as well as the protection offered by the Greek flag against ITF (Goulielmos 2001). Whereas before 1981 the ship-owners' criteria for choosing a flag change were based on the corporate strategies they were applying (Harlaftis 1996, Thanopoulou 1994, Theotokas 1997).

TABLE 27. GREEK-FLAGGED AND OWNED SHIPS, 1975-1980 (DWT)

Year	Greek-flagged	Greek-owned	% in the Greek flag
1975	25.108.441	23.189.995	52
1976	28.660.875	21.923.713	56.7
1977	33.752.076	19.111.751	63.8
1978	36.314.066	16.193.615	69.2
1979	38.570.128	14.379.967	72.8
1980	41.421.925	12.203.959	77.2

Source: Naftika Xronika, various issues, Developed by the author (2013)

Although in the beginning of the 70s the market was on a decline it did not affect the investments of the Greek ship-owners. They mostly invested in second hand vessels and new ships build in Japan (The Greek Miracle 2015). In 1971 shipping was under the supervision of a new public body (the Ministry of Shipping, Transport and Communications) and at the same time half of the Greek-owned ships were registered to the Greek registry, (The Greek Miracle 2015). As presented in Table 27 the Greek-flagged fleet was continuously increasing from 52% to 77.2% of Greek controlled ships being registered under the Greek flag.

The Greek government aimed in the repatriation of Geek owned ships to the Greek flag by offering attractive conditions. Three hundred companies were relocated and established in Piraeus (The Greek Miracle 2015). The fundamental measure ensuring minimal state involvement was the Legislative Degree 2687/1953 convened with the investment and the protection of foreign capital. The Greek state also kept good relationships with ship-owners. The foreign exchange from shipping and the geopolitical advantages forced the Greek government to develop a favorable institutional framework for the Greek flag. Despite the conflicts between the government and ship-owners, the government's attitude towards shipping

was to support its competitiveness (Theotokas and Harlaftis 2009). This state-ship-owners relationship was regarded as an advantage and an element which defined the competitiveness of the flag (Thanopoulou 1994).

In 1970 the number of Greek seaman decreased in the ocean going and short sea sector. Greek ship-owners made requests for foreign crews to be allowed, they were financing ships from equity. Their main concern was to lower the operational costs coming from crew wages and insurance premiums, crew transport, spares, repairs and provisions (Goulielmos 1993). In 1972, the Government allowed for 25% of foreigners on board Greek ships, provided that Greeks were not available and had to pay them as Greek seafarers were paid. The shortage of seamen was always foreseen and since a small nation had to supply crew to the first worldwide sector, foreign labor on board ships was allowed (Goulielmos 1997).

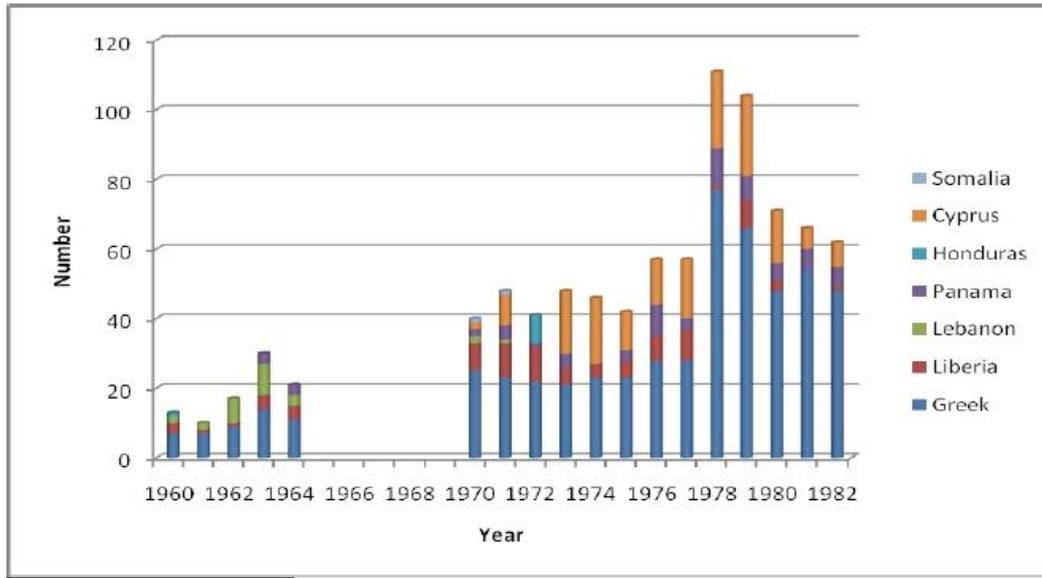
In 1974 after the fall of the seven year dictatorial regime in Greece and Turkey's intervention in northern Cyprus, Constantinos Karamanlis was sworn as Prime Minister in July with his newly founded centre-right party, New Democracy. A week later a referendum which led to the abolition of the monarchy was held. One month after the referendum a new constitution was passed in June 1975 (Sotiropoulos 2010). This was the starting point of a new political era. Especially the first years were years of de-juntification with political reform and the development of a viable democratic culture (Kassimeris 2005). Karamanlis' government, a renewed right political party (Roberts and Legg 1991), prioritised political stability and foreign policy issues (Lichbach 1979). Being preoccupied with issues such as; (a) the

conflict with Turkey and (b) preparations for the country's accession to the European Community (EC) (Sotiropoulos 2010). The role of shipping for Greece in 1974 was very important. The main reason was that gross receipts from shipping became the most important item of invisible receipts accounting for 36% of gross receipts. At the same time net receipts from shipping covered 25% of the deficit in the balance of trade for that year (Serafetinidis *et al* 1981).

Why ship-owners increased their capacity? Ship-owners wanted to meet demand to the point that their investment was profitable. Lun and Quaddus (2009), state that fleet size is related to; (a) freight rates and (b) seaborne trade. Thus ship-owners increased their fleet capacity when they received a higher compensation for their existing fleet and benefited from an increase in demand. However, it is impossible to predict the global economic demand if a Greek ship-owner chooses to buy a second hand ship or a new building to be delivered in 18 months, similar decisions are made all over the globe. This explains why Stopford (1997) considers shipping as a big poker game. Further the freight rates determine the price of the ship (Stopford 1999) and Greeks were buying mostly second had ships. It must be noted that the timing of purchase was very important and it was made when the market was at low levels. Greeks were accused of asset play but the reality was that it boosted the fleet since a 1974 built ship of 65,000 dwt Panamax could be worth \$1.6m and in 1989 it could worth \$8.5 (Clarksons Research Studies 1995).

After 1975 the Greek state undertook positive measures in the form of initiatives to reorganise the Greek register and make it more attractive and competitive (Goulielmos 2001). The Greek Prime Minister Konstantinos Karamanlis seemed keen in the repatriation of the ships, as he claimed not due to the interest of the public sector and the state's budgetary revenues but for other reasons such as political and patriotic (Antonopoulos 1976). At the same time the Greek ship yards are nationalised. As to taxation he said that shipping contribution will go towards shipping infrastructure, which actually never happened (Goulielmos 2006). and he also commented on the bad reputation among the general public (Harlaftis 2008). The reasons for the bad reputation were the criticism and accusation in developing close relationships and collaborations with the junta (Bissias 2012)

Karamanlis trying to repatriate ship-owners was also pushing for incorporating shipping to the new constitution and the repatriating signal came from the Chairman of the Union of Greek Ship-owners, Antonis Chandris, who said ***“if we do not respond to the pressures of the government, Law Decree 2687/53 will be excluded from the revision of the Constitution”*** (Bissias 2012). The state was trying to repatriates the Greek ship-owners although their reputation was perceived by the public as negative. According to Bissias (2012) the underlying reasons for the negative reputation were the image of Greek ship-owners in the movies presented as ***“notorious rich and ruthless”*** and most importantly the media at the time reflected the reality of maritime accidents of Greek-owned ships reaching a worldwide record, which lasted up to the 1980s with most of the ships flying the Greek flag (Figure 21).



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FIGURE 21. SHIPWRECKS AND MARITIME ACCIDENTS IN GREEK-OWNED SHIPS UNDER DIFFERENT FLAGS (OVER 500GRT), 1964-1982

Source: Bissias 2012, p.n. 326.

Three main arguments explain why Greek-flagged ships (along with the Greek-owned) reached these records; (a) The over aged fleet, (b) since ships were involved in tramp shipping they were navigating in unknown waters, and (c) the unskilled seafarers from undeveloped countries on board ships. Consequently the Union of Ship-owners had to deal with; (a) bad reputation, (b) crew shortages, c) ship total losses, (d) the desertion between the rank of seaman, and (e) foreign ship-owners wanted to secure tax privileges using the Greek flag (Bissias 2012).

The decisions taken in the new political era were taken while at the same time the Greek government had to deal with; (a) alienation or hostility of the political parties, (b) a new government being reluctant to assist shipping and reflect that in the institution, (c) the changing environment of the USA and UK shipping regimes, (d) the media effect on people’s perceptions and (e)

a country that was ignorant to the benefits and prospects of the maritime profession (Bissias 2012).

According to the Law Degree 2687/53 foreign companies that operate abroad can establish offices in Greece following a deposit of a bank guarantee of a relatively small sum between 1000-5000 USD and then benefit from administrative measures and tax exemptions. These exemptions included; full exemption from taxation of any kind, exemption for keeping accounting records and provide work permits for all foreign personnel (Nomothesia 2011).

Further in order to develop Piraeus as a shipping centre, Law 89/1967 allowed foreign shipping companies operating in Piraeus acting as agents for or as representatives under Greek or foreign flags to found branches in Greece and operate under the privileged regime. This Law 89/67, amendment 378/1968 mainly deals with the foundation and taxation of shipping companies with foreign flags in Greece (Goulielmos 1997). This law is considered as very important to the development not only to Piraeus attracting more companies but to the development of Greek controlled shipping. With this legislation it was made possible for many Greek shipping companies from London and other maritime centers to establish offices in Piraeus. This made possible development of all kinds of shipping related activities in Piraeus and thus until today Piraeus is considered one of the major shipping centers providing job positions and economic activity that would not otherwise be attainable (Nomothesia 2011). What was required by those companies was to import a certain amount of foreign exchange

into the country for the running of their offices and in return they were totally exempt from income tax, duties, payments to the state and control from the state which normally applied to the limited companies. This law was broadened and amended by Law 37/1968, Law27/1975, Law 814/1978 (Theotokas and Harlaftis 2009).

Taxation was an important factor which could influence the repatriation of ships into the Greek flag. The tonnage tax was introduced in 1939. The purpose of introducing a tonnage tax was to reduce the ship-owners' tax burden which in principal would allow them to be more competitive on a global basis. Greece has the longest history in applying a tonnage tax regime (Theotokas and Harlaftis 2009). After 1968 (Law 465/68, Law 509/70 and the Presidential Degree 800/70) the taxation of ships under the Greek flag was calculated with the net registered tonnage (NRT²³) and the age of the ship. The Obligatory Law 465/68, changed the taxation system from the tax being levied from the income of ships to the age and the net capacity²⁴ of the ships. It is not elective as it is the only tax imposed on the registered owners of Greek-flagged ships (Theotokas and Harlaftis 2009). "The tonnage tax" system was not calculated on the net profits of the shipping company but according to the tonnage of each ship. The ship-owner still had to pay the tax even if he does not make a profit out of his business and according to Art.6 of Law 27/ 1975, term 12, when a ship is inactive due to lack of work or any other cause, the tax is reduced (Matsos 2009). The system was similar to Liberia which register was regarded as a quasi flag of

²³ Net registered tonnage is a volume measurement. It is the volume of cargo the vessel can carry. This includes any tanks, cargo holds, etc. that are normally used for transporting cargo.

²⁴ Net registered tonnage i.e. the gross register tonnage less the volume of spaces that will not hold cargo (e.g. engine compartment, helm station, crew spaces, etc., again with differences depending on which port or country is doing the calculations).

convenience (Goulielmos 1997). The advantages of the tonnage tax over the net profit or corporate system are: simplicity, certainty, efficiency and transparency providing an overall reduction of the tax burden (Matsos 2009).

Article 25 of Law 27/1975, as replaced by article 28 of Law 814/78, permits the establishment in Greece of the offices or branch offices of foreign shipping companies of any type or form, provided they engage in activities of: ship management; ship operation; chartering, insurance, average adjustment; brokerage services (sales and purchases, shipbuilding, freight and insurance) involving vessels of over 500 GRT under Greek or foreign flags (with the exception of coastline passenger vessels) and representation of companies engaging in the above activities (Nomothesia 2011). This law has two main elements. First it clarifies the taxation status of vessels under the Greek flag that is based upon age and grt capacity. Second, it allows foreign companies dealing with “management or exploitation” of vessels under a Greek or foreign flag to establish offices in the country provided that they pay their operational expenses of at least \$50.000 per year in foreign currency. These companies enjoy full tax exemption (Nomothesia 2011).

Agents were excluded from the Law 27/75. It was difficult at that time to assess the performance of work required outside Greece. In 1978 Law 814/78, article 8, agents were included. Law 2234/94 article 4 (which replaced article 8 of Law 814/78) included salvage and towage ships with foreign flags (Goulielmos 2001). In 1975, Law 27/75 raised the taxation level but the method calculating it remained the same. The tax benefits were

levied to the income and gains that companies raised from the management and exploitation of ocean going vessels. Its' status is protected under the Greek constitution which means that it cannot be abolished or amended except in the amendment of the tax rate. In a period where the use of the Greek flag was increasing rapidly this measure reduced the taxation burden (Harlaftis 1993). This approach toward taxation was aimed at maintaining the competitiveness of shipping (Theotokas and Harlaftis 2009). For example the provisions of Law 27/1975 are applicable to vessels flying the Greek flag irrespective of the domicile, residence or place of business of the ship-owners or ship-owning companies. The tax imposed exhausts any obligation of the Greek shi-powner as well as the shareholder or partner of a Greek or foreign company controlled by Greek interests as regards profits derived from trading of ships. Additionally, any excess value realised following the sale of the ship or the collection of indemnity insurance or for any other reason is deemed to be income exempted from taxation as long as profits are derived from the ship's exploitation (Goulielmos 2001).

In 1976 the Greek state accepted help from the Greek ship-owners to run nautical schools by providing more that 65% of the total costs. The state determined after negotiations the contribution of ship-owners and seaman to the Greek Pension Fund (NAT), the course manning scales and the percentage foreign labour can occupy. In 1977 the national currency, (drachma) was used for paying seafarers wages to Greek crews instead of the English pound (Goulielmos 1997). That resulted saving for the ship-owners since freight was paid in dollars and they gained from the currency difference.

In 1977 the elections were held earlier than they were supposed to, due to the readdressing of the balance of votes and power with the parliament. In this election, the party changed within the parliament and PASOK became the second largest party in the parliament. In addition Greece re-enters NATO and the treaty for the membership in the European Community was signed and internally Karamanlis decided to seek election as President and he was replaced by Georgios Rallis (Lyrintzis and Nikolakopoulos 2011).

In the autumn of 1978, the dry cargo market started recovering and developing into a firm market. The reason was the increase in major bulk commodities and the low ordering of fleets during the previous decade. The oil price increased which forced industries to switch from oil to coal and boosted the trade, and the congestion in ports increased the demand for shipping services (Stopford 2009a).

In 1979 Greece was accepted by the European Community as the 10th member with both, the socialist (PASOK) and the communist party (KKE) opposing European Union membership. In 1980 Constantinos Karamanlis becomes the President of the Republic and Georgios Rallis becomes Prime Minister of New Democracy. Costantinos Karmanlis called for early elections in the 1980 (Roberts and Legg 1991).

Freight rates climbed further in 1980, but the dry cargo freight boom lasted until March 1981. The initial reason for the fall was the US coalminers' strike which caused a decline in the Atlantic market. The main reason was the recession in the world economy. The freights dropped further in 1982 and then improved slightly in the spring of 1983 but fell to bottom level in the

summer and remained there. With freights being depressed from 1983 to 1984 large number of orders were placed for bulkers. The situation itself availed the placement of orders with ship-owners having capital reserves from the boom of 1980, banks were keen to lend, ships were cheap due to the overcapacity of shipyards, and shipyards were offering a new generation of fuel efficient bulk carriers. Adding to that the yen being favorable meant many orders were being placed in Japan (Stopford 2009a).

During 1980-1990 the international shipping industry is oversupplied with vessels from the previous decade and goes through another deficit. The energy crisis does not affect the tankers or mega tankers but the bulk carriers. The result is ships were laid up or went for scrap (Lloyd's List 4.12.1997).

Alogoskoufis (2012) states that following the 1979 oil crisis, the accession to the EU in 1981 and the election of a socialist government, Greece entered into the 1980s with a problematic financial situation. Karamanlis became the President of the Republic in April 1980 and PASOK won the elections, two consecutive times, in 1981 and in 1985 (Lyritzis 1984, Spourdalakis 1988a, Spourdalakis 1988b). For the next three decades, the two dominant parties were enchanted with power (PASOK and Nea Dimokratia). Although there were attempts for the formulation of new parties, with the exception of Sinaspismos, no one lasted long or at all. (Lyritsis and Nikolakopoulos 1999) Since the 1970's all political parties whether in power or not, especially when being in power, performed practices that aimed at gaining votes (Sotiropoulos 2001). The party system during the 1980s has been described

as close to the model of 'limited but polarised pluralism' while the current one is a 'two-party system' (Mavrogordatos 1984, Pappas 2001). PASOK with its charismatic leader, Andreas Papandreou managed to establish itself as a rising and convincing new political force.

Although in the previous decade the Greek-flagged fleet prevail the Greek-owned from this decade onward and since 1982 the opposite is evidenced Progressively the percentage of Greeks owning ships under foreign flags is increasing (Table 28).

TABLE 28. GREEK-FLAGGED AND OWNED SHIPS, 1980-1990 (DWT)

Year	Greek-flagged	Greek-owned	% in the Greek flag
1980	41.421.925	12.203.959	77,2
1981	42.289.117	12.028.656	77,9
1982	38.057.112	15.397.870	71,2
1983	37.707.377	18.431.381	67,1
1984	35.781.076	17.820.386	66,7
1985	27.765.421	19.143.454	59,2
1986	24.183.381	20.920.969	53,6
1987	21.006.751	26.529.937	44,2
1988	19.759.053	28.287.135	41,1
1989	20.898.119	24.656.291	45,8
1990	22.524.329	24.056.210	48,3

Source: Naftika Xronika, various issues, Developed by the author (2013)

Actually from 1973 to 1986 flagging out attracted massive attention from the traditional registries. The OECD fleets lost over 20% of their total market. That was due to the ascent of developing countries in shipping and the persistence of maritime crisis of the 1970 and the 1980s. The reason that all ship-owners did not flag out using the Greek flag was that not all companies had the ability to reduce the cost, to mobilise past profit reserves, to cope with raising funds and to cross subsidise vessels (Goulielmos 1993). Overall the Greek ship-owners anticipated the crisis in

both decades because they were; not exposed financially and were mostly self funded, were expecting the crisis due to the high prices of the crude oil, they had benefited financially from the 1940 to 1970 period and had less takers. Several measures were taken during this decade but still the Greek flag did not manage to keep ships in the registry. The success of the socialist party PASOK came as a big surprise (Roberts and Legg 1991). PASOK also won the elections in 1985 having a total of an eight year of long tenure (Sotiropoulos 1994) which was another surprise for many among them the Greek ship-owners.

The flagging out the 1980's was significant (Goulielmos 1997) while the market attitude was still the same, emphasising helping Greek shipping to become competitive. In 1981 more ships returned to the Greek flag and the register increased in both number of ships and capacity. This was due to the boom in the market and freight rates. But the next year's decline in freights made them flag out massively. The after 1981 criteria for flagging out are characterised as more defensive, aiming at reducing running cost and thereby increase the competitiveness of the company (Theotokas and Harlaftis 2009, Thanopoulou 1997). In an effort to cut costs, Greek ship-owners flagged out to flags of convenience or at the time *'flags of shame'* (Metaxas 1985) with the aim of reducing the manning cost. In the period 1983-1984 the daily cost of the Greek-flagged ship was on average \$500 higher than that registered under the flags of convenience (Goulielmos 1998). The cost of maintaining the Greek flag with limitations imposed increased their costs and made flagging out seem a necessity (Thanopoulou 1994) or a good excuse (Theotokas and Harlaftis 2009). Limitations on the

numbers of crew and nationality, adding to that the age of the vessel made flagging out with the Greek flag in 1981 77.8 per cent to 42 percent in 1987 (Theotokas and Harlaftis 2009). The shipowner who registered his ship under the flag of Panama or Liberia differentiated his costs and the quality of the service offered. If the ships were retained under the Greek flag the owners would have to absorb contributions to the social insurance fund and other related costs, while if the contributions are not included that increases the crew's remuneration. Also taking advantage of the foreign crew low wages in principal differentiates the quality of services compared to the crew from the traditional maritime states (Yainnopoulos, 1988). The quality of crew was a risk when employing crew from the traditional states, but most probably not to the extent as in the countries with flags of convenience. That is supported by the management practices of Greek ship-owners who when registering their ships under a flag of convenience retained Greek nationals in key positions such as the officer posts. (Yainnopoulos, 1988)

In 1981 Greece entered the European Union. Based on the Treaty of Rome, the same privileges were required for all European Union citizens (Nomothesia 2011). Grigoropoulos (2013) argues that the membership of Greece in the European Union has influenced the Greek shipping industry both positively and negative. Greece has played an important role in the development of shipping in the Union and joined forces with other states in the applicability of the Unions principles in the shipping industry. On the other hand there were cases where decisions were supported by the Greek side although its fleet competitiveness was threatened. For example the Community Ship Register EUROS register proposal (Grigoropoulos 2013,

Giziakis 2005) where the Greek shipping industry was in favor since it would not create a discriminatory status towards third country flags (Treves and Pineschi 1997).

It took time for the European Union to develop a strong maritime policy. Greece being a member of the International Maritime Organization, the leading maritime regulatory body was always ahead and prompt with the adoption of new regulations. In 1992 a Motivated Opinion of the European Commission was raised against Greece which concerned ship ownership and the discrimination between citizens of the European Union (Treves and Pineschi 1997). The European membership, according to Dertilis (2010), made Piraeus more attractive to Greek ship-owners.

Although in 1984 there was an increase in world trade, in 1985 the dry market struggled. Ship-owners were not able to repay loans that led to bank disclosures and distress sales, which made second hand vessels prices fall low. In 1985 the percentage of tankers in the Greek-owned fleet had dropped to 38 percent. From this year onwards the percentage increased and in the 1990s reached 50 percent of the fleet (Theotokas and Harflaftis 2009, Stopford 2009a). The markets reached the bottom in mid-1986 and started rising steadily reaching a peak in 1989. That came along with the world business cycle (Stopford 2009a, Stopford 2009a, Stopford 2009b). The tanker market boomed in 1985 followed by the heavy ordering of new ships during 1988 to 1991. The reason for the renewal of the fleet was; ageing, shipbuilding capacity being sharked the previous years was predicting a shortage, and growing oil demand was expected (Stopford

2009a). The reasons which led to the long duration of the crisis of the 80s was the size and productivity of the shipbuilding industry, the availability of capital by banks or other financing bodies, and the state intervention in shipping (Theotokas and Harlaftis 2009).

Shipping is not just capital but labor intensive (Stopford 2009a). In the early 1980s various regulations were passed which included ministerial decisions and laws regulating the composition of the crew on board of ships and the percentage of foreign crew. That involved the bilateral trading agreements to avoid double taxation of Greek ships and to regulate the employment of foreigners (Theotokas and Harlaftis 2009). In the early 1980s the stagnation of wages and high rates of unemployment combined with the crisis changed the structure of demand for and of labour (Theotokas and Harlaftis 2009) with the percentage of foreigners increasing to 30% in 1983, and to 40% in 1986 (Goulielmos 1997). The factors reducing the Greek crews were that; (a) before the 1980s going to sea was regarded as a profession with high wages, (b) going to sea was seen as a good career prospect but after the 1980s was regarded as a profession with an uncertain future, and (c) the rise of the standards of living in Greece coupled with the greater number of alternative opportunities (Corres 1978). That low embarkation of Greek seaman and the high laid up rates resulted in high unemployment in 1982 (Goulielmos 2001).

One major element that affects the operating cost of the ship is the crew onboard in respect of the nationality of seafarers, number and ranks on board ships. According to Corres (2007) the composition of crews of Greek-

flag vessels in the deep-sea sector has been flexible and negotiated between the Ministry and the individual operator. Until 1986; (a) the national currency (drachma) was chosen for paying crew wages; (b) the foreign crew percentage was increased twice, one in 1983 and another in 1986; and (c) the foreign crew was paid not according to Greek wages but to their country of origin (up to 1983.) Further in 1983 the salaries paid to the foreign seafarers were differentiated to those of Greeks and they were paid according to the payroll of their country subject to the bilateral agreements (Goulielmos 1997). When the foreigners were paid the same amount as Greeks the operating cost of the ship was increased (Goulielmos 2001).

Still ship tonnage taxation is based on the size and type of ships with profits from Greek shipping not being subject to tax, as vessels pay taxes but further more ship-owners are not obliged to convert profits into local currency or to deposit them in Greek banks²⁵. Greek ship-owners flying the Greek flag maintained a team of crew absorbing the additional costs because they believed that the crew contributes to the quality of the ship. They offered permanent contracts to officers believing in the long-term prospects of their business. This long term strategy did not prohibit ship-owners from opting for short term solutions (Theotokas and Harlaftis 2009, Theotokas and Progoulaki 2007a, Theotokas and Progoulaki 2007b).

Thus, the flags under which Greeks were registering their vessels were competitors of the Greek flag. These were Panama, Liberia, Cyprus, Lebanon Singapore and New Zealand. After 1982 Malta, UK, Bahamas,

²⁵ Law 465/68 and Law 27/75

Phillipeans, Honduras, Ceylon, Saint Vincent, Marshall Islands, St. Mauricio, Hong Kong, Egypt, Sri Lanka and Antigua (Goulielmos 1997).

The option of registering either on a flag of convenience or being on a national flag but using the dual registration (open registries) both contributed further to flagging out. Greece being a traditional flag and not having a parallel registry was severely affected. Dual registration allowed a ship already registered in a national flag to register to the parallel register for example the USA, Italy, France, Germany, Luxembourg and Norway, even for one voyage without losing the benefits of the nationality. That allowed ship-owners to retain the prestige of the national register and at the same time the low cost operation of ships registered elsewhere. The open registries were not characterised as flags of convenience and were not treated like that by ITF. Also additional benefits were given through subsidies and other forms of financial support, under the pressure of the deep depression of the shipping crisis of 1981-1987 (Goulielmos 1997).

The remarkable flagging out of the 1980's led to the proposals of a second registry, a strategy which was followed by other European countries. That failed and Greek shipping was still ***“developing first under flags of convenience and then flagged-in instead of out”*** (Pallis 2007, Thanopoulou 1994). The actions taken by the Greek governments from 1981 up to 1990 were (Goulielmos 1997):

- Reductions in the composition of crews in 1983, 1986, 1990
- The reduction in the remuneration of foreign crew in 1983
- The reductions in taxation for the large ships 40,000 grt and over in 1990

During 1981-1982 the Minister introduced controls in preventing illegal national currency exports by shipping companies. The mistake of the government was that the non –anticipation of the coming crisis in the second half of 1981. The Ministry had to (a) reduce the increasing labor employment; and (b) to minimise companies' losses. The relevant measures instead of being taking in 1981 they were taken two years later, when the crisis was at its peak (Goulielmos 1997). In order to understand the whole picture the policies should be considered together with other elements as (a) the devaluation of the drachma against the US dollar, (b) the Law of **'recycling of crew'** and (c) the bilateral agreements (Goulielmos 1998).

The government issued a Presidential decree (No. 29/24-1-84) in order to redefine the status of unemployed seaman and at the same time redefine marine unemployment. During 1983 to 1990 there were reductions of labour positions on board ships and reduction of ships' taxation due to size. Before 1983 foreigners onboard ships were 30% and 35%. In 1983 the percentage was increased to 40% which lasted up to 1985. 1986 allowed the enlistment of foreign crew to the lower rate 40% if Greeks are available, this passed in 1992 in the Agreement Act and became constitutional law (Goulielmos 1998).

The government decided to introduce a limited duration on board ships, but the decision was criticised by the ship-owners as **"recycling of unemployment"**. The law of **"recycling of unemployed seaman"**, Law 1376/83, was not included in the Authorising Acts, on the contrary with the bilateral agreements. The law was in force only for two years (Goulielmos

2001). The recycling law and the reduction in the composition resulted in more unemployment for the Greek seafarers.

Greece never developed a parallel registry. Still according to Law 3170/28-3-1955 where ships of Greek interests not flying the Greek flag can affiliate with national seaman social security (NAT). That allowed for ships flying foreign flags to be manned in the same manner as the Greek-flagged ships, and Greek seafarers were insured at NAT. This in a sense could be regarded as an International Greek Register (Goulielmos 1997).

In 1982 the first bilateral agreements were signed, named after the Minister '**bonus Katsifara**', which added about \$500 million per year to the shipping industry (Goulielmos 1998). The essence of the bilateral agreements was that the foreign crew were not paid the same amounts Greek seaman were paid but with the standards of their county of origin. Due to heavy flagging out the ship-owners asked for the Government's intervention several times: in 1983, 1986, 1990, and 1995-1996. Bilateral wage agreements took place during 1983-1991, in order to reduce crew unemployment (Goulielmos 1998).

The bilateral contracts with other countries and seafarers unions were incorporated in the article 8 of the Authorising Acts of the 1985 and the 1990 (Goulielmos 1998, Goulielmos 2001). The percentage of foreigners could not exceed 40% of the organic composition, subject to three requirements; (a) the foreign seafarers are dismissed 12 months after the employment if the difficulties of replacing them do not exist; (b) if the conditions are violated that the Ministry of Shipping can recall that paragraph for the specific ship;

(c) the requirements if the State requires not to apply if the country's interests imply otherwise (Goulielmos 2001).

Figure 22 presents the employment of Greeks and foreigners on board Greek ships. In 1978 58.033 Greeks were employed and 28236 foreigners whereas in 2000 18450 Greeks and 10935 foreigners. During 1986-1988, 2.798 Greek seafarers lost their jobs and 1523 foreigners were employed and in 1998-1990 588 Greek and 1236 foreigners (Goulielmos 1998).

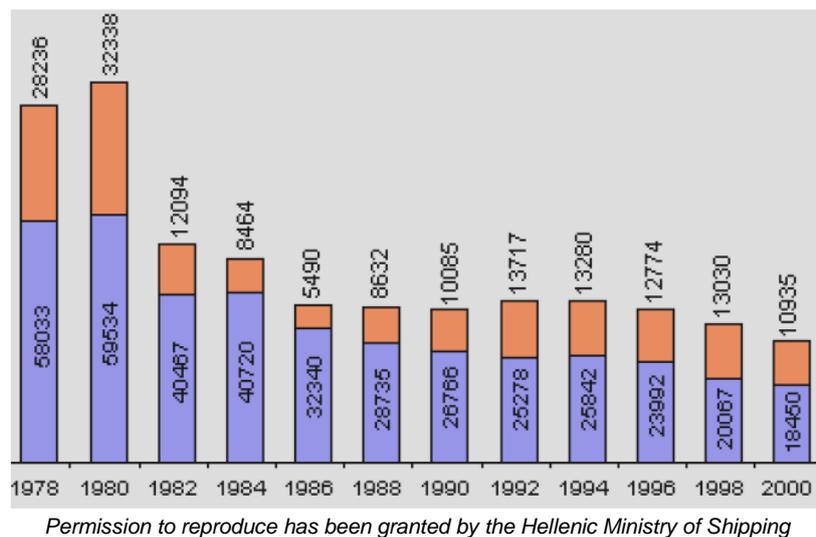


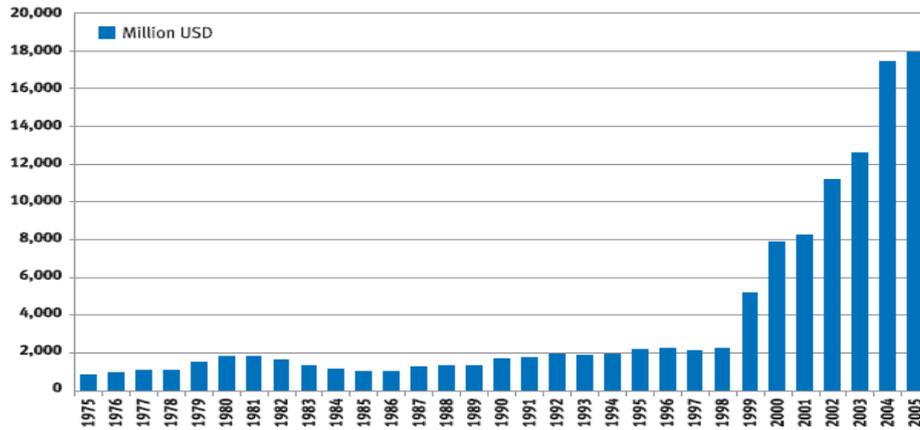
FIGURE 22. GREEKS AND FOREIGNERS EMPLOYED IN GREEK-FLAGGED SHIPS, 1978-2000

Please note: Blue coloured columns (the basis of the column): Greeks and Red Blue coloured columns: Foreigners (on the top of the column)

Source: Ministry of Shipping, www.yen.com (2012)

Foreign currency from shipping during 1975 to 2005 ranges from 8 billion to as high 16.2 billion US\$. It is important to note that despite the depressed global market for shipping, foreign currency inflow in the country was never reduced lower than 8 billion. In Figure 23 the foreign inflow from shipping is illustrated from 1975 to 2005 and from 2000 to 2010 in Figure 24 (Goulielmos 1997, Samiotis *et al* 2008). The reason for using two figures to present the foreign inflow is that in 1999 a new system was adopted for the

keeping of records/statistics nationally and reliable statistics can be taken after the year 2000, since 1999 was the first year of the application of the new system (Bank of Greece). As we can see in Figure 24, the trend of inflow is increasing but with the 2008 economic slowdown the inflow is decreasing.



Permission to reproduce has been granted by the authors, Samiotis et al (2008)

FIGURE 23. FOREIGN EXCHANGE INFLOW FROM SHIPPING, 1975-2005 (IN MILLION US\$)

Source: Samiotis et al (2008)

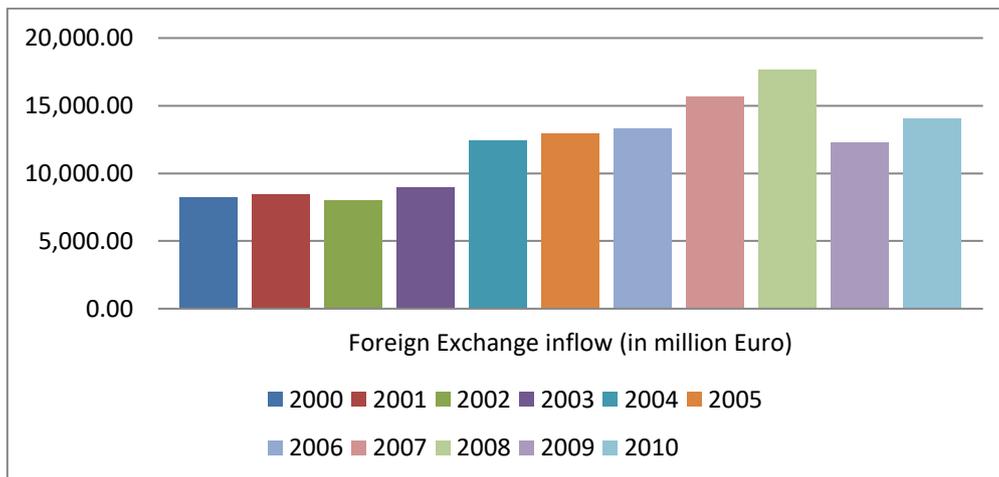


FIGURE 24. FOREIGN EXCHANGE INFLOW FROM SHIPPING, 2000-2010 (IN MILLION EUROS)

Source: Bank of Greece, published information from various sources found in the official site: <http://www.bankofgreece.gr/>, Developed by the author (2015)

The rates for the dry market peaked along with the tankers in 1989. From 1988 to 1991 fewer orders were placed and when the economy went into recession in 1992 the orders reached a low. That contributed to the dry bulk ship's demand, freights rose and reached a peak in 1995. From 1993 to 1995 orders increased too, with the earning of the previous period being invested in new ships (Stopford 2009a).

PASOK's won the elections in 1985, despite the adoption of moderate and realistic policies while in power (Lyritzis 1985). According to Clogg (1993), this populist decade, was a decade with elements of truth and at the same time exaggeration. Additionally many reforms were introduced but they were also characterised by antinomies and contradictions (Lyritzis 1989, Spurdalakis 1988).

The election in June 1989 confirmed the decline of PASOK and the rise of Nea Dimokratia. Nea Dimokratia and Synaspismos allied unexpectedly ending the conflict between the left and the right. Nea Dimokratia withdrew from the alliance and new elections were held in November 1989. The new elections did not produce a parliamentary majority and a new coalition government, an all-party government; 'ecoumeniki' was agreed with Xenophon Zolotas acting as Prime Minister. During this government, not much was accomplished with three parties needing to agree on issues. Consequently, the aim was to for this Ecoumeniki to last up to 1990 when the parliament had to elect a new President.

Although studies in naval architecture at University level already existed, toward the end of the 80s and the beginning of the 90s, shipping courses

were developed at the University of Piraeus and later at the University of the Aegean. That was a positive policy for many reasons, students had the option to study in their homeland, capital remained in Greece, allowed for expertise in academia to be developed, and enhanced the cluster.

Despite the existence of non discriminatory legislation and the company policies, shipping jobs were recognized as unfavorable for women employment (Mitroussi and Mitroussi 2009, Mitroussi and Papazoglou 2010, Konsta 2015). Still the women participation in the industry is strong (Konsta 2015). The Universities offering shipping courses empowered women with qualifications, and the opening up of the industry allowed women to obtain top positions in the shipping industry.

The 1990's followed the trend of the previous decade and was characterised by the further decreases of the Greek registry compared to the Greek-owned fleet. As noted in Table 29 flagging out was significant during 1990-1993 (Goulielmos 2001). Table 29 indicates that the percentage in the Greek-flagged ships starts with 48.3% and in 2000 is 29.6%. Although there is a steady expansion of the Greek-owned total fleet, with more than 105m dwt, representing around 14% of the world fleet and about 43% of the EU fleet. Greece wanted to win back tonnage (Lloyd's List 7.9.1990) but Greek owners remained reluctant to some degree to place tonnage under their own flag (Lloyd's List 30.9.1993), holding back afraid of the tax cuts (Lloyd's List 26.9.1990) and strikes (Lloyd's List 28.9.1990, Lloyd's List 7.12.1990).

TABLE 29. GREEK-FLAGGED AND OWNED SHIPS, 1990-2000 (DWT)

Year	Greek-flagged	Greek-owned	% in the Greek flag
1990	22.524.329	24.056.210	48.3
1991	24.082.483	23.824.369	50.2
1992	26.055.932	27.835.596	48.3
1993	29.671.983	27.246.285	52.1
1994	30.535.560	35.806.486	46.0
1995	30.220.636	41.446.307	42.1
1996	27.935.053	47.221710	37.1
1997	25.708.074	49.274.036	34.3
1998	25.689.500	53.211.343	32.5
1999	25.002.463	58.452.427	29.9
2000	26.769.502	63.457.989	29.6

Source: Naftika Xronika, various issues, Developed by the author (2013)

According to Goulielmos (2006), the Greek shipping problems began when Brussels introduced a second package of measures aiming to lower the financial burden of ship-owners, titled as 'State Aid for Shipping'. For many years Greece was trying to persuade the other shipping member states to adopt the tonnage tax. Through this package the Europeans adopted the tonnage tax policy²⁶ and by doing so they become more competitive within the world shipping arena. The European Union measures affected the Greek Registry negatively rather than positively due to the 20 months delay of the second package of measures. Greece being through several short financial crises could not offer as much as the EU could.

In April 1990, the new leader Constantinos Mitsotakis won the elections for New Democracy. This government had to deal with issues like stabilising the economy, strikes and foreign affairs and the 'Macedonian issue' (Lyrintzis and Nikolakopoulos 2011). Alogoskoufis (2012) states that the right wing government of 1990 developed fiscal policies, that would solve

²⁶ Holland (1996), Germany (1999), United Kingdom (2000), Spain (2002), Norway (2002) and Denmark (2002).

the financial issues and at the same time prepare the state for participation in the single currency which eventually brought stabilisation in the 90s.

In 1990 the Prime Minister and Minister of Merchant Marine, Costas Mitsotakis states that emphasis will be placed on the international competitiveness of Greek shipping and the importance of maritime training. He also criticised the former socialist government which as he claimed in the eight years of its governance had (a) reduced the Greek flag fleet to reduce the national flag fleet from 3,591 vessels in 1981 to 1,197 vessels in 1988, which is a reduction to one third of the fleet's size, (b) bankrupted the once wealthy Seaman's Social Security and Pension Fund (NAT), which in the early 1980's had a surplus of \$250 million and measures were taken, and the new government had to support it with a \$273 million subsidisation by the state in that year. The desire for this government was for Piraeus to become an international shipping and financing centre but certain infrastructure problems had to be resolved giving priority to telecommunication and more specifically to telephone lines for shipping companies.

The same government but the alternate Minister of Merchant Marine, Aristotelis Pavlidis promised that (a) taxes on vessels 40,000 to 80,000 grt would be reduced by 50% and for those 80,000 grt and over would be reduced by 75%, and (b) bureaucratic procedures in hiring foreign crews would be simplified (Lloyd's List 7.9.1990). This was realised and was incorporated to Law 25/75. The taxation was further reduced when ships were supplied in Greek ports with costs of supplies over \$30.000 per year

with import of foreign currency: a) 10% for up to \$ 60,000, b) 15% of \$ 60.001 to \$ 100,000 and c) 20% from \$ 100.001 to \$150,000. The percentage is calculated on the expense and deducted from the tax attributable (for the following year of expenditure) (Goulielmos 1997).

Greeks had acquired a large number of second hand vessels in 1991 but larger shipping companies had responded to the previous year's package of incentives with the government claiming that there was no sign that the owners were flagging out as they had done in the last decade (Lloyd's List 4.11.1991, Lloyd's List 5.11.1991).

The overall measures were opposed, not just from the public or the seafarers but the shipowner Geroge P. Livanos, who headed the Ceres Hellenic Shipping Group. He criticised the above measures saying that the cuts came at a time when '***the multifaceted crisis which is hitting our country means profound deprivation for our people, the lower classes of which are being called upon to shoulder colossal burdens..... Ceres would consider it against its principles not to participate in the common effort to face the difficult period.***' He decided to donate the gains from the tax relief which was approximately \$1 million annually (Lloyd's List 26.9.1990, p.n. 14).

The 1990s are characterised by strikes in Greece due not just to shipping related measures taken by the government by the seafarers unions or the general workforce. The results of closing down of banks, postal services and public transport and interrupted telecommunications and electricity

supply affected the operations of the shipping companies (Lloyd's List 28.9.1990)

In December 1990 the Panhellenic Seamen's Federation (PNO) called a 24-hour warning strike of all categories of seafarers and on all classes of vessels protesting against the government policy. The demands of PNO related to ocean going ships and included (a) the rescinding of the manning cuts introduced by the government in October, (b) subsidising of the bankrupt Seamen's Pension Fund (NAT), and (c) the legal recognition of the seagoing profession as **'heavy and unhealthy'**. The Minister's reply was that the mandatory reductions on manning had already started to contribute to the return of Greek-owned vessels to the national register. Thus, bringing the possibility of more jobs, also saying that the major threat to Greek shipping came from external sources and blamed the EU and the free employment directive. PNO replied that **'the minister's claims do not correspond to the truth or reality'** (Lloyd's List 7.12.1990). This is a common scenario between the state and PNO.

Several times through this and other decades the Minister of Mercantile Marine visited the London based Greek ship-owners. The repatriation of the London Greek ship-owners was always an issue for the Greek governments (Lloyd's List 27.10.1990, Lloyd's List 1.11.1990).

In 1991 many Greeks moved their offices from London to Greece because of the tax reliefs offered by the Greek government, the possibility of tax change in the UK and the practical reason that there were a number of highly experienced Greek officers who were retiring from the sea at the age of 50.

They were employed ashore to take up office positions with their companies taking charge of operations and they were invaluable (Lloyd's List 1.11.1991).

In this decade personal disputes are put aside when ships were to be taken out of the registry. For example in 1991 the ship and media owners Aristides and Ioannis Alafouzos considered flagging out 25 vessels which in dwt terms this was more than 1 million tonnes deadweight from the Greek flag to the register with the Isle of Man, or the Norwegian International Ship register they also considered Malta (Lloyd's List 11.9.1991, Lloyd's List 7.3.1991). Reports in the newspaper owned by the Alafouzos drew the attention and anger of the Prime Minister, who attacked Alafouzos and ordered a probe of various aspects of the family's media division. The dispute was put aside when a withdrawal was mentioned. Additionally most ship-owners were reluctant to diversify on a large scale into Greece's ailing onshore economy due to their past negative experiences (Lloyd's List 4.11.1991).

In 1992, a 48-hour strike was called by Greece's Panhellenic Seamen's Association (PNO) protesting among other things to stop ship-owners from allegedly employing more foreigners on board Greek-flagged vessels over the 40% of lower deck crew officially allowed and to establish a school for ratings (Lloyd's List 23.6.1992).

The ship-owners in 1992, for the first time in history, published a document²⁷ where they presented their own wide-ranging proposals for cleaning up shipping's record on accidents and pollution (Lloyd's List 21.8.1992).

The Mitsotakis' government claims that in one year the return of Greek-owned ships to the national register, which has grown by 2m tonnes and the foreign exchange gained from shipping rose by 8.9% to \$ 959m during the first six months of 1992 (Lloyd's List 7.9.1992).

The devaluation of the drachma in 1993 was given as a premium of \$152 per year / \$416 per day for ship-owners. The inflation of 1993 decreased the premium by 4% which was followed by the currency policy to enter the European Monetary Union (EMU) at 14%. The assumed depreciation of the drachma benefited shipping over \$ 550 a day (Goulielmos 1998). According to Lowry (Lloyd's List 7.9.1992) companies established by Greeks in Panama and Liberia were for reasons of anonymity and simplicity (although in Greece's Law) offered shipping exempt from taxes. In 1992 the government proposed modifications to the Law in order to attract more ships and at the same time protect the Greek interests in case the EU discriminated in any way against vessels which have a legal connection with tax havens. The modifications were (a) the establishment of a new-style Special Shipping Company (ENE) which would not require any of the principals to be mentioned (changing that at least two partners in the company to be named in the articles of incorporation), (b) the setting up of the company could be completed with the signature of a lawyer alone, (c) to

²⁷ "Towards A Better Service With Improved Standards of Safety and Environmental Protection Worldwide"

be of unlimited duration and (d) to have share capital denominated in foreign currency. Still companies under the modified Law would be required to keep proper accounts and have representatives in Greece. The ship-owners' reply was that the modification would not have any short term effect on the Greek flag and that there would be more benefit to short sea shipping (Lloyd's List 7 September 1992). The reason reference is made to the companies flying a foreign flag although it is out of the scope of this study is because being located in Piraeus is important for the development of Piraeus and the clustering.

The make up of the crews at that time was 12 or 13 seafarers in 3.000-20.000 grt, 14 or 15 seafarers in 20.001-45.000 grt and 19 or 18 for 45.000 plus grt (Goulielmos 2001). In addition the Greek shipping policy was called on to defend Greek-flagged vessels not paying higher insurance premiums, possessing good quality management and standards due to good maintenance criteria in relation to their competitors and quality of crews in relation to their training (Goulielmos 1997). But in the same decade the United States Oil Pollution Act affected the standards of safety with respect to tankers (Lloyd's List 8.9.1992) while in the sector the Greeks were increasing their investments.

Mitsotakis and the New Democracy government resigned and called for early elections in 1993. Andreas Papandreou despite his poor health became Prime Minister. Papandreou died in 1996 and Kostas Simitis was elected as the new party leader. With Simitis as Prime Minister, PASOK wone the 1996 and 2000 elections (Lyritzis and Nikolakopoulos 1999).

During 1993-2002 no drastic measures are taken due to the timidity of politicians with one exception except the 1997 set of measures on the (a) the number of seafarers employed on board ships; (b) the regime applicable to ship-owners for the national insurance NAT²⁸; (c) the new employment policy; (d) the seafarer register ; (e) the unemployment benefit; and (f) the upgrade of maritime education²⁹ (Goulielmos 1998).

In 1993 the Seafarers Unions were demanding better conditions of employment and welfare and a 20% increase in basic pay. The Union of Greek Ship-owners, in the beginning offered only an 8% rise, which was below the local rate of inflation which finally become a two-year agreement giving seamen consecutive yearly wage increases of 10%.

In the same year, the socialist governments come into power. The Union of Greek Ship-owners believed that ***'PASOK had learned from the mistakes of the 1980s'***. The new Minister, George Katsifaras had first to deal with (a) the European Commission over the country's refusal to allow other European nationals use the Greek registry; and (b) the problematic Seamen's Pension Fund (Lloyd's List 14.10.1993).

Since 1995, a period of five years of relatively strong earnings resulted in heavy investment in bulk carriers. From 1993 to 1995, 55m dwt of bulk carriers were ordered. As deliveries built up in 1996 the dry market moved into a recession. In the first half of 1997, the industrial production boomed

²⁸ The ship-owners' contributions to NAT will be paid only for Greek seafarers employed on the ship. Failure to comply with these regulations involves the payment of any contributions to the NAT for total organic position. (Lloyd'sList, 4 July 1998)

²⁹ Reform of the legal framework of the maritime education was scheduled to draft legislation was set until in September 1997 in order to adapt to the requirements of the International Convention Standards of Training and Watchkeeping (STCW). (Lloyd'sList, 4 July 1998)

but the bulk shipping market was hit in June 1997 by the the Asia crisis which was followed by the Russian crisis in 1998 (Chistè and van Vuuren 2013).

From 1997 to 1999 a classic boom and bust cycle was experienced. In 1997 the financial crisis took place in the Pacific Rim countries and was associated with the Russian crisis that took place one year later. This caused the freight rates to decrease to amazingly low levels (Paixao and Marlow 2001). In 1999, almost every market segment was in recession (Stopford 2009a).

In 1997, the Greek flag was required to have all Greek officers and foreigners for up to 40% of the lower deck positions. The Minister of Merchant Marine, Stavros Soumakis pushed by the steady flagging out, and expressed his intention to modify the law and more foreign crew to be allowed on board of ships (Lloyd's List 22.1.1997). This brought forward the reaction of the seafaring union who went on strike (Lloyd's List 23.1.1997). Greek seafarers called off their ten-day strike after the government offered concessions both on minimum pensions and the amount of tax levied on the profession, which traditionally had been outside the tax net. Under the terms of the government's offer to mariners announced by Marine Minister Stavros Soumakis officers were to pay 8% as a basic rate in 1997, rising to 9% from 1998. While an introductory rate of 4% would apply to lower deck crews and increase to 6% from the next year. But the government's intentions were to raise it to 15% and 10% respectively within three years. Mr Soumakis also announced that fully paid up retired seafarers would collect a minimum of

58% of their basic salary under the collective agreement, which was not always met (Lloyd's List 24.1.1997)

The 1997 measures with regard to compositions did not reduce the number of Greek seafarers in the organic composition of a ship up to 20.000 grt (8 compulsory Greek seafarers. five officers and three members of the crew. including two staff deck and one in general service with valet or chef diploma). In vessels up to 45.000, six officers and three lower crew, two deck personnel and one general service. In bulk carriers or tankers up to 100.00 grt, six officers and four lower crew, three deck personnel and one general service. In bulk carriers or tankers above 100.000 grt , seven Greek officers, four of the lower crew, three deck staff and one general service. No cadets would occupy these positions. At least one cadet or student of Maritime Academies (ASDEN) Master or Engineer Cadet would be on board. The position of the student ASDEN would be sponsored by the Naval Training Chapter. which funded 75% from EU funds. while by 1997 covered by Greek ship-owners (Lloyds List 4.6.1998).

By 1997 the Greek register has suffered a net loss of nearly 3m dwt and ship-owners made clear that either their operational costs were reduced or they would withdraw from the flag. Ship-owners proposed (a) for reductions in crew compositions and instead of having all officers and at least 60% of the crew foreigners, and the new minimums would require only five to seven Greeks plus a cadet officer, depending on the size and type of vessel and (b) the ship-owners' contributions to the Seamen's Pension Fund to be restricted to Greek crews, rather than for both Greek and foreign nationals

(Lloyd's List 21.4.1997). According to the Panhellenic Seamen's Union (PNO) the job losses would reach up to 4,000-5,000 jobs. Greek ship-owners claimed no support from the Greek government for the reductions in crew composition in the EU (Lloyd's List 21.4.1997). Whereas other European countries allowed drawing the entire crew from the Third World and there were cases that they provided incentives and subsidies (Lloyd's List 11.7.1997). Mr Lyras the president of the UGS also stated that "**Greek ship-owners can exist without the help of the state, but Greece's merchant fleet cannot**" (Lloyd's List 21.4.1997).

The above discussion gives rise to the extent that ship-owners can influence the governmental decisions. Ship-owners apart from shipping investments they invested during the whole post war period until the 2000s into the country's secondary sector³⁰ and banking, participating in the founding of banks. According to Theotokas and Harlaftis (2009), during this period ship-owners were - after the state and they could influence the decision making mechanism of the state in respect of investment and distribution of resources directing large parts to organisations that they themselves controlled. Ship-owners as important players in the development in the postwar period acquired powers over the state.

The cuts in the crew composition were more than what the European ship-owners association were requesting. The new minimum was five and seven Greek officers, plus three to four nationals serving in lower-deck jobs, which

³⁰ Construction, real estate, commercial business, refineries, shipyards, chemicals, food and beverages, tourism, insurance, cruise, domestic airlines mass media and football.

is a minimum of between nine and 13 Greeks on board (Lloyd's List 11.7.1997). In the same package was the abolishment of the ship-owner's contributions for foreign seafarers. At the same time the seafarers' unemployment benefit doubled from Dr36,000 (Dollars 130) a month to Dr72,000 (Lloyd's List 4.7.1997). The Panhellenic Seamen's Federation (PNO) which had already condemned the proposals and announced it would call a global strike on Greek ocean-going ships during August (Lloyd's List 11.7.1997).

In the next page, Table 30 presents the requirements for the minimum number of Greek nationals for ships flying the Greek flag in 1997, with the exception of the master who must remain Greek. The ship-owners are free to choose whether the Greek contingent consists of officers' lower ranks or a combination of the two.

The modernisation of the shipping industry in the 1990's affected the world and Greek-flagged and owned shipping.

The highlights of the modernisation being the passing in the United States of the Oil Pollution Act of 1990 (OPA 90), the adoption of amendments 13G and 13F of MARPOL in 1992, which set new specifications for tanker construction and the compulsory withdrawal of existing ships (Goulielmos 2001).

TABLE 30. REQUIREMENTS FOR THE MINIMUM NUMBER OF GREEK NATIONALS UNDER THE GREEK FLAG, 1997

1997	
Types of vessels	Number of Greek nationals
Dry bulk and tankers of 3.000–20.000 gt	Min. 5 officers (incl. necessarily master) and 3 ratings
Dry bulk and tankers of 20.001–45.000 gt	Min. 6 officers (incl. necessarily master) and 3 ratings
Dry bulk and tankers of 45.001–100.000 gt	Min. 6 officers (incl. necessarily master) and 4 ratings
Dry bulk and tankers over 100.001 gt	Min. 7 officers (incl. necessarily master) and 4 ratings

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Source: Marlow and Mitroussi (2008), p.n.198.

Note: In this table only the 1997-2006 requirements are used from the original table

Also In 1998 the International Safety Management code which come into force in July 1998 with the vision ***‘to significantly enhance maritime safety and the quality of the marine environment by addressing human element issues to improve performance’***; (IMO) introduced new management procedures. Both on-board as well as ashore procedures were soon to be upgraded through a massive wave of compulsory certification with the shipping industry having had five years to prepare (Lloyd’s List 4.12.1997). The survival of the national fleet was an issue. Many companies struggled but there were no delays and no disruption in bulk shipping transactions and in the late 1990s Greek-owners went on to increase their tonnage (Thanopoulou 2007). Although Greek ship-owners were in denial the Greek companies had no trouble in complying with ISM. The International association supported that the compliance by the world fleet would be much lower than in Greece. The philosophy, was that no-one

wanted to put the culture and the large fleet investment at risk (Lloyd's List, 9.1.1998).

The 1990s was a decade of frustration for ship-owners who accused the Greek government that flagging out was due to their inertia. Although changes were undertaken the ship-owners complained that those measures were ineffective and that Europe's were stricter. They projected their argument to the whole government of Costas Simitis stating that this government failed to apply the modernisation to the economy and shipping industry. Since the ship-owners could not absorb the full number of Greek cadets during their sandwich course they proposed to the Minister to consider extending the scheme to the wider Greek-controlled fleet (Lloyd's List, 15.12.1997).

Cost was always an issue and that was emphasised in a more direct way by Emmanuel Couloucoundis, the president of the New York Shipping Co-operation Committee (NYSCC) who said '**...the only way to ensure the future of the Greek flag is to make it cheaper. Otherwise we cannot help. We used to have the most competitive of the traditional flags, but now it is the most expensive**' (Lloyd's List 24.12.1997).

In the beginning of 1998 Stavros Soumakis said: '**...We will not allow the Greek flag to become a flag of convenience at the expense of making a social problem even worse..... ships will keep on leaving the registry, not because of the seamen but because of international market reasons...**' (Tradewinds, 15.1.1998, p.n.6). The measures taken by Stavros Soumakis were not successful since they were not accepted by the

Greek shipping industry. Thus, not included in the Draft Bill discussed at Parliament in beginning of January. The legislation that was passed referred to the flag in the following ways; (a) administrative measures and (b) adjustments to seafarers' pensions and described by Stavros Soumakis **'the first 'good house-keeping' exercise since 1966'** (Tradewinds, 15.1.1998, p.n.6). The former prime minister honorary chairman of the New Democracy opposition party Constantinos Mitsotakis, former conservative Prime Minister said that **'...There may soon be no Greek merchant marine at all. For God's sake, do something!'** (Lloyd's List, 9.1.1998, p.n.3).

The Greek flag recorded a net loss of about 40 ships and 1.5m dwt in 1997, where as the Greek-owned fleet had increased by 5% to 133.6m dwt (Lloyd's List, 20.3.1998). The next year the registration increased by 576,730 gt and had an average age of 10.7 years. Whereas ships leaving the Greek flag register were 220,919 gt and their average age was 22 years (Lloyd's List 4.7.1998). The UGS together with the Greek Shipping Co-operation Committee (GSCC) were still proposing for more a more flexible approach to national manning restrictions (Lloyd's List, 1.7.1998).

Since 1996, the Greek Shipping Co-operation Committee has joined the Union of Greek Ship-owners in lobbying the Greek government hard for **'urgent corrective measures'** for the Greek flag (Lloyd's List 1.7.1998, Lloyd's List 28.10.1998). Their proposals included: (a) the composition of crews being stricter in Europe, (b) tonnage tax being weighted with age and size, being applied to older ships, (c) their contributions to the seaman's pension fund, (d) national seafarers' education system and (e) Piraeus

becoming an international maritime center (Lloyd's List 4.11.1999 1999, Lloyd's List 23.11.1999,). Stavros Soumakis replied that these were longstanding stereotypical statements emphasising that no government was given any assurance that if the ship-owners' proposals were accepted ships would return to the flag. The ship-owners replied that they never had any national support as other nations had. According to Lloyd's List 23.11.1999 for many types of ship, the tonnage tax was up to four times that payable under the Dutch and British tonnage tax systems.

The ups and downs in the freight rates during 1980 to 2000 led to a restructuring of the traditional maritime powers, including Greece, with new countries emerging. That also resulted and a change in the international division of seafarers (Thanopoulou 1994). From 1985 onwards the extensive flagging out drove the demand for seafarers to nontraditional maritime flags and countries like the Philippines. By the spring of 2000, industrial production was growing faster than ever, at 11% per year, with shipping experiencing its first real boom for 25 years (Chistè and Van Vuuren 2013). This time the recession was saved by the Asian economies.

According to the World Trade Organisation, world trade during 2000 had risen by more than 10% reaching its highest rate in the last 10 years. This was due to the western European countries and Asia with European crude steel production, China's iron ore imports and Japan increased production. The American production was also increased (World Steel Association, 2001)

The heavy scrapping in tanker markets resulted in freight rates reaching a peak in 2000, but unfortunately, this boom was not to last. The collapse of internet stocks and the deep recession in the Atlantic and Asian economies followed the decline in world production, which in response affected the demand for tankers ships and bulk carriers (Stopford 2009a, Chistè and Van Vuuren 2013).

On January 1, 2001, Greece became the twelfth member of the euro area (De Grauwe 2007). According to the Bank of Greece Working Paper, published in March 2011, the motivation for joining the euro is believed to be that the benefits of joining would outweigh the costs (Gibson *et al* 2011). The entry of Greece into the euro brought forward a huge dividend in terms of sharply-reduced interest rates. Additionally, the global financial crisis that erupted in August 2007, following the collapse of the US subprime mortgage market, initially had little impact on Greek financial markets (Gibson *et al* 2011).

In March 2004, New Democracy won the election and returned to power after 11 years. This was the year that the Olympic Games took place in Greece. Simitis accomplished the entry of Greece into the European Monetary Union and fully supported Cyprus' entry into the EU. The period of 2001 and 2008 was a golden era for the Greek economy but the fiscal situation was uncertain (Alogoskoufis 2012). In the same year, Simitis retired and George Papandreou, son of Andreas Papandreou succeeded him as PASOK leader. In the elections of March 2004, New Democracy, led by Kostas Karamanlis won the elections.

Greece has never experience the financial crisis of 2008, but only a shallow recession since 1975, and the period of stagflation in 1981-1983, in 1987 and 1993 (Alogoskoufis 2012).

During this decade contrary to the past two decades the Greek fleet was increasing alongside the Greek-owned fleet (Table 31). In terms of numbers the Greek flag increased by over 909 ships of just under 50m dwt which made it the European Union's strongest national fleet but still under one-third of owners' total tonnage (Lloyd's List 1.11.2000). In the light of the Erika disaster Stavros Soumakis took the opportunity to reply to the ship-owners' longstanding complaints by stating that **'competitiveness (of the Greek flag) comes through quality'** (Lloyd's List 25.1.2000). In the same year Greek ship-owners were flagging out of the Panamanian flag and going to the flag of Cyprus and Malta, because of the discriminations at port by Russia and Ukraine (Lloyd's List 25.2.2000).

TABLE 31, GREEK-FLAGGED AND OWNED SHIPS, 2000-2010

Year	Greek-flagged	Greek-owned	% in the Greek flag
2000	26.769.502	63.457.989	29.6
2001	29.038.847	100,220,348	28.9
2002	29.970.053	98,195,100	30.5
2003	31.915.727	103,807,860	32.1
2004	32,769,792	108,929,135	33.7
2005	31,444,245	109,377,819	32.3
2006	32,765,042	113,603,803	36.9
2007	36,239,543	129,765,470	38.5
2008	39,156,211	154,599,221	40.1
2009	41,358,711	156,214,619	41.7
2010	43,086,974	152,616,046	43.3

Source: Hellenic Chamber of Commerce (2012), Developed by the author (2014)

Simitis and his cabinet secured fiscal policies and Greece joined the single currency. That contributed to a social party win for the third time at the

elections. The ship-owners although most of them supported New Democracy claimed that they only cared about cost cutting and legislation being passed in order to admit oceangoing operators to the Greek stock market (Lloyd's List 1.4.2000). According to Dertilis (2010), when Greece entered the euro zone, Piraeus started to attract more Greek ship-owners. Shipping is a capital intensive industry and the capital raised from shipping seemed to flow to other countries. In Greece the cluster is not as strong as in other countries. With the introduction of the Euro the currency exchange was not as important as it was in the past. Additionally, there was no strong back up and clustering since for example marine insurance or shipbuilding in London and the latter has been moved to China (Goulielmos 2006).

With the new election the successor of Soumakis in the Mercantile Ministry was Kostas Papourtzis (Lloyd's List 14.4.2000). In questioning the tonnage tax the answer remained that Greeks were still better off paying the tonnage tax rather than being taxed on earnings (Lloyd's List 15.5.2000). Papoutsis, in an attempt to modernise ocean going shipping asked the Union of Greek Ship-owners and the Panhellenic Seafarers Federation, to come up in two months time with a mutually agreed proposal for operating conditions under the Greek flag for the future otherwise he would do what was required (Lloyd's List 17.7.2000). This proposal was never realised.

The new draft legislation for maritime stocks under the pressure of ship-owners makes no mention of the age of fleets which could be eligible when the Athens Stock Exchange is finally opened to oceangoing operators. Although seafarers tried to keep the opening only to the Greek flag they

failed and all ships under any flag can be accepted provided they are registered with the Greek Seamen's Pension Fund (NAT) (Lloyd's List 8.8.2000).

The Greek government proposed that all non-MARPOL tankers of up to 5,000 dwt be excluded from EU accelerated phase-out legislation altogether. Around 55% of the EU's tanker fleet flies the Greek flag, including 278 single-hull oil tankers (Lloyd's List 4.9.2000).

The quality of ships has increased respectively. The age of ships being a factor that determines quality rather than the average age of the Greek flag fleet which is 9.5 years compared with 9 years in 2000 whereas the world shipping average age was 12.9 years (Alpha Bank 2009). Additionally and according to the Paris Memorandum of Understanding on Port State Control (Paris MOU) the Greek flag has remained on the "white list" and is one of the top ten performing flags (Corres and Pallis 2009). Another quality factor is that six major IACS Classification Societies share the bulk of the Greek-controlled fleet: Lloyd's Register, ABS, Bureau Veritas, Det Norske Veritas, ClassNK, Germanischer Lloyd. (UNCTAD, 2009).

George Gratsos, the president of the Hellenic Chamber of Shipping, said that since 1982 a total of more than 2,000 ships had been forced out of the Greek flag. He also noted that there is no research on the contribution of Greek shipping in the state which make it questionable how policies were undertaken (Lloyd's List 13.6.2001).

In 2001 the Prime Minister Simitis offered tax reductions to ship-owners and seafarers. The tonnage tax would be cut by half. Still the Greek ship-owners would have to pay more than if he registered his ships in another flag for example the UK flag. Also due to low registrations in the Maritime Academies the government's proposed to upgrade the quality of the training system and offer cadets a reduction in their statutory military service (Lloyd's List 7.6.2001).

In 2001 George Anomeritis was appointed as the Minister of Shipping (Lloyd's List 25.10.2001). In 2002 Anomeritis stated that 1,055 shipping companies employed 10,922 seamen of whom 9,644 were Greeks and 1,278 foreigners. He added that that shipping management companies in Greece totaled 640 in 2002 with 3,212 vessels under management, while shipping brokerage firms totaled 440. As to the Greek interests in other flags 96.7 percent of the country's shipping capacity and 94.3 percent of vessels were distributed under nine national flags (Greece, Malta, Cyprus, Panama, Bahamas, Liberia, Marshall Islands, St. Vincent and Cayman Islands) (Europe, 2013).

In January 2002 a mini-package of measures that passed through parliament which reduced the direct levy on Greek-flagged vessels by 70% (Lloyd's List 25.1.2002) as well as reduce the tax burden on the seafarers. The officers were to be taxed on this year's income at 6% while lower ranks would pay just 3%. The Minister Anomeritis said that the aim was to bring the flag more in line with competitors without sinking to the cost levels of flags of convenience (Lloyd's List 25.1.2002). Greek ship-owners a few

months later said that the package was disappointing compared to other European flags. The Greek flag accounts for 38% of all tonnage registered in the EU, down from 47% a decade ago, which partly reflects the boost given to various European national fleets in recent years (Lloyd's List 26.3.2002). They also complained that they were not given any details on the package (Lloyd's List 31.1.2003). They proposed for a reduction in the compulsory quota of Greek or other European nationals required on board as well as initiatives to modernise training and attract more youth to seagoing careers (Lloyd's List, 19.3.2003).

The primary problem for Greek shipping is the reduced number of sailors. For example in 2000-2002 supply of seafarers increased by 3.4% but the number of vessels increased by 10%. The lack of competent Greek seafarers to cover the required manning positions on board ships and would later staff shipping offices has in the long term a detrimental effect. Due to the fact that companies may relocate closer to the areas supplying sailors. This will affect foreign income generation for the country and may also lead in the long term to lower productivity of the fleet and ultimately to a contraction of the Greek fleet and the shipping industry. During low freight rates for international shipping some 140,000 Greeks are employed in the shipping industry. When freight rates increase so does employment that reaches 255.000 people (Goulielmos 1997).

The highest contribution to the GNP was in 2002 the main reasons being Law 3091/2002 whereby shipping companies are exempted from the obligation to pay property tax and the growth of seaborne trade (Nomothesia

2011). Anomeritis had no fear for the Greek flag seeing the advantages of being on the White List of the Paris Memorandum of Understanding, with a good average age of the fleet and most of the takers double hulled (Lloyd's List 2.7.2003).

On the 7th of July 2003 the new Minister Paschalidis Gergios was appointed in a climate where the ship-owners believed that the Greek government did not fight for Greek interests. As a result of the tough post-Prestige proposals for shipping approved during the Greek presidency, combined with the second package of measures to boost the competitiveness promised by Anomerisits was delayed (Lloyd's List, 2.7.2003, Lloyd's List, 7.7.2003).

In 2003 a package of 44 points was announced by the Ministry of Competition with the aim to increase the competitiveness of the Greek flag and the highlights are presented in Table 32.

TABLE 32. HIGHLIGHTS OF THE 2003 PACKAGE OF THE 44 POINTS

1	Reduction in ship taxation up to 40% though the Authorising Acts under article 107 of the Constitution; The reduction at a level of 20% of average taxation applicable to Great Britain, Norway, Malta, Cyprus and Liberia which was still more expensive than the three most expensive EU flags. For example for vessel 15 years old 18 gt the tonnage tax will be reduced from \$ 41.152 to \$ 12.104. in Holland is \$ 9418. Germany \$ 8.703 and \$ 8.498 in England. The decline for all categories are
2	The taxation of income of officers and lower crew would be estimated at proportionate rate of 6% for officers and 3% lower crew.
3	Education and training remaining public and further training became public and private. Public education and training will be decentralized and 10 MMA and not just from KESEN. Finally recognized proof of study from EU Member States.
4	The pensions of seafarers increased maximum of 53-82% and lower by 142-186%.
5	The establishment of the Committee on National Maritime Policy

Source: Several articles from Lloyd's List and Naftika Xronika, Developed by the author (2014)

Although negotiations had started with the market participants the measures and outcomes were never realised. George Paschalidis' tenure was short and lasted only a few months (Lloyd's List, 9.3.2004).

The Greek ship-owners just before the elections urged the state to act as freight peaks (Lloyd's List 7.2.2004). In 2004 New Democracy and Kostas Karamanlis come into power defeating the Panhellenic Socialist Movement (PASOK) for the first time in 11 years (Lloyd's List, 9.3.2004). Manolis Kefaloyiannis was the Minister of Merchant Shipping and in the first statement he made he pointed out the aims of the government to adopt effective shipping policies to enhance trust between the state and the shipping community (Lloyd's List, 9.3.2004). In regard to ocean going shipping he referred to increasing the competitiveness of the Greek flag, the creation of new jobs for seafarers, and the recognition of private schools and technical colleges in addition to the state-run maritime academies (Lloyd's List 10.3.2004).

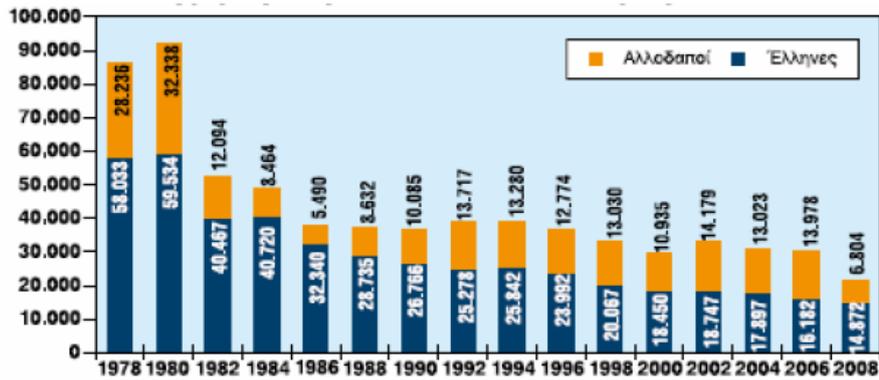
In 2004 only about 27% of the tonnage of the total Greek-controlled fleet was under the Greek flag. The Greek flag lost ground in terms of number of vessels the last year but grew by almost 5.7m dwt. The Greek owners were using a total 51 different flags for their ships. Their first choices were the flag of Malta and Panama and lastly Cyprus (Lloyd's List 15.4.2004).

George Gratsos, president of the Hellenic Chamber of Shipping said that the issue over the years was that Greece had lost opportunities to capitalise, he further added that operational costs would be reduced if the legal framework is changed (Lloyd's List, 20.1.2004). The Union of Greek Ship-owners argued several times that what was not evidenced was the necessary political will from the government to connect in a productive way the ship with the national economy (Lloyd's List, 7.2.2004).

In 2005 the Greek Shipping Co-operation Committee pointed out that there was an upcoming period of lower freight rates and these could affect the Greek-flagged ships. The issue of cost was always a priority for the ship-owners. The ship-owners supported their views referring to the case of the Norwegian flag which in their view had a delayed reaction and lost ships and now there was no restriction in the composition of crews (Lloyd's List, 24.11.2005).

The Greek flag began to attract more ships in December of 2006. This was probably due to the more flexible composition of crews at lower ratings imposed by the State in order to increase the competitiveness of the national register. However as shown in Figure 25 the number of seafarers on board ships flying the Greek flag and other ships that are contracted with the Navy NAT is declining. Only 16.2 mm Greek seafarers and about 13.98 mm foreign sailors are employed on board (Alpha Bank 2009). As in Figure 26, from 1994 to 2004, the number of Greek seafarers declined by more than 20% (Lloyd's List 12. 9.2007, Ministry of Shipping 2009).

In 2006 the Greek ship-owners warned the government that either the country's ship registry becomes more attractive, or there would be an exodus of tonnage. It was claimed that of the fleet would lose ships, jobs would be lost and George Gratsos, president of the Hellenic Chamber of Shipping asked for more flexible laws on crewing as provided for by the EU (Lloyd's List, 6.3.2006).



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FIGURE 25. GREEKS AND FOREIGN CREW, AS WITH THE SOCIAL SECURITY FUND NAT. 1998-2008

Source: Ministry of Shipping (www.yen.gr), (2009).

Note: The navy blue colour (dark colour) on the bar denotes the Greek crews and the orange (lighter colour) the foreign crews

In 2006 the Greek-flagged ships comprised 50 percent of the EU fleet and with 55.4 million dwt reached third place worldwide after Panama and Liberia. The average age of the fleet was constantly decreasing to 14.6 in 2006 (OECD 2004).

The Minister Kefaloyiannis promised that measures to enhance the appeal of the flag would include; that the Master would be Greek, and smaller vessels would employ four Greeks and when available a cadet, for ships of more than 30,000 gt the obligation would be five plus one and ships of more than 80,000 gt - must use at least six Greeks and a cadet. There was no mention in the quotas of the ranks of the other Greek jobs. The ship-owners were satisfied with the new measures (Lloyd's List 28.1.2006). On the other hand however the seafarers warned the government with a strike due to the introduction of changes to crewing (Lloyd's List 18.1.2007). The minister claimed that with these measures the Greek-flagged fleet would increase

which would increase the employment of seafarers (Lloyd's List 8.2.2007). The fleet rose to 218.2m dwt in 2007 from 190m in March 2006 (Lloyd's List 28.2.2007).

The Prime Minister Kostas Karamanlis said his government was improving competitiveness of the Greek registry, supporting the Greek shipping interests and promoting Piraeus as an international shipping and financial centre. The amount of \$1bn was planned to be invested in the International Maritime Business Centre planned for a 640-acre site along with a new exhibition and conference centre in the Palataki area of Piraeus port (Lloyd's List 17.4. 2007).

Table 33 presents the requirements for the minimum number of Greek nationals for ships flying the Greek flag with the exception of the master who must remain Greek the ship-owners would be free to choose whether the Greek contingent consists of officers' lower ranks or a combination of the two.

In 2007 Manolis Kefaloyiannis was replaced by George Voulgarakis to head a newly merged Ministry of Merchant Marine and the Aegean and Island Policy (Lloyd's List 19.9.2007). The renaming of the ministry was well received by the ship-owners as it demonstrated the seriousness applied to shipping as well as the change of ministers (Lloyd's List 21.9.2007). One year later Voulgarakis was replaced by Anastasios Papaligouras.

TABLE 33. REQUIREMENTS FOR THE MINIMUM NUMBER OF GREEK NATIONALS UNDER THE GREEK FLAG

1997–2006		2007 onwards	
Types of vessels	Number of Greek nationals	Types of vessels	Number of Greek nationals
Dry bulk and tankers of 3.000–20.000 gt	Min. 5 officers (incl. necessarily master) and 3 ratings	Dry bulk and tankers of 3.000–30.000 gt	Min. 4 officers and ratings (incl. necessarily master)
Dry bulk and tankers of 20.001–45.000 gt	Min. 6 officers (incl. necessarily master) and 3 ratings	Dry bulk and tankers of 30.001–80.000 gt	Min. 5 officers and ratings (incl. necessarily master)
Dry bulk and tankers of 45.001–100.000 gt	Min. 6 officers (incl. necessarily master) and 4 ratings	Dry bulk and tankers over 80.001 gt	Min. 6 officers and ratings (incl. necessarily master)
Dry bulk and tankers over 100.001 gt	Min. 7 officers (incl. necessarily master) and 4 ratings		

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Source: Marlow and Mitroussi (2008), p.n.198.

Note: In this table only the 2006 onwards requirements are used from the original table

In 2008 the flagging in the registry was not what was expected. Although the government was considered by the ship-owners the first in 30 years to recognise shipping's contribution to the economy the measures taken were considered as a good starting point by the ship-owners (Lloyd's List 12.2.2008). The Greek registry increased by 228 ships of 22.3m dwt, restoring its share of the fleet to 29% instead of 1000 (Lloyd's List 12.2.2008) with the average age of 12.5, nearly a year younger than the worldwide average (Lloyd's List 12.3.2008).

While normally elections would have been held in March 2008, the government called for early elections in September 2007 and New Democracy won the majority party in the Parliament. In 2009, George A. Papandreou becomes Prime Minister after PASOK won the elections.

Following a short interval, one by one all of the main freight markets resumed, in 2003 their course towards record heights continued until the

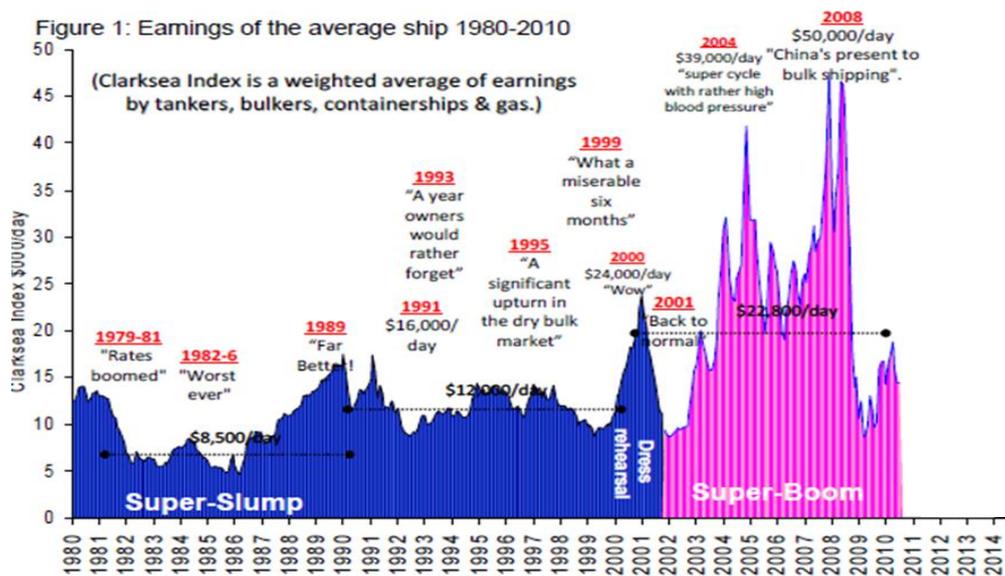
2008. Banks returned massively to shipping financing Greek ship-owners eagerly. When the market reached the record levels of late 2004. Greek shipping was ***“quietly amassing cash reserves but looking at booming worldwide sales with apparent restraint”*** (Thanopoulou 2007, p.n. 44). In the beginning of 2004 the share of Greek purchases in the total sale and purchase activities were down to 12% and lower in the higher markets of 2005 (Thanopoulou 2007).

In December 2008 the Greek fleet numbered a total of 2.082 ships with a total capacity of 39.156.211 gross tonnage (GRT) representing 5.3% of the world fleet. From these ships 626 were bulk carriers with a total capacity of 15.078.971 grt, 521 tankers with a total capacity of 22.318.727 GRT and 936 passenger ships and other ships with a total capacity of 1.758.513 GRT. Flagging out remained a huge issue for the Greek flag. Only 32% of the Greek-controlled fleet uses the national flag. The Greek-controlled fleet is registered with under 40 Flags. The first preferences of Greeks are the flags of Panama, Liberia and the Bahamas. (UNCTAD, 2008)

Figure 27 presents that during 1979-1981 dry freights boomed and 1982 – 1986 reached the worse ever point. In 1989 there was a slight improvement and 1993 was a year that ship-owners would rather forget. 1995, was a significant year for the dry bulk market, and in 1999, the freights fell. In 2000, there was an increase and in 2001 it went back to normal. In 2004, the market went all the way up and nobody believed that it would last up to 2008.

The super Boom, which nobody expected and nobody believed that it would last for five years. The market reached a new peak three times, in 2000, 2004, and 2008 (Chistè and Van Vuuren 2013).

As presented in Figure 26, between the years 2002 and 2007, there was a tremendous increase in freight rates. This was due to China's steel production which grew from 144m to 468m adding capacity equivalent to that of Europe, Japan, and South Korea. This increase combined with the growth of oil imports and exports of minor bulks; in the autumn of 2003, this created an acute shortage of ships and propelled freight rates to new highs (Chistè and Van Vuuren 2013).



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FIGURE 26. EARNINGS OF THE AVERAGE SHIP, 1980-2010

Source: Stopford (2009a), p.n. 2

According to Stopford (2009c) regardless of some volatility between January 2005 and August 2006, the boom of 2003 to 2008 is considered to be the most powerful in term of intense and durability (Chistè and Van Vuuren 2013).

The volatility of 2005 was experienced in the dry freight rates market. The increase in fleet capacity, fewer bottlenecks in the dry bulk ports and a diminishing growth rate in Chinese iron ore imports resulted in the decrease in freight rates (Chisté and Van Vuuren 2013).

Chinese trade supported the steady rise of freight rates through 2007, which was further supported by port congestion and healthy economic key figures. Completely the opposite from two years ago time charter rates and ship values reached new record highs. (Chisté & van Vuuren, 2013)

In December 2008, the freight rates were falling steadily. That was due to the combination of an economic crisis and a historically large global order book for new tonnage. As a result, orders were cancelled, delivery dates were postponed and ships were running on slow steam. Bulk shipping suffered the most of this downturn, it performed relatively better than the second half of 2008 (Chisté and Van Vuuren 2013).

Summarising for a Panamax ship in the 1980s earnings averaged \$8,500 per day but in 1982-6 earnings were fluctuating around \$5,000/day, which at the time was more or less the operating expense of a ship. According to Stopford (1998), in 1985 it cost \$5,000 per day to run a Panamax bulk carrier under the German flag and it was at \$3,500 per day under a flag of convenience. In the 1990s earnings went up to \$12,500 per day but the US Financial Crisis in the early 1990s and the Asia Crisis in 1997, resulted by September 1999 in VLCCs earning less than \$10,000/day. Nobody could foresee or believe what the 2000s would bring. The tree earning in 2000 were \$24,000 per day, in 2004 were \$39,000 per day and \$50,000 per day

in 2008. But at the end of July 2009 it was down to \$8,500/day (Stopford 2009a, Stopford 2009b).

During the period 2000-2008, gross receipts from maritime transport services amounted to 6.3% of GDP and covered 23% of the trade deficit, while net revenues amounted to 3.5% of GDP. The revenues of the Greek state are related to the earnings of the ships and the freight rates. Thus, higher contributions were due to the increase (a) in freight rates, and (b) in the financing of ocean going shipping through the Greek banking system. There is correlation between the freight rate and shipping contributions to the state that the increase in freight rates by 10% will produce an increase of revenues from shipping for the state by 4.3%, with a lag of two months (Economou *et al* 2010).

In 2009 although Greek ship-owners increased (Lloyd's List 16.1.2009) the tonnage the Greek flag lost 76 ships of 4.3m dwt under the impact of the financial and freight crisis (Lloyd's List 13.3.2009). Ship-owners warned that the state was at risk of losing cash derived from shipping (Lloyd's List 17.12.2009).

In the same year PASOK wins the national elections and Greek owners were nervous with the newly elected socialist government (Tradewinds 6.11.2009). The Prime Minister George Papandreou established two super ministries: (a) the shipping ministry was incorporated to the former Ministry of National Economy in a new Ministry of Economy, Competitiveness and Shipping and (b) the general secretariat for ports and port policy and the country's coastguard was taken over by a new under secretariat for the

protection of the citizen affiliated to the Ministry of the Interior. Ship-owners did not seem to agree with that decision which made no sense to them (Lloyd's List Tuesday 6.10.2009, Lloyd's List 6.10.2009). Professor Louka Katseli was appointed as the Minister (Lloyd's List 17.12.2009). Professor Katseli stated that ***'first and foremost the ability of the regulatory and tax framework within which Greek shipping has been established and flourished, will be safeguarded'*** (Tradewinds, 3.11.2009 p.n. 4) and she further explained the reason of the merging of ministries emphasizing on the importance of shipping and its alignment with other areas of the economy (Tradewinds 3.11.2009)

In 2009, the Greek registry accounted for less than a quarter of the Greek-owned fleet and lost 152 ships or 13.5% of its ships (Lloyd's List 8.2.2010) The direct contribution of shipping was € 8.4 billion in 2009 (approximately 4% of the total economy). The € 5.4 billion concerned corporate profits €2.2 billion depreciation and finally \$680 million wages and contributions. The majority of the value added from the shipping industry comes from the bulk shipping. 93% of the total value of produced industry corresponds to services exports (Svetoslav and Demian 2013). From 2002 to 2008 it doubles to 4% including the passenger shipping.

In 2010 Michalis Chrisochoidis replaced Louka Katseli. In October Dimitris Diamantidis was the minister of the renamed ministry to Ministers for Maritime Affairs, Islands and Fisheries.

In 2010 the Greek-controlled fleet has decreased in terms of ship numbers but has increased in terms of deadweight and gross tonnage (Marlow and Mitroussi 2008).

Since 2000 the connections between Greek shipping and the Greek state have strengthened significantly and 1.200 companies were established in Greece resulting in income for the state with the GDP to increase to 4.06 percent in 2008 from 2.2 per cent in 2002 and 3.1 percent in 2000 (Alpha Bank 2009)

During the end of 2000 and mid 2009 the Greek fleet in total increased. The increase was noted in the number of ships by 6.8 percent and the tonnage of ships by 48.1%. Bulk carriers were reduced in the number of vessels by 0.2% but tonnage capacity increased by 27.2%. Tankers increased in number by 18.2% and an increase of 67.9% in tonnage capacity.

Greek-controlled shipping overall placed huge investments in new ships. The reasons for the renewal and investment in new ships were mainly the new environmental rules and the boom in demand for shipping services (Goulielmos 2004).

In 2010 Greece was getting into a deeper economic and sovereign debt crisis having broken the provisions of the European Growth and Stability Pact. The government undertook a series of emergency measures on the economy and the state was under strict monitoring (International Monetary Fund 2010).

The shipping inflows and outflows are determined by (a) the freight market, (b) the amount of outstanding loans and (c) the value of second-hand vessels. The cash flow position of the Greek ship-owners altered their attitude towards investment even though the market was high (Thanopoulou 2010).

The conflicts between the government and ship-owners with Greece being in a financial crisis were worsening. The issue of taxation was first on the list of the negotiations since 2008 and after. An indication is the proposals of the government for a voluntary doubling of tonnage taxes for the next three years and to tax foreign crew on Greek-flagged vessels on the basis that they are on sovereign territory". The ship-owners raise the words 'flagging out' (Lloyd's List 29.4.2014).

In conclusion apart from the confusion and complexities only one word could easily characterise the Greek maritime policy with respect to the flag, the word chaos. However, in this chaotic situation it produced results that can be observed.

Chapter 3. Methodology

According to Silverman (2011), the methodology is not to provide solutions, but underpin the understanding of which methods that can be adopted into the research. Therefore the aim of this chapter is to: present the research approach for the literature review on the methodology selected, as well as the process and attitude towards methodology, to provide a clear understanding of the chosen methodology, to justify the selection of the chosen methodology that has been set in order to achieve the objectives of research questions, and overall to determine the ontology, epistemology, and axiology of the study.

According to Lapan et al (2009), the quality of the methodology adopted refers to firstly how well a study has been designed and secondly how well has been implemented to achieve its objectives. The design of the methodology and how it fits to the overall study is conceptualised in this chapter.

A mixed, holistic, exploratory, inductive, abductive and overall pragmatic epistemological approach is adopted in order to achieve the objectives set and the hypothesis.

3.1 Research Approach and PhD Conceptual Model

The Greek shipping policy relates to ship registration, from the period 1975 to 2010. It is a complex issue that is not set, nor previously examined to an extent of developing a solid case. In the absence of other viable research being on this topic, the author adopted an innovative, and mixed methods research approach in order to assure achievement of the objectives.

The inductive approach has been adopted due to the lack of published research, and lack of knowledge in this area, in order to develop a better insight into the aforementioned research objectives (Wilson *et al* 2014). Inductive research begins with detailed observations, which are specific and limited in scope, and follow more abstract generalisations (Neuman 2003). Exploratory research occurs before knowing enough to make conceptual distinctions, or posit an explanatory relationship in order to help determine the best research design, data collection method, and selection of subjects (Wilson 2014). Abductive reasoning typically begins with an incomplete set of observations, and proceeds to the likeliest possible explanation, with the aim of producing scientific results by drawing on the concepts, and meanings used by social actors, and the activities in which they engage (Kovács and Spens 2005, Dubois and Gaddle 2001). The deductive approach moves from the general rule to the specific application, and it begins explicitly with a tentative hypothesis³¹ in order to form a theory which could provide a possible answer, or explanation for a particular issue (Hayes and Sliwa 2003). The inductive, deductive, abductive, and explanatory approach are combined in this study, and under the pragmatic prism, the theories are formulated towards the end of the research. These come as a result of the author's observations (Goddard and Melville 2004) in combination with the other research techniques adopted (Durkheim 1966).

³¹ In this study there is blend of factors that affects the development of the Greek-flagged ocean-going shipping.

The quality of research depends on the researchers' philosophical positioning, and how the research is undertaken (Alvesson & Sköldberg, 2009). The author of this study aims to create knowledge that is based in a belief system, and basic assumptions (Saunders *et al* 2016). In all steps, and considerations made when developing new insights, the author's views and judgement are an integral part of the research. The quality of the research relies on the the author's conscious, and unconscious assumptions, and considerations with regard to ontology³², epistemology³³, and axiology³⁴ (Biedenbach and Jacobsson 2016). The author has adopted a hypermodern perspective where the role of value³⁵ is both systemic, and extrinsic. That leads to the author's personal values that consciously, or unconsciously guide her in the research process (Biedenbach and Jacobsson 2016). This is evidenced even in the the choice of research problem, the development of literature, the methods of research and analysis (Hartman 1961, Hartman 1962, Hartman 1967, Lincoln et al., 2011), as well as in what has been considered as important, who benefits from the study, and what is the added value of this study (Mingers, 2003). The author considers that her academic background, work experience, involvement in shipping in Greece and internationally, as well being bilingual has allowed the research to be realised. Whereas, no such research has been previously realised. It is not enough to identify a gap in literature and knowledge, it is the researcher who is willing to commit to fill the gap.

³² The nature of reality.

³³ The creation of knowledge and understanding.

³⁴ The role of values and their influences on the knowledge creation process.

³⁵ Axiology

It is due to the author's epistemological standpoint, and the desire to produce socially useful knowledge, the inductive and deductive approaches are embraced under the pragmatism umbrella, as the core approach to this study. The mixed approach adopted intergrates positivism and pragmatism, since the researcher is independed from the data, and maintans an objective stand (Creswell and Tashkkori 2007, Visser 2016). The author acknowledges that she can be subjective to the extent that any researcher may be (Creswell and Tashakkori 2007, Visser 2016), but she adopts a neutrual, realistic and transparent view to the study. and objective and subjective views. The values, and the methods in this research are known, the bias, as well as the value laden nature of information also understood (Saunders 2012). Having said that, all research is value laden and contains bias (Cederblom and Paulsen, 2001). After all values are derived from subjective beleifs although certain disciplinary realted methodologies are adopted. The beliefs, and the values of the author are clear and open, so that responders know how the research was consulted upon, and it can be exposed to critical examination (Klenke, 2008)

Pragmatism uses mixed methods in research and ***“sidesteps the contentious issues of truth and reality”*** (Feilzer 2010, p.n.8), and ***“focuses instead on ‘what works’ as the truth regarding the research questions under investigation”*** (Tashakkori & Teddlie 2003b, p.n. 713). Further, Feilzer (2010), emphasises on the practical relevance of philosophical pragmatism to the research methodology, and supports the view that the paradigm supports the use of a mix of different research method, modes of analysis and a continuous cycle of abductive reasoning

applicable to all for all types of research (Denscombe 2008. Thagard and Shelley 1997). Further stating that pragmatism focuses on the problem to be researched, as well as the results considered and is a more realistic and challenging approach compared with positivism, post-positivism and constructivism (Brewer and Hunter 1989, Tashakkori and Teddlie, 1998, Miller, 2006, Creswell and Plano Clark, 2007, Teddlie and Tashakkori 2009).

Pragmatism can be used as a guide, not only for a top-down deductive research design but also for grounded inductive or abductive research (Feilzer 2010). Dewey's wording on the existential reality represents the author's view on dealing with research and the truth whether it is an objective truth or subjective (Dewey 1925). In this study the author attempts to produce knowledge that represents reality and this knowledge to be potentially utilised (Rorty 1999).

The methodology being pragmatic, and logical allows for integration of the three methods adopted consistently (Creswell & Tashakkori, 2007, p. 107). Each of the three methodologies adopted inform, and supplement each other not only because they addressed different aspects or layers of Greek-flagged ocean-shipping, but also because they are taken from different research strategies (Feilzer 2010).

High emphasis is placed on the practical relevance to mixed methods research being applicable for all types of research (Denscombe 2008). Further pragmatism offers from research design to conclusion another approach (Creswell and Plano Clark 2007, Greene *et al* 2001) which is flexible, and more impulsive to the research design (Feilzer 2010), grounded

research solves practical problems in the real world (Creswell and Plano Clark, 2007, Dewey 1925, Rorty 1999), and validity is ensured when the theory and methods are matched and helps the researcher to find out what they want to know (Hanson 2008).

The overall methodological approach creates a cyclical process that allows for movement between theorising, and doing empirical research, moving from one approach to the other, and making the best out of each one in order to achieve the research objectives in the most efficient, and effective way (Figure 28).

Consequently, a three-pronged approach is employed to determine which are the factors, and the interrelations that contributed to the success of Greek-flagged ocean-going shipping from 1975 to 2010. The reason this methodological synthesis was decided upon was to rationalise the significance of the problem (Dochartaigh 2007), to discover the important variables relevant to the study (Jesson and Matheson 2011), to identify the main methodologies and research techniques that have been utilised (Marshall and Rossman 2006), to relate ideas and theory to applications (Saini and Sholonsky 2012), and to determine the suitability to answer in order to research questions.

The three-pronged approach is composed of the following methods:

Method 1 – Literature Analysis & development of the Timeline Alpha to Omega

Method 2 – Delphi Analysis

Method 3 – Analysis based on Porter’s Diamond factors

The Timeline Alpha to Omega (Method 1) includes information in a chronological order. Thus, the Timeline Alpha to Omega will allow the reader to easily realise the developments of the Greek flag policy issues throughout these years. The timeline illustration provides a visual representation of the existing literature. By using this timeline it is easy to understand, what happened, and when, as well as to observe interrelations. The application of research will be conducted through observations, and descriptive analysis of data on the Greek flag from 1975-2010, using the Timeline as a basis. Further analysis of the literature and data will follow.

Although secondary data is analysed the results are not presented in this study because (a) results are already derived from the literature for example the understanding that Greek flag shipping depends on the development of seaborne trade, and (b) there are no correlations identified in data analysis that contribute to the identification of the elements/factors and interrelations. That justifies that analysis of secondary data does not provide adequate results on policy issues and further enhances the need of the Delphi method.

The most important phase of the research is the Delphi methodology (Method 2). Delphi is multiple-attribute decision process that is normally made by a review committee with experts from academia, industry and the government which seems the most appropriate match for this case study. The information from Method 1 will be used to develop the statements

(questions hereafter³⁶) in the 3 Rounds of the Delphi technique. The findings of the 3 Rounds Delphi Survey will be presented and analysed.

Further, Porter's diamond will be applied to this Greek flag shipping case study. Porter's model refers to what industries, and nations specialise in, and what the explanation behind their international competitive advantages is as well as the success of nations. All the information from Method 1 and Method 2 will be further analysed using the Porter's Diamond factors. The aim is to explain what constitutes the success of Greek-flagged vessels, and the correlations to be demonstrated. The actual model application is presented in the last chapter.

The combination of all of these approaches is the most appropriate for a policy topic, and explains why other methods, and means are rejected. The cornerstone of this study is the Delphi methodology, and the other of the chosen methodologies work supportively. Detailed discussion in this chapter for all methods and how they blend follows. The mixed method approach combines elements from quantitative, and qualitative approaches to data collection and analysis, and attempts to minimise the differences in epistemological assumptions, research cultures, and researcher biographies (Brannen 2005, Salkind 2006, William *et al* 2012).

In Figure 27, the overall design of the study is conceptualised and in Figure 28 how the methodology fits in the study is explained.

³⁶ In this study the statement will be set in the form of questions which is more suitable to the culture of the Greek panel, see more on

3.1.1 Validation of the Conceptual Model: Before Application

The conceptual model adopted in this research is innovative with the amalgamating of three methods, qualitative and quantitative in nature to serve particular theoretical, methodological and practical purposes (Branner 2005). This amalgamation incorporates historical research (the systematic and objective location, evaluation and synthesis of evidence in order to establish facts and draw conclusion about the past), comparative research (used together with the historical research to compare experiences of different shipping shareholders in the past), descriptive (collecting of data in an attempt to examine situations in order to establish what really happened), experimental (isolation and control of every relevant condition which determines the study under investigation, so as to observe the effects), evaluation (dealing with complex policy issues with the involvement of evaluators), and holistic research (breaking the problem into parts, then separately evaluating the parts and then aggregating the evaluations into an explanation of the whole) (Tashakkori 1998, Tashakkori and Charles 2003).

In principle the mixing of methodologies is an integral part of this study as leads itself to innovation and the contribution to knowledge. This multi-faceted study requires the mixing of methodologies and no reliable results would have been achieved nor deep understanding of the study otherwise. The combining of methods eliminate any bias inherent in particular data sources and one single method.

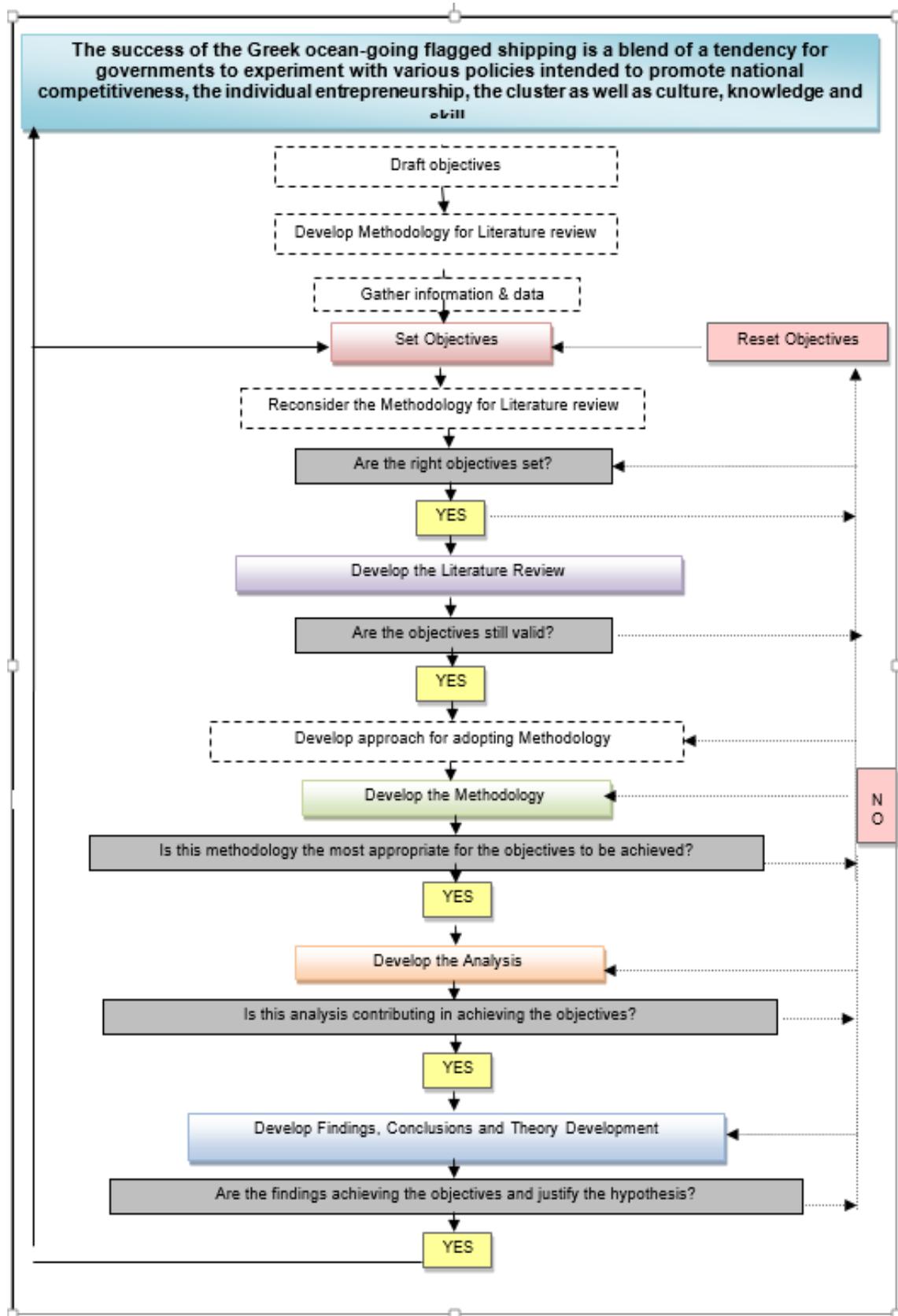


FIGURE 27. PH.D. CONCEPTUAL MODEL

Developed by the Author (2013)

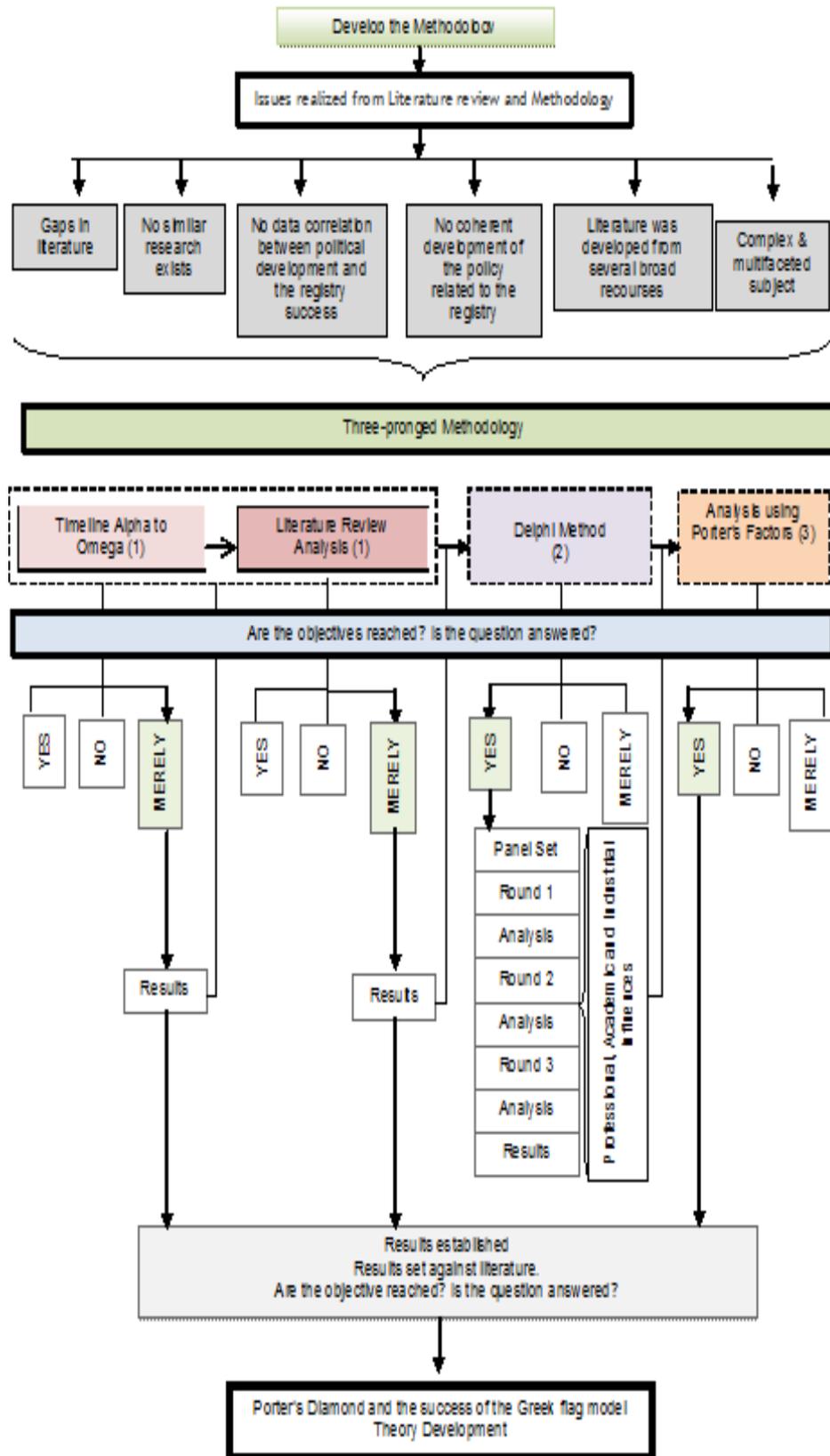


FIGURE 28. PH.D. CONCEPTUAL MODEL: CONCENTRATING ON METHODOLOGY

Source: Developed by the author (2013)

As a result the conceptual model used in this study has facets of triangulation (in seeking coverage of results), is complementary (when different facets of events emerge), developmentary (every method is used sequentially to help inform the next method), initiationary (to identify contradictions), and expansionary (in order to add scope and breadth to study) (Tashakkori 1998, Tashakkori and Charles 2003).

The methodology approach as well as the approach to literature and how they fit in the study, contributes to knowledge. The contribution is evidenced in respect to the topic in search and in the general shipping subject area, as well as and the actual market and policy making (aslo see the contribution to knowledge in the last chapter). Dawson (2009) suggested that a significant contribution to theory development is the summing up of past knowledge in the form of (a) general position (the literature review and analysis in this study), and (b) the synthesis of diverse views and partial knowledge in general frameworks explanation (methodology and analysis in this study). Further Russo (2008) suggests that the significance of theory development is that social forces must carry it matching the worldview, and articulating their interests. Consequently, theory developed from this study is clearly explaining and logically being applicable, and useful. The findings of this study deriving from the achievement of aims and objectives set offer sufficient evidence to support the theory.

In the final chapter the success of the conceptual model will be challenged based on Britt's (1997) criteria and the model's ability (a) to increase the

capacity of understanding the situation, and (b) the ability to increase the understanding of how theories apply to the phenomenon being analysed.

3.2 Method 1 – Timeline Alpha to Omega and Literature Analysis

The timeline Alpha to Omega puts together 35 years of policies with regard to the flag as discussed in the literature review. In the timeline Alpha to Omega the Greek governments and Prime Ministers are presented with the development of the Greek flag in terms of dwt, the development of the world fleet, the Greek GDP, the major international events, the EU Greek membership, EU enlargements by shipping nations, EU regulations, IMO and International Regulations.

The purpose of the timeline is supportive and practical. Supportive in order to bypass the fact that there is no research that presents the political developments of Greek maritime policy with respect to the flag. It is in a way paving the way towards the identification of elements, factors and interrelations for the Greek flag. Practical, since it is impossible for a non-Greek, or a person who is not familiar with the subject to realise what happened within those 35 years in question. The Timeline is an effective an efficient way to tell the whole story in a chronological order.

The development of the Timeline assists in the analysis of literature and in the development of the Delphi rounds' statements. Points from the literature are raised including for example the situation before 1975; the legal shipping framework, the Authorising acts, the state assistance, the 50% rule, the role of the Ministry, lobbying and power. This is a descriptive synthesis and relies on the author's knowledge and experience in identifying and interpreting

similarities and differences in the literature purposes, methods and findings (Anders 2009).

Goulielmos (1996) identifies problems on the adequacy of statistical information for the shipping industry provided in Greece. These problems are mostly identified in the contribution of the inflow of foreign currency from seafarers, repair and supply companies to the GDP. Further Goulielmos (1996) asks how shipping policy can be exercised with no data for half of the shipping (referring to the Greek-owned) when the other half (Greek-flagged) is not accurate.

Partly due to the inadequacy of data and mainly due to the nature of this study the researched topic is not answered by analysing secondary data. Several data series from reliable sources were undertaken but no correlations identified relations in the success of Greek shipping.

3.3 Method 2 - Delphi Technique

3.3.1 Why Delphi?

Previous research in national competitiveness has often been survey based (Papanastassou and Pearce 1999) and Delphi is a viable research tool with regard to research areas with a lack of sufficient information (Wiersma and Jurs 2005) or incomplete knowledge about a problem or phenomena (Adler and Ziglio 1996, Delbeq *et al* 1975, Gracht von der 2012). In addition, the lack of accessibility to reliable information requires the use of the technique, which the research topic clearly is faced with, due to little, and no coherent research. Delphi is characterised as a method ***“for structuring a group communication process so that the process is effective in allowing***

a group of individuals as a whole to deal with a complex problem”

(Linstone and Turoff 2002, p.n. 3). They further state that the technique is appropriate for the research when it is not suited to precise analytical techniques but can still benefit from subjective judgments of the experts within the field. The aim of the Delphi method, as a method for structuring a group communication process, is to allow the process to deal with a complex problem. Greek shipping policy, and its evaluation is complex, and requires the most reliable consensus of opinion of a group of experts (Dalkey and Helmer 1963, Helmer 1983) and is suited to problems that require evaluative qualitative answers rather than precise quantitative results (Malonis 2000, Brayman 1988).

The Delphi concept has its roots in the early 1950's and was developed in Santa Monica, California and was used in defense of research. The name was borrowed from Delphi, which is a place in Greece, and refers to the Delphic oracle. Delphi was a place visited by individuals, usually officials or their representatives, to consult the prophet Pythia. Socrates around 400 BC judged: ***'The prophetess at Delphi (...) turned many good things towards the private and the public affairs of our country'*** (Cuhls 1993, p.n.94).

The most important reason making Delphi a reasonable alternative and most appropriate for this study is summarised in what Linstone and Turoff (2002, p.n. 4) said: ***“(Delphi is) appropriate for gathering historical data and accurately known or available, examining the significance of historical events...putting together the structure of a model,***

delineating the pros and cons associated with potential policy options, developing casual relationships in complex economic or social phenomena, distinguishing and clarifying real and perceived human motivations, exposing priorities of personal values and social goals”.

Delphi is used as a judgment. decision-aiding or forecasting tool (Rowe and Wright 1999, Ludlow 1970), to program planning and administration (Delbeq *et al* 1975), to problems that do not lend themselves to precise analytical techniques but rather could benefit from the subjective judgments of individuals on a collective basis (Adler and Ziglio 1996), to focus collective human intelligence on the problem at hand (Linstone and Turoff 2002), to investigate what does not yet exist (Czinkota and Ronkainen 1997, Skulmoski *et al* 2007), and as a tool building consensus for public policy (Dye 2008, Wilson 2006) especially when policy alternatives are not well defined and issues are complex (Rayens and Hahn 2000, Clarke 1990, Cochran and Malone, 2009).

The achievement of the utmost reliable consensus from a group of experts using rounds of focused questionnaires, mixed together with controlled opinion feedback (Dalkey and Helmer 1963) has been used in various fields, which are presented in Table 34. Delphi has also been used in other but similar industries, research areas or policy making situations, which is presented in the following Table 34.

TABLE 34. EXAMPLES OF DELPHI USED IN SHIPPING RELATED AND SIMILAR AREA RESEARCH

SHIPPING RELATED RESEARCH	
Czinkota and Ronkainen (2005)	forecasting of future global trade, and business
Marchau and Heijden (1998)	transport policy and driver support systems implementation
Zhou (2011)	guidance in building a well integrated transport and logistics system in Northeast Asia
Hwang (2004)	in a comparative study of logistics services in the container logistics
Cottam (2012)	in liner shipping analysis on a period of transition
Tsai and Su (2005)	the political risk assessment of international ports
Barnett <i>et al</i> (2005)	used electronic Delphi technique for research on shipboard manning where alternative structures were conducted.
Lu <i>et al</i> (2006)	in liner shipping research, in finding co-operative niches possible disadvantages, successful factors, and the future development of the alliance co-operation
Zaloom and Subhedar (2009)	to prioritize events impacting operations in the maritime domain.
Dourmas <i>et al</i> (2007)	in rating and ranking hazards in maritime formal safety assessment being an iterative procedure, which aims at the convergence of various subjective opinions into a more widely acceptable view and in order to avoid disagreement or discrepancies among evaluation committee's members
Brett and Roe (2010)	examining the potential clustering of the maritime transport sector
SIMILAR RESEARCH AREAS	
Linstone and Turoff (1975)	environmental, health, and sales forecasting
Kaynak and Macaulay (1984), Moeller and Shafer (1994), Weber and Ladkin (2003), Yong <i>et al</i> (1989), Lloyd <i>et al</i> (2000).	used extensively in a number of different forms in leisure and tourism
Shaw and Coggin (2008)	methodological tool for listening to culturally different speakers, and building up consensus among members
Lee and King (2009)	in the tourism industry as to destination identification because it has been shown to be useful for information gathering and model building
Green <i>et al</i> (1990)	to facilitate group input for ideasm and problem-solving
Miller (2001)	such as identifying the environmental impacts of tourism and developing sustainable tourism indicators

Source: Developed by the author (2013)

The combination of two additional reasons make Delphi analysis the most appropriate method, (a) the policy making in a country taking under consideration the culture, and (b) the sensitivity of the shipping sector (Bond and Bond 1982, Cuhls 1993, Young and Mendizabal 2009, Rowe and Wright 1999, Skulmoski and Hartman 2002, Skulmoski *et al* 2007, Linstone and Turoff 2002). Whereas, the particular circumstances of Greek shipping policies and policy making make the Delphi method most appropriate these are presented in Table 35.

TABLE 35. PARTICULAR CIRCUMSTANCES THAT MAKE DELPHI METHOD APPROPRIATE FOR THIS STUDY

FURTHER REASON FOR APPROPRIANESS
The development of the Greek shipping policy not being evidenced, does not lead itself to precise analytical techniques.
Individual testimonial and judgments on a collective basis will contribute to the complex issue of policy development and evaluation.
All parties can be represented, with more diverse backgrounds for example shipowners, seafarers. different political parties and so on.
The development of the rounds and questions will minimize time and cost.
Face to face discussion will be enhanced on a further stage with supplementary group meetings if needed.
In order to avoid severe political disagreements and to secure anonymity. Anonymity is assured since the names of the participants are not known and severe political disagreement are avoided because the panel never meets. In the first face of Delphi is that each individual answers the questionnaire then on a second stage results are published to participants and then they answer another questionnaire until consensus is achieved.
The heterogenic panel of participants is preserved in order to assure validity of the results.

Source: Linstone and Turoff (2002), Developed by the author (2013)

3.3.2 Delphi Process and Phases: An overview

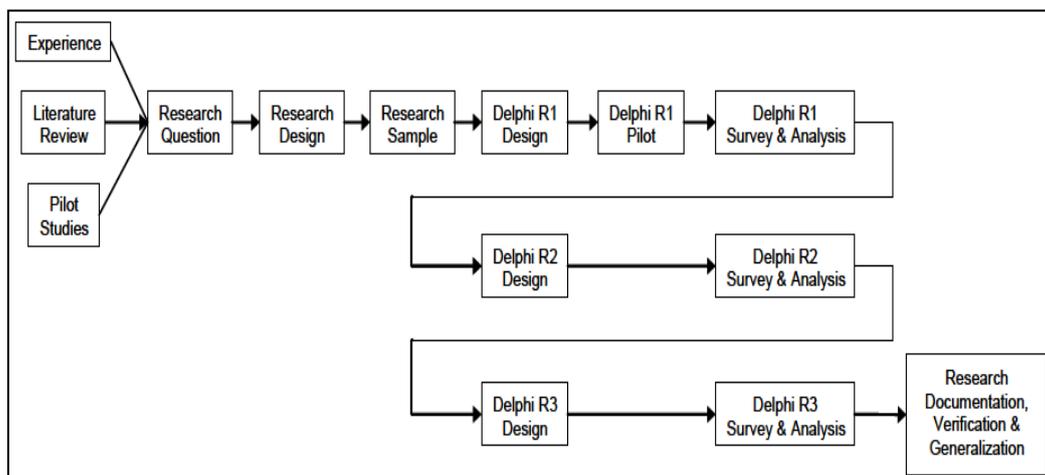
The starting point of the Delphi process is the design of the statements which were sent through a web link accompanied with a mail to the responding group. In this study Round 1 statements were posed as questions rather than statements because this was considered as the most

appropriate method by the author in keeping with the Greek culture. The participants were contacted (either in person or by phone) beforehand, and the research was explained to them (the aims, objective, importance of the research, the level of consensus and the possibility of three or more than three rounds, methodological instructions, and deadlines), and they were asked if they wanted to participate in this research, and then the mail followed once consent was obtained. Once the results were returned they were summarised, and based upon the results a new questionnaire was designed, and sent to the responding group. That commonly results in three rounds of questionnaires, in total (Jones *et al* 1992). The responding group was given at least one opportunity to re-evaluate its original answers but no participant changed their choices. The results were collected online by a reliable site (<https://www.surveymonkey.com/>). That eliminates cost, any collection delays and gives real time responses (Linstone and Turoff 2002).

The phases of the Delphi method as applied in this research are described by Linstone and Turoff (2002). In Figure 29 the process is mapped taking into consideration the design stages before the methodology section including the literature review and analysis (experience, literature review, and pilot studies). The research question was set as well as the research design, and the sample (responders/panelists). During the first phase (Delphi R1) the topic in discussion was examined, and the experts on an individual basis offered valuable information. This stage is usually unstructured, and seeks open response. Whereas during the second phase emphasis is placed in how the group views the topic (Delphi R2). During the third phase (Delphi R3) focus is placed on the reasons for the differences –

if any, and the possibility to evaluate them. Finally all information is evaluated (Linstone and Turoff 2002).

In the development of the first round all opinions are taken under consideration, as well as the Greek culture, and the time available of the panel to reply. The qualitative analysis that follows provides the basis on which to construct the next round questionnaire (Wilson *et al* 2014). The second round is more specific, and the questionnaire structured are looking for specific findings. After the questionnaire is answered by the panel the qualitative analysis takes place. The rounds continue until consensus at a percentage requested by the author is achieved. The results to conveyed to the panel members though mails followed by phone contact and reminders. The rounds end when consensus is achived. (Linstone and Turoff 2002).



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FIGURE 29. MAPPING THE DELPHI METHOD

Source: Skulmoski *et al* (2007)

3.3.3 The Delphi Respondents

Ludlow (1975, p.n. 103) describes experts as *“individuals whose reputation, education or experience indicate that they are in a relatively advantageous position to make a judgment relative to the*

question or decision of interest". The selection of the respondents was be based on the following criteria (Skulmoski *et al* 2007):

- Knowledge and experience;
- Capacity and willingness to participate;
- Sufficient time to participate in a multi-round Delphi; and
- Effective communication skills.

The selection of the panel is a process that contributes to the achievement of the study's objectives, and at the same time consensus must be achieved, and must be reliable (Dalkey and Helmer 1963, Helmer 1983). The Delphi method itself takes advantage of the positive group interactions while minimising the social difficulties often encountered when groups meet and avoids of the risk of bias either by the participants or by peer pressure arising among the group during the course of the study (Rowe and Wright 1999). The assembling of expert groups allows for generating an overall group view that would never have had the chance of developing otherwise.

The key advantages of the Delphi survey technique are iteration, participant, and response anonymity (Blinda *et al* 2001, Gupta and Clarke 1996). Iteration means that the participating experts will be consulted at least three times while the anonymity, the personality, and status of the participating experts do not influence the response, social pressure can be avoided, and controlled feedback achieved. The most important advantage being the anonymity of participants as it encourages opinions, and honest answers while not being influenced by others. Therefore, responders are most likely to be true (Goodman 1987, Snyder-Halpern 2002). Additionally anonymity encourages experts to provide answers based on their personal knowledge, and experience (Gupta and Clarke 1996). Moreover direct confrontation of

the experts being and the quick formulation of preconceived notions is avoided, as well as persuasively stated opinions of others (Dalkey and Helmer 1963, Dalkey *et al* 1969).

The survey participants for this study did not represent the companies or organisations they work for but they expressed their personal views as experts. It seems therefore logical to assume that the participants while working in a shipping company will not express the same views as the seafarer or the civil servant, in other words their work experience would have affected their views. Still no prejudgments with 100% certainty can be made which verifies further the importance of the Delphi method.

According to Lee and King (2009) the literature on relevant research in the tourism industry indicates that the most common approach to the assessment of competitiveness is from the supply side. The supply side equivalent for the success of the Greek-flagged ocean-going is the market shareholders. The usefulness of the participation of the shipping practitioners, and the government involves those who are knowledgeable, skilled, and commence have first hand experience. In order to make sure that important experts are not left out or are difficult to locate (Cavana *et al* 2001) the panel of experts were asked to recommend others who also meet the criteria (also known as snowball sampling) (Lee and King 2009).

Delphi candidates were sourced for this study from the following organisations: governmental, academics, representatives of the political parties, unions, associations, the Greek Chamber of Shipping, classification societies, banks and financial institutions, insurance companies, and the

media. The intention was to allow all of these groups to be equally represented (Powell 2002).

The individuals were important and equally important the combined expertise developed in the panel. This study addresses top sources, and actors of the Greek-shipping industry, bearing in mind that the shipping community in Greece is a large community and accommodated all types of participants in high numbers. That allows the author access to a large available sample where the population of the research was developed.

Literature identifies that the number of participants varies with 25 proposed by Dalkey *et al* (1963) as sufficient for minimising error rates, and improving reliability. Whereas Reid (1988) suggests panel sizes should range from 10 to 1685. The numbers of participants according to the scope of the study, and resources available was set at a minimum of 18 to a maximum of 125. The respondents were carefully chosen in order to reflect the market and reality. Thus, the proposed participants' population of 125 in total has been segmented in 18 groups representing the market shareholders (Table 36). Selecting participants from a wide range of backgrounds (Table 36) ensures representative, and comprehensive insights (Rowe and Wright 1999). Shipowning representation is important in this research. It is important that the shipowners that own bulk carriers, and tankers as well as those flying the Greek flag or flying another flag are represented which will include more experts from this group. The qualifications of the participants are important to the making of a valid contribution (Linstone and Turoff 2002), and this is ensured by the fact that most market participants are market pioneers or in

top management positions. In addition every group of participants in the survey represents a large and sizeable amount of companies and organisations . Their contribution is therefore important.

It was equally important that the knowledge of the subject within this community is extensive drawn on **“a pedigree of knowledge and experience running back through families for more than one generation”** (Lloyd’s List 29 May 2014, p.n.6). A parameter which is very important for this study is that since this study refers to a thirty-five year period from 1975 to 2010, it is important that the participants have personal experience working in the Greek-shipping industry.

Anonymity was assured among panel members, thus no panelists knew who was participating, but they knew the sectors represented. It was equally important that each respondent was an expert who had an incentive and at the same time is motivated to participate in the research area. However the actual returned response from Round 1 was unlikely to be 125 due to the expected drop out rate associated with the method. The final population of 42 agreed to take part in the Delphi study in all three rounds, but even 1 or 2 experts per segment to 36 experts, would have been sufficient (Linstone and Turoff 2002). For the purpose of this study since all participants are market pioneers the time they will spent in responding was an enormous value. Since panelists are high positioned, and influential people face-to-face meetings were also requested but it must be noted that face-to-face meetings concerned the recruitment of the panel and not the application of the panel questions.

Table 36 provides an illustration of the size and structure of the panel experts selected to participate in the analysis of Greek ocean-going flagged shipping.

TABLE 36. ROUND 1 – PARTICIPANTS

<i>Industry</i>	<i>Participation Percentage (%)</i>	<i>Individuals</i>
<i>Academic Institution</i>	9.5	4
<i>Agents</i>	2.4	1
<i>Banks/Financial Institutes</i>	7.2	3
<i>Classification Society</i>	4.8	2
<i>Consultants</i>	2.4	1
<i>Government /Registry</i>	2.4	1
<i>Chamber of Shipping</i>	2.4	1
<i>Insurance/P&I Clubs</i>	4.8	2
<i>Legal</i>	2.4	1
<i>Maritime Academy</i>	2.4	1
<i>Media</i>	4.8	2
<i>S&P Broker</i>	4.8	2
<i>Salvage</i>	2.4	1
<i>Ship Brokers</i>	9.6	4
<i>Ship management</i>	7.2	3
<i>Ship Yards</i>	2.4	1
<i>Shipowner</i>	19.2	8
<i>Trader</i>	2.4	1
<i>Union</i>	7.2	3
<i>TOTAL</i>	100	42

Source: Developed by the author

With the exception of the academics and the policy makers (government) all other participants are pure shipping market practitioners. The academics are represented by 9.5%, the government by 2.4% and the market participants by 88.1%. The reason is because that the academics and policy-makers (government) are not the key actors in the shipping market but play and act upon the results the shipping practitioners achieve by observing, researching, and the latter by developing policies. It must be noted that although all political parties were contacted several times no party was willing to participate in the research.

The representation of the shareholders in the sample is a reflection of the Greek market. The shipowners' interests are represented in the shipowner group by 19.2%, ship management with 7.2% and the Chamber of Shipping with 2.4%. In total the shipowning interests are represented by 28.8%. The seafarers are represented by the unions with 7.2% and the Maritime Academies with 2.4%. The Maritime Academies are manned mostly by seafarers and that further explains the support of unions views and brings up the union percentage to 12%. The traders are the customers and the kings in the chain that are interested in transporting their goods in the most effective and efficient manner thus they are not involved nor are interested in the national policies since they are international shoppers. Still the traders' views are important to the flag choice and are represented by 2.4%.

Most importantly the 42 expert panel members are willing to and are able to make a valid contribution (Powell 2002) to this research.

3.3.4 Phases and Statements/Questions

During first phase (Delphi R1) the topic of this study was examined and the experts on an individual basis offered valuable information. Each round of the questionnaire contained a combination of closed, and open-ended questions/statements seeking the views of the expert participants (Rowe and Wright, 1999). Linstone and Turoff (2002) suggest that in the first round questionnaire the statements are open ended serving the role of seeking open response, and that issues raised in this round will enact issues in the later rounds (Powell 2002). Other authors suggest that semi-structured

questions can be used (Bond and Bond 1982) or structured questionnaires designed from elements found in the literature (Duffield 1993).

The word 'question' is used as a of statement in this study. The questions are actual statements presented in a question form which was deemed more appropriate for the Greek culture. Otherwise the statement might be considered as a fact and severe opposition may have resulted. A question seemed the most respectfull form, for this research in order to find out views of participants.

The process for the formation of the first round statements is graphically explained in Figure 30. First the literature review was written and analysed to find out all relevant what information that was available. The information from literature is then used to develop the Timeline Alpha to Omega and realise the coherency of events related to this study. Then the literature information and data is analysed in order to identify the elements that contribute to the success and the interrelations. The analysis of the literature has been proved helpful in the understanding what happened through 1975 to 2010, to identify the gaps in literature, and further to contribute to the development of the Round 1 statements.

The data analysis proved inadequate since so many events were taking place so the effect on for example a policy in crew cutting cannot be clearly identified. Alongside the literature analysis process the panel was set up. The statements were tested before being distributed following the approval by the Supervisor, Professor Michael Roe only then were they sent to the participants. (For the actual surveys Appendix 2. Letter and Statements of

1st Round Delphi, Appendix 3. Letter and Statements of 2nd Round Delphi Appendix 4. Letter and Statements of 3rd Round Delphi).

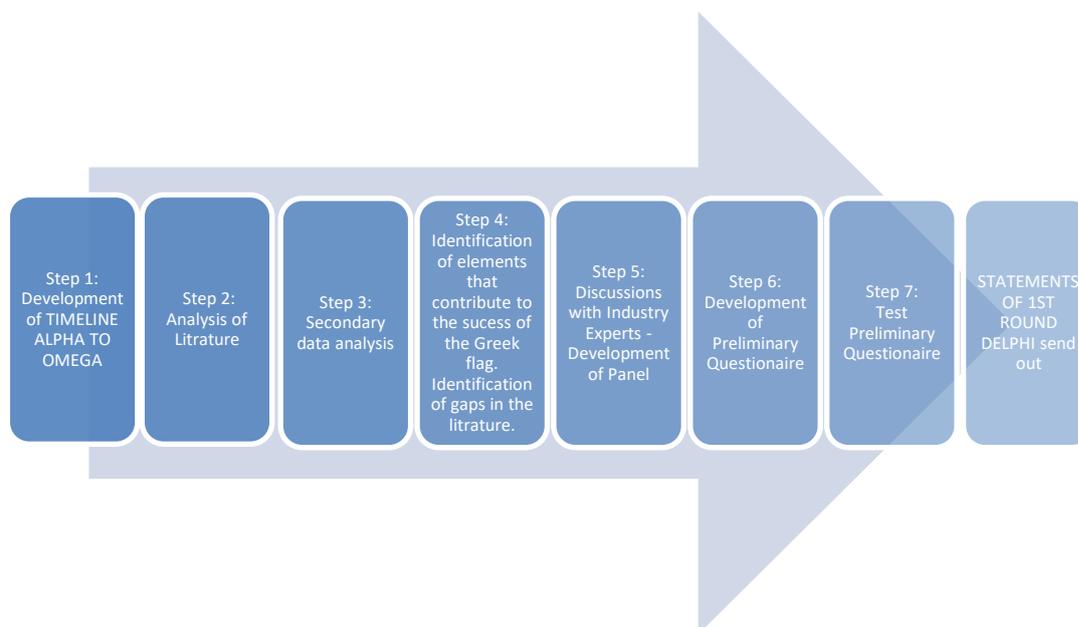


FIGURE 30. FORMULATION OF STATEMENTS OF THE 1ST ROUND DELPHI

Source: Developed by the author (2014)

When the first round of the Delphi survey was sent out to the panel members, they were requested to respond within a one month period. The purpose of the deadline was to encourage participants to complete the survey within a timeframe as opposed to leaving the process open-ended, which could significantly prolong the Delphi Study. Phone calls were made to those that had not responded, in an attempt to encourage a higher response rate. Several reminders, and calls took place through the three rounds. The communication over the phone proved very successful compared to emails since such emails went unread. The culture of Greek shipping is one characterised by personal and direct relationships, and has

to be to the point, fast, and effective. The author's work experience in the Greek shipping market, and the relations with the Greek cluster, and the panel supported the study.

Phone calls and emails to the first round participants were sent over a period of six months. At the end of the 6 month period, the first round of the Delphi Survey was closed, and a total of 42 responses was collected and analysed for the second round. At the end of the study a phone call was made to all participants in acknowledgment of appreciation for their time in all Rounds, and the value of their continued support.

The communication over the phone was held in Greek, and the questionnaires were in English. The terminology was explained over the phone, although it was evidenced that it was not needed, since the working language for shipping in Greece is English, and even when communicating in Greek the terminology is communicated in English.

The role of the first round is to identify issues to be addressed in later rounds. Literature indicates that there are alternative approaches Powell (2002), Bond and Bond (1982) used semi-structured statements in their first round, while Duffield (1993) supports the use of a structured questionnaire. For the purpose of this study consisted of structured questionnaires using the Likert 1 to 5 scales in order to capture the variation in views. In addition participants had the option to comment on each statement. The reason for this decision was that (a) literature on Delphi supports it, and (b) to save time and use more in depth statements in next rounds, and (c) during the time that the statements were developed, discussions were held with experts as

to what would motivated the to participate in the questionnaire and the feedback was questions.

The Delphi phases started in September 2014 and ended in January 2016. The first round took place from September 2014 to February 2015 (6 months), the second round April 2015 to July 2015 (4 months) and the third September 2015 to December 2015 (3 months). During the periods in between rounds (March 2015, August 2015) and after round three (January 2016) the author analysed the results, and the actual answers given and send them to the panel members.

When evaluating the results of Delphi it is important to measure consensus, which in fact varies from study to study. According to Powell (2003) there seems to be no solid rules for establishing when consensus is reached. It is common to set percentage level for inclusion of items. As cited in Powell (2003), and Williams and Webb (1994), some researchers have sought 100% agreement and others had set the level of agreement as low as 55%. Also there are cases where percentages are not used such as Beech (1997) for example who suggests that consensus was implied by the results and Butterworth and Bishop (1995) explain that it was mostly participants' agreement. On the other hand Duffield (1993) defined consensus according to stability of responses between rounds and others leave interpretation of consensus entirely to the reader (Lindeman 1975, Bond and Bond 1982).

The use of the Average Majority Percentage of Opinions (AMPO) approach and percentage is supported by many researchers such as Kapoor (1987), Abdel-Fattah (1997), Saldanha and Gray (2002) and Hwang (2004). The

AMPO approach uses the 100% scale. When Round 1 Delphi results indicate an AMPO of a certain percentage then every statement with a disagree/agree percentage of less than that percentage is processed through the second round supplemented with feedback from the first round. Thus, the determined percentage is given to decide consensus (McKenna 1989) and a higher percentage may be required for yes – no response categories (Alexandrov *et al* 1996).

Based on Green *et al* (1990), as cited in Hsu and Sandford (2007) a 70% agreement is a reasonable consensus level which is neither too low nor high. Therefore the following reflection of the need for further clarification and the objective of reaching high consensus, statements that attained a consensus below 70% was reconsidered the second round of the Delphi survey.

In the achievement of consensus it must be taken into consideration the Greek shipping culture, stereotypes, and the panel composition. There are two strong views in what the success of the Greek registry is owed to. One view is that the shipowners' initiative and patriotism contributed to the success of the Registry and the other that the state contributed to this success. It is impossible to reach consensus for sides supporting this view apart from the fact they disagree. This stereotype and the opposing views have not really changed over the 35 years under examination. The composition of the panel is 26.1% of shipowning interests, 2.4% governmental, 9.5% academic and the rest are other interests from industries related and dependent on shipowning. If the statements set would

require a 100%, consensus this would be difficult to realise. Consequently following Green *et al* (1990), 70% AMPO cut off rate was applied to all rounds.

Each statement is calculated using the following Average Percent of Majority Opinions (AMPO) formula, (Table 37).

During the second phase (Delphi R2) emphasis was placed on how the group views the topic, and the statement not achieving consensus were rephrased and incorporated within. The participants are provided with a range of closed-ended statements, being requested to put in priority certain elements in order to elicit their level of agreement. The participants are given the option to comment at each statement.

TABLE 37. FOLLOWING AVERAGE PERCENT OF MAJORITY OPINIONS (AMPO) FORMULA

$$APMO = \frac{\text{Aggregate of Majority Agreement (a)} + \text{Aggregate of Majority Disagreements (b)}}{\text{Total Opinion Expressed (c)}} \times 100$$

Source: Kapoor (1987), p.n. 259

As in the previous two rounds and in the third round was sent out to the panel members, they were requested to respond within a specific period. Phone calls and emails to the first round participants were sent over a period of four months in Round 2 and 3 months in Round 3. In all rounds the panel members were the same 42 panel members. The results of Round 2 were evaluated within 1 month and the statement results of Round 3 were sent to the participants.

The majority of answers in Round 1 achieved consensus, and two that did not were rephrased and asked again in Round 2, where consensus was achieved. In Round 3 there were statements that required ensuring consensus in the agreed ranking achieved in Round 2.

In Round 2 in ranking statements, the moving average, the MATCH Excel function, and the Kendall's coefficient of concordance non parametric statistic were employed.

The moving average was used to analyse, and rank Statement answers with up to six data series (for example Round 2, Statement 2) (Linstone and Turoff 2002). Moving average smoothes the price data, and forms a trend following indicator. It is calculated by taking the arithmetic mean of a given set of values (Han and Kamber 2006).

For statements with eight, and more series of data, both the MATCH Excel Microsoft Office function, and the Kendall's coefficient of concordance were applied. The MATCH Excel Microsoft Office function was used in order to rank data and the Kendall's coefficient of concordance in order to test the consensus of the ranking resulted by the MATCH function. In particular the MATCH function searches for a specified item in a range of cells, and then returns the relative position of that item in the range (<https://support.office.com>). The statements that contain these questions are found in Round 2. For example in Round 2, Statement 18, using the MATCH function first the MAX PER SERIES is found and then the MATCH IN ROW. For 'taxation' the MAX is 16, indicated as the most important element

(16 out of 42 participants choose it among 11 elements as 1st preference). For the 'quality of flag' the MAX is 7 (7 out of 42 choose it) and as first time found in the series returns in the 2nd preference. At the bottom of the table the sum of preferences (1, 2, 3, to 11) are noted and further used in the development of the chi-square significant test scenarios of Kendall's coefficient of concordance.

The consensus of the ranking result was tested by Kendall's coefficient of concordance (Kendall 1948, Kendall and Babington Smith 1939). According to Von der Gracht (2012) to find consensus in the Delphi technique for the non parametric variables, the Kendall's coefficient of concordance (aka Kendall's W) can be used. It is a normalisation of the statistic of the Friedman test³⁷, and can be used for assessing agreement among raters. The equations used for Kendall's coefficient of concordance are illustrated in Table 38.

According to Table 38, it is assumed there are m raters rating k subjects in rank order from 1 to k . Let r_{ij} = the rating rater j gives to subject i . R (no. 2 equation, in Table 38) is explained as: for each subject i , $R_i = \sum_{j=1}^m r_{ij}$, \bar{R} is the mean of the R_i , and R is the squared deviation. The Kendall's W is defined by W (as no. 1 equation, in Table 38). It can be observed that for

each rater j then $\sum_{i=1}^k r_{ij} = 1 + 2 + \dots + k = \frac{k(k+1)}{2}$ (no. 3 equation, in Table 38), and

³⁷ It is used to detect differences in treatments across multiple test attempts.

so the mean of the R_i can be expressed as (no. 4 equation, in Table 38):

$$\bar{R} = \frac{1}{k} \sum_{i=1}^k R_i = \frac{1}{k} \sum_{i=1}^k \sum_{j=1}^m r_{ij} = \frac{1}{k} \sum_{j=1}^m \sum_{i=1}^k r_{ij} = \frac{1}{k} \sum_{j=1}^m \frac{k(k+1)}{2} = \frac{m(k+1)}{2}$$

TABLE 38. KENDALL'S COEFFICIENT BASIC FORMULA

$R = \sum_{i=1}^k (R_i - \bar{R})^2 \quad \text{(no. 1)}$	$W = \frac{12R}{m^2(k^3 - k)} \quad \text{(no. 2)}$
$\sum_{i=1}^k r_{ij} = 1 + 2 + \dots + k = \frac{k(k+1)}{2} \quad \text{(no. 3)}$	
$\bar{R} = \frac{1}{k} \sum_{i=1}^k R_i = \frac{1}{k} \sum_{i=1}^k \sum_{j=1}^m r_{ij} = \frac{1}{k} \sum_{j=1}^m \sum_{i=1}^k r_{ij} = \frac{1}{k} \sum_{j=1}^m \frac{k(k+1)}{2} = \frac{m(k+1)}{2} \quad \text{(no. 4)}$	

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Source: Sheskin (2003), p.n.1373

Following that, and using algebra, Kendal's W can be obtained by

$$W = \frac{12S^2}{m^2(k^3 - k)} - \frac{3(k+1)}{k-1}, \text{ where } S^2 = \sum_{i=1}^k R_i^2 \text{ and } k \text{ is the number of objects}$$

and m is the number of variables. In the case that the raters are in the same

agreement, then $S^2 = \sum_{i=1}^k R_i^2 = \sum_{i=1}^k (mj)^2 = m^2 \sum_{i=1}^k j^2$, but

$$\sum_{i=1}^k j^2 = \frac{k(k+1)(2k+1)}{6} . \text{ That results then the following equation:}$$

$$W = \frac{12S^2}{m^2(k^3 - k)} - \frac{3(k+1)}{k-1} = \frac{12m^2k(k+1)(2k+1)}{6m^2k(k-1)(k+1)} - \frac{3(k+1)}{k-1} = \frac{2(2k+1)}{k-1} - \frac{3(k+1)}{k-1} = 1 .$$

Thus, if all the R_i are the same which might mean the the raters are in complete disagreement, then by Definition 1, $W = 0$. In fact, it is always the

case that $0 \leq W \leq 1$. In the case that $k \geq 5$ or $m > 15$, $m(k-1)W \sim \chi^2(k-1)$, then the hypothesis $W = 0$ is tested, which shows that there is no agreement among the ratters, is tested (Friedman 1937, Friedman 1940, Kendall 1948, Kendall 1939, Legendre 2005, Legendre 2010, Zar 1999).

The purpose of this is to establish consensus by setting the same hypothesis for each statement (H_0 =that there is no consensus at all, H_1 =there is consensus), and establish that there is consensus or not ($H_0..W=0$). For example a number of people have been asked to rank a list of criteria for selecting the Greek flag from most important to least important. Kendall's W can be calculated from this data. If the test statistic W is 1, and all the survey respondents being unanimous, then each respondent has assigned the same order to the list of concerns. If W is 0, then there is no overall trend of agreement among the respondents, and their responses may be regarded as essentially random. The W values indicate a greater or lesser degree of unanimity among the various responses. All results in this study are more than 0, the closest to 0.5 with consensuses being achieved (Sheskin 2003).

The Kendall's concordance significance, is computed by using the Friedman's chi-square test obtained from : $\chi^2 = m(n-1)W$. Since n is less than 20, the use of chi-square distribution is suggested (Sheskin 2003). In order to validate and strengthn results three different statistics are used, 1)the maximum value of responses, 2) which preference of the panel has a maximum value, and 3) the sum of each preference. That results the development of three scenarios (see the actual results in the Analysis

chapter, Tables 51-54). Each scenario shows a different coefficient of concordance, which significance has been tested using the chi-square distribution. For testing significance the p value is calculated in order to prove the validity of the hypothesis testing.

After all relevant statements from Round 2 were ranked, the statements were rephrased and readdressed to the panel in Round 3 (for example Round 2, Statement 18 in Round 3, Statement 2). In Round 3 the AMPO rate was calculated for the panel answers in order to identify AMPO consensus. Finally all information was evaluated and will be presented in the Analysis chapter.

3.3.4.1 Statements in Round 1

All statements, which are posed as questions, form part of a structured questionnaire with the Likert 1 to 5 scales, in order to capture variation in views. In addition, the participants were invited to make comments on each statement since in each statement, panellists were invited to comment. When the participants were provided with their replies no alterations were made.

(Round1) Statement 1: Do you believe that the Greek government protected the Greek-flagged shipping during 1975-2010? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

This statement reflects a fundamental question of the research. There are several debates evident in questioning if the government protected the flag, or not. This is a closed statement, to identify the assumed strong opposition of groups. Participants were invited to comment, so as to elaborate their answer.

(Round1) Statement 2: Do you believe that there was potential in the Greek flag? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

The aim of this question was to discover if there was a valid reason to support the flag. This is another issue of debate in the Greek industry.

Statement 1, and 2 are statements as to (a) identify where the panel stands, and from this to see how they evaluated the past political actions, and (b) identify what triggered their interest, and motivated them to be involved in the research.

(Round1) Statement 3: Do you believe that the individual initiative, and not the government assistance affected the development of the Greek-flagged shipping? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

Literature identifies that views vary. This was very important to identify to identify views of the panel. This statement verifies statement 1.

(Round1) Statement 4: Do you believe that Greek-flagged shipping was competitive the last 40 years? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

Literature identifies that Greek shipping was competitive, not just with the volume of its deadweight, or the number of ships, but the quality of the crew and the ship. This must also be determined by the panel.

(Round1) Statement 5: Do you believe that the Greek-flagged shipping could have become more competitive the last 40 years? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

Statement 5 follows Statement 4, as to the potential that Greek shipping had. If the ship registry had the potential, and the government did not assist the flag, then this is different from not having the potential. The difference lies in identifying as what the government should have done.

(Round1) Statement 6: Do you believe that the Government played an important role in the development of the Greek-flagged shipping? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

Literature identifies that governments play an important role in the development of their ship registries. The purpose of this statement is to

identify if the role of the government was important, and contributed to the development of the ship registry.

(Round1) Statement 7: Do you believe that there was any legislation passed that affected positively the growth of Greek-flagged shipping? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

Literature identifies several reductions in taxation, and other positive measures. This was the opportunity to establish if the participants believed that specific regulations have affected the flag positively. Will the experts coming from the seafarers group have the same view with the experts coming from the shipowning sector?

(Round1) Statement 8: Do you believe that there was any legislation passed that affected negatively the growth of Greek-flagged shipping? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

This statement is the complete opposite of statement 7. This is the opportunity to establish if the participants believe that specific regulations negatively affected the flag. Will the experts coming from the seafarers group have the same view as the experts coming from the shipowning sector?

(Round1) Statement 9: Do you believe that the Greek government could have protected, and promoted the Greek-flagged shipping? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

Literature does not clearly state if the Greek government could have protected, and promoted Greek-flagged shipping. The purpose of this statement is to see if the panel believes that the government could have protected and promoted the registry.

(Round1) Statement 10: Do you believe that the choice of flying the Greek flag on board of ships is just due to patriotism, during 1975-2010? Please tick as appropriate. Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Feel free to comment on the question in the comment box.

Shipowners support the view that they register their ships to the Greek registry for the reason of patriotism. It is important to understand if the panel believes that patriotism exists in business, and whether this is a factor which affected the shipowners' decision making.

(Round1) Statement 11: Do you believe that the EU membership affected the Greek-flagged shipping? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

According to the literature a number of measures have been adopted since Greece become an EU member. Do any or all of these measures affect positively or negatively Greek-flagged shipping?

(Round1) Statement 12: Do you believe that the EURO currency affected the Greek–flagged shipping? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

The shipping currency was always the US dollar. Shipowners were paid in dollars, but they were paying off their expenses as corporations within Greece, and the Greek crew in drachmas. Has the EURO currency affected shipping in a positive or negative way?

(Round1) Statement 13: Do you believe that the taxation was in favor of the shipowner who flies the Greek flag on board of ships for the last 40 years? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

Taxation was always considered to be a major factor in the decision to register a ship under any flag. The flagging out to the flags of convenience, or other European flags justifies that to an extent. Is this the case? This statement will be considered in contrast with Statement 10, and 'patriotism'.

(Round1) Statement 14: Do you believe that the shipowners that fly the Greek flag are preferentially treated? Strongly Disagree, Disagree,

Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

Literature identifies that shipowners flying the Greek flag are preferentially treated. This is mostly reflected in the taxation and the Authorising acts. The panel must determine if the shipowners flying the Greek flag are preferentially treated.

(Round1) Statement 15: Do you believe that the development of the composition of crews in the Greek flag will motivate young people to get into shipping? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

What motivates Greeks to enter the sea? The Greek nationals have been cut off throughout the years, and on the other hand the shipowners complain that there are no Greek crews to employ. Will young Greeks be motivated when measures have been undertaken for crew synthesis for less Greeks on board?

On the other hand although shipowners complain about the availability of Greek crews why are they registering their ships under the Greek flag?

(Round1) Statement 16: Do you believe that the composition of crews on board of the Greek-flagged ships will make young Greeks to get into shipping? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

Throughout the years more foreigners are on board Greek-flagged ships. It is not important just how many Greeks are on board but in what positions. How will a young Greek seafarer be promoted to a higher position if the lower positions on board are taken by foreigners? Is that a motivator for young nationals to go to sea?

(Round1) Statement 17: Do you believe that was a limited active aid from the state for the Greek-owned shipping which reached its status of world supremacy with no palpable state support only a tacit one? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

Thanopoulou (2007) identifies in literature that there was limited state aid with no palpable state support but only a tacit one. The panel is requested to reply to that statement in order to have a clear answer as to whether this was the case or not.

(Round1) Statement 18: Do you believe that without the support of the state after the World War II, Greek-owned shipping would never have increased as much as it did? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

Harlaftis (1993) states that the Greek shipping was supported by the Greek government with the Liberties case. This statement might come in contradiction with Statement 17 or they might complement each other.

(Round1) Statement 19: Do you believe that is due to the advantages of the flags of convenience that Greek shipowners' flag out the Greek flag? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

Literature identifies that it is due to the advantages provided by the flags of convenience that Greek shipowners' flag out of the Greek flag. This was the case for other European countries as well. The statement tries to identify if it is the advantages provided by the flags of convenience such as cost and not other reasons, like the fear of political instability that impact shipowners.

(Round1) Statement 20: Do you believe that the governments have given initiatives to attract ships in the Greek registry since the 80's? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

Literature identifies that there were initiatives given by governments but at the same time the market players, e.g. shipowners, never seem to be satisfied. The statement does not ask if the initiatives were effective or not, that is another case.

(Round1) Statement 21: Do you believe that Greece not being an exporting country is not able to assist Greek-flagged ships? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly

Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

Greece is not an exporting country which has made Greek shipping offer its services to other world shippers. This statement tries to determine if this is an an excuse or the reality.

(Round1) Statement 22: Do you believe that the Greek state ignored Greek-flagged shipping? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

Literature identifies that there were stages when the Greek government did nothing about shipping. Thus, was because they ignored issues or not? Was it because of the shipowners "hands off shipping" attitude or because there were other priorities?

(Round1) Statement 23: Do you believe that the Greek governments had a systematic plan for the development of the national registry? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

Literature identifies that there was no systematic plan from any government, The question tries to establish if this was the case.

(Round1) Statement 24: Do you believe that there are political issues which do not allow shipowners to register their ships under the Greek

flag? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

The statement tries to establish the political issues, if any, for example with governments in power that made shipowners not willing to register their ships with the Greek flag. Literature identifies that shipowners were surprised and afraid when the socialist party of PASOK come into power. In another case there was a personal conflict with the Prime Minister Mistotakis and a shipowner.

(Round1) Statement 25: Do you believe that there are operational issues which do not allow shipowners to register their ships under the Greek flag? Please tick as appropriate. Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Feel free to comment on the question in the comment box.

The purpose of this statement is to identify any operational issues known to the panel, that were not identified in the literature.

(Round1) Statement 26: Do you believe that there are cost issues which do not allow shipowners to register their ships under the Greek flag? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

The purpose of this statement is to identify any cost related issues known to the panel, that were not identified in the literature.

(Round1) Statement 27: Do you believe that there are any other issues which do not allow shipowners to register their ships under the Greek flag? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

The purpose of this statement is to identify any other issues known to the panel, that were not identified in the literature.

(Round1) Statement 28: Which are the attributes which have contributed to the success of the Greek-flagged ocean-going shipping? Shipowners, the state, the skilled seafarer, the seaborne trade, the cluster, all together? Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the question in the comment box.

The purpose of this statement is to identify if the panel supports the idea that it is just one attribute, or more that contributed to the success of the Greek-flagged ocean-going shipping.

The development of the Statements for Round 2 and 3 is in the Analysis Chapter. There reason is that Round 2 and 3 Statements development depends on the results and consensus acheived in the Round 1 Statements.

3.4 Methodology 3- Porter's Diamond & the Greek flagged ocean-going shipping

Porter's theory, and model on what industries and nations specialie in, and the explanation behind their international competitive advantages, is

discussed in literature review. In this section the model will be applied to Greek shipping, incorporating findings deriving from the timeline Alpha to Omega, the analysis of literature, and the Delphi analysis. This will result in merging, and consolidating all relevant elements, and of accomplishes of the research objectives.

The reason that a new model was not developed by the author is that Porter's model is a reliable alternative model, and has been tested for more than two decades. It must be noted that Porter's diamond had been altered by the author, in an innovative manner, in order to incorporate those features that ensure the achievement of the research objectives and to fit the ship registration area. In addition the use of an existing model will allow comparison between the Greek-flagged shipping industry, and other flags, as well as other industries to test the competitive advantage.

The analysis will be based on the 4 factors affecting Porter's diamond as illustrated in the literature:

- Factor Conditions: The nation's position in factors of production necessary to compete in an industry and the conditions in national governing.
- Demand Condition: What is the nature of the market demand for shipping?
- Related and Supporting Industries: The presence in the nation of the supplier industries and other related industries that are internationally competitive.
- Firm Strategy, Structure and Rivalry: how companies are created, organised, and managed as well as the nature of domestic rivalry.

Further the analysis, and the framing of Greek-flagged ocean-going shipping in Porter's diamond is discussed along the same principals, and ways Porter previously analysed the competitive advantage for example in the textile industry in Italy (Porter 1990). The reason is that (a) the research philosophy being pragmatic articulates the theories already established (Kuhn 1962), and (b) the application of the model and the comparison of this application in two different industries can be easily undertaken.

The outcome of the analysis will allow the application of Porter's diamond to Greek-flagged ocean-going shipping.

3.5 Ethics

Ethical issues impact all stages of the research process including the topic chosen, and the methods used (Punch 2005). Grix (2004) suggests that the researcher has a set of moral principles which guide them, such as anonymity, and confidentially. Arguably everybody has a different idea of what is ethical, and this can be overcome by the standards set by the University of Plymouth, and the author's transparency in every step of this research. Following the guidelines set out by the Faculty Research Ethics Committee (FREC) a number of processes were adopted in order to ensure no harm to the participants (Appendix 1: Application for Ethical Approval of Research).

The combining of methods of research to eliminate any bias inherent in particular data sources, investigation, and was important to this study (Tashakkori 1998, Tashakkori and Charles 2003). A mixed methodology is quite common for example the combining of inductive and deductive

strategies to capitalise on their strengths, and minimise their weaknesses (Brewer and Hunter 1989). In the same way the use of the three-pronged research approach, works, and ensures ethicality throughout as well as transparent methodologies, and procedures. In addition the breaking down of the analysis into three main sections, synthesising piece by piece the evidence, while ensuring, validating double checking, also ensures transparency and reliability.

Further, emphasising on the engagement of the 42 participants equally allows for a fair representation. The criterion or choosing the participants was based on their expertise, and long term involvement in Greek shipping. As it has been already discussed the panel were selected on their experience solely, and were asked for their consent in participating assured of their anonymity. The author fully explaining the purpose and the methodology used in the research. No individual names, and positions are linked to individual responses. This is illustrated in the cover letters of the questionnaires in all rounds (Appendix 2, 3, and 4). Also, the participants were able to withdraw at any time.

3.6 Methodology Limitations

The paradigm has been criticised for excluding other paradigms due to the articulation of the theories it already established, and as a result constrains intellectual curiosity, and creativity (Kuhn 1962), as well as limiting the sociological imagination (Mills 1959). To overcome the limitations the author's epistemological understanding, ontology, and axiology are made explicit, and her aim to allow not just for 'some point of view' (Feilzer 2010)

but all views to be represented. This is reflected (a) in the representation of all participants in the Delphi method, and (b) the abductive reasoning.

Although the timeline Alpha to Omega is an effective, and efficient way to tell the whole story in a chronological order, it is practically impossible to fit all events in one line because the outcome will be confusing to the reader. In order to avoid confusion only the historical (e.g. oil crisis), the legal effect (e.g. EU and IMO laws and regulations) alongside the political developments in Greece (e.g. elections and Prime Ministers) are presented. Data (seaborne trade, world fleet, national fleet, GDP) is presented above the timeline to complement the storytelling.

The analysis of secondary data imposes limitations in its effectiveness on this study (Lina and Simb 2013, Zenga and Qua 2012). Several unsuccessful attempts have been undertaken by the author to identify data correlations that contribute to this study's objectives. The consideration of secondary data further justifies the usage of Delphi in shipping policy topics.

Delphi should provide more accurate assessments or judgments compared to those obtained by individuals or groups (Rowe *et al* 1991) but still there are issues to consider in order to successfully apply Delphi: (a) participants, (b) preparation and testing of the questionnaires, (c) time frame, (d) drop out of participants (Gordon and Glenn 1996), and (e) group thinking versus individual thinking. Time (Grix 2004), willingness to participate and freely express view are also important with the participants being at top management positions in the public sector.

All the above issues have been taken into consideration throughout the whole process.

There are practical difficulties in involving people in research, especially people of authority, but this can be overcome by assuring them their anonymity, increasing the number of potential participants, and relying on the author's personal, and close relationships with the Greek market. Greek shipping after all is a small, and close community located mostly in Piraeus, and the suburbs of Athens. The most important assurance of participation, and reliability of results is anonymity of participation, and this was offered to the panel. Only the author knows the participants, and their answers, and it is the job of the author to safeguard them. Still though, even the author does not know who gave which answer. Anonymity is what the participants are looking for and Delphi proved to be the best possible technique as far as governmental planning is concerned since Delphi organises and clarifies views in an anonymous way (Linstone and Turoff 2002). Participants were sent the text relevant to them, and they had the opportunity to make alterations, or corrections

Whatever the research method, bias of results, and subjective interpretations are always a big issue. As to this study these problems are eliminated since the research topic itself is to evidence the elements of the Greek shipping policy from 1975 to 2010, and then evaluate it by breaking down the questionnaire into three parts/three phases, setting the right statement and include participants that represent all interests in the topic. Bias and subjective results are eliminated (Linstone and Turoff 2002).

As to subjectivity, the degree of confidence is high although different members, and different interests are represented by the respondents. After all the aim of the Delphi method is to bring together responders with opposing views, and to systematically attempt to facilitate consensus, as well as to identify divergence of opinion (Strauss and Zeigler 1975).

Additionally extreme opinions from the respondents are made open, and clear via the controlled feedback, and estimates are achieved bypassing the problems of group dynamics (Gordon 1994).

Porter's diamond model has come under some criticism given that at the time it was developed the conditions of international business were so different from today. This criticism does not affect this study due to the following reasons (a) criticism is not always correct since for example the factor seaborne trade, and technology are incorporated taking into consideration that shipping was always an international industry, (b) Greek shipping is governed by the derived demand factor, and follows the seaborne trade demand. Both the alternation in sea roads and total freight carried are the norm, and what is expected by the industry, (c) the factors of criticism suggesting that the model is out of date are already incorporated by the author of this study in its application to the Greek-flagged ocean-shipping, (d) even if all economic and political factors can be altered the culture and tradition of a nation does not change in a period of 35 years, which further make Porter's diamond valid, (e) the author of this study has altered the original model to incorporate the particularities of the shipping industry and the Greek culture, and finally (f) according to Noble (2000) the

four diamond factors are guarantees. All these reasons contribute to the explanation, and justification of the application of the original model altered by the author to engage the Greek-flagged ocean-shipping industry.

This study takes into consideration the above limitations in testing the model on the success of Greek-flagged ocean shipping, and modifications are made to the model. The applicability to this case is not a limitation (Noble 2000) but an advantage, and it is considered as the only viable solution. Literature identifies the applicability of the diamond to small nations and Rugman (1991) suggests that for small countries, competitive advantage may be derived from a combination of diamonds which can exist outside of the home country, which in this case one diamond is the Greek flagged shipping.

According to Cho *et al* (2008) a good theory should be comprehensive enough to capture the most important independent variables to explain a dependent variable, and Porter's original model is not comprehensive enough to be used in explaining today's complicated economy. Taking that into consideration, as well as the above criticism of Porter's original model, and the modifications and extensions by other authors, the model is modified in order to adapt it to Greek-flagged ocean-going shipping with three extensions. These are as follows:

Extension 1: The "demand condition" refers not to the national demand according to Porter's diamond but to the international demand. The Greek flagged tramp shipping always served the international demand mainly because there is no demand from the national market.

Extension 2: The “related and supported Industries” are considered in two levels (a) on national and (b) the international level.

Extension 3: Davies and Ellis (2000), and Porter (1990) suggest that the government’s role (see Figure 5) is partial and indirect working in cooperation with the diamond’s conditions, and creating a favourable environment for the companies to be competitive, and that another approach would result in companies having problems. If this study was not about the Greek national ship register but was on the success of the car industry then the role of the government would have been as Davies and Ellis (2000), and Porter (1990) suggest. The case of the national registry differs by being national as an industry that belongs to the state. Thus, in this case the government is included in the diamond and will be incorporated in the conditions. Thus, the “factor condition” in the diamond concentrates and represents the country as well the state and the EU is also incorporated. This is further justified by Cho *et al* (2008) who state that Porter's single diamond model was designed for industry analysis which explains that the government factor was treated as exogenous. In the Greek-flagged ocean-going ships’ case the government factor should be treated as endogenous since the government is one of the main factors that contribute to national competitiveness.

3.7 Presentation of Findings

The findings by using all methods are presented in the final chapter. The findings are presented and set against the literature and the study’s

objectives. Then Porter's Diamond for shipping is developed, the hypothesis is tested and the new theory is developed.

Further to that in order to assure reliability and enhance meaningfulness in the challenge and synthesis an acceptable level of reliability, validity and reproducibility is established:

- Reliability refers to the degree of consistency and stability in an instrument (Franzosi 2004).
- Validity refers to the extent to which an empirical measure adequately reflects the real meaning of the concept under consideration (Saini and Sholonsky 2012).
- Reproducibility refers to the ability of a dataset to be accurately replicated by someone else working independently (Saini and Sholonsky 2012).

Chapter 4. Analysis

The purpose of this chapter is to analyse and to execute the three pronged methodology presented in the previous chapter: the Timeline Alpha to Omega and the analysis of the secondary data, the Delphi method and the application of Porter's theory to Greek flagged shipping.

4.1 Literature Review Gap and Literature Development

The systematic, explicit and reproductive literature review selection in this study which contains related information, evidence, and data revealed that resources are limited.

In respect to the success of the Greek Registry and the determinants of the success, there is no similar, in-depth, and explicit research undertaken. The interest of researchers is mostly on the Greek-controlled shipping, focusing on maritime economics and finance³⁸, history³⁹, shipping management⁴⁰, legal issues⁴¹, maritime policy and management⁴², market players and human resource⁴³, and EU policies⁴⁴. However, specific papers⁴⁵ and maritime history books⁴⁶ on the Greek controlled shipping provided valuable

³⁸ Serafetinidis *et al* 1981, Thanopoulou 1994, Thanopoulou 1996, Goulielmos 1996b, Thanopoulou 2002, Papagiannoulis 2002, Sabrakos 2003, Giziakis *et al* 2005, Corres 2007, Thanopoulou 2007, Matsos 2009, and Prandeka and Zargos 2014.

³⁹ Harlaftis 1993, Harlaftis 2008, Bissias 2012, and Harlaftis and Valdaliso 2012.

⁴⁰ Harlaftis and Theotokas 2004, Theotokas and Harlaftis 2009 and Lekakou *et al* 2015.

⁴¹ Deloukas 1979, Markianos-Daniolos 2013, and Antonopoulos 1976.

⁴² Goulielmos 1997, Goulielmos 1998a, Goulielmos 1998a, Goulielmos 1998a, Goulielmos 2001, Grammenos and Choi 1999, Goulielmos 2001b, Goulielmos 2006, Grigoropoulos 2013, and Samiotis *et al* 2008.

⁴³ Corres 1978, Corres 2007, Theotokas and Harlaftis 2009, Theotokas *et al* 2006, Sabrakos and Stiaparikou 2001, Theotokas and Progoulaki 2007, Theotokas 2007, Theotokas and Progoulaki 2007b, and Tsamourgelis 2007.

⁴⁴ Coulielmos 1998, Marlow and Mitroussi 2008, Pallis 2007, Fafaliou *et al* 2006, Lekakou *et al* 2007a, and Lekakou *et al* 2007b.

⁴⁵ Coles and Watt 2009, Ready 1994, and Spruyt 1994.

⁴⁶ Harlaftis 1993, Harlaftis 2008, Harlaftis and Valdaliso 2012, Harlaftis and Theotokas 2004, and Theotokas and Harlaftis 2009.

information for this study. Literature on registration⁴⁷ and flagging out⁴⁸ are traced in a of couple papers and books.

The national shipping policies research is also limited and referenced in a couple of papers⁴⁹. Limited and not in-depth is the research that contextualises Greek shipping policy with specific evidence on the Greek Shipping Registry, with reference only to specific periods or concentrating on specific aspects⁵⁰ and there is no historical evaluation undertaken on the Greek Register from 1970-2010, apart from this findings are scarce⁵¹.

4.2 Linear story telling: The Alpha to Omega Timeline

The Timeline Alpha to Omega is schematically presented at a later stage in this chapter (from Figure 32 to Figure 35) and puts together 35 years of politics, and policy making with regard to the flag.

The relative figures representing specific years are:

- Figure 32. Timeline Alpha to Omega, 1975-1980,
- Figure 33. Timeline Alpha to Omega, 1981-1990,
- Figure 34. Timeline Alpha to Omega, 1991-2000, and
- Figure 35. Timeline Alpha to Omega, 2001-2010.

In all of the figures, the Greek governments and Prime Ministers are presented alongside with the development of the Greek flag in terms of deadweight, the development of the world fleet, the Greek GDP, the major international events, Greek EU membership, the EU enlargements by

⁴⁷ Coles and Watt 2009, Hill Dickinson 2008, Ready 1994.

⁴⁸ Yainopoulos 1988, Downard 1994, Aspinwall 1996, Bergantino *et al* 1998, Goulielmos 1998a, Goulielmos 1998b, Goulielmos 2001, Hoffmann *et al* 2005, Nguyen 2011, Celik and Kandakoglu 2012, and Luo *et al* 2013.

⁴⁹ Li and Cheng 2007, and Sletmo 2001.

⁵⁰ Antonopoulos 1976, Goulielmos 1997, Goulielmos 1998a, Goulielmos 2006, and Marlow and Mitroussi 2008.

⁵¹ Goulielmos 2001 and Goulielmos 2004.

shipping nations and main regulations, and the IMO's international regulations.

At the top of each page data on the world fleet, world seaborne trade, the Greek flag and the Greek GDP are provided alongside the Timeline. The reader can observe the events on the Timeline, and on the top of each part of the timeline the relevant data is presented. Figure 31 illustrates the boxes used in the Timeline.

Under the timeline (in different schemes/boxes, shape and colour per category) the following information is located:

- the party in power, the election data and the Prime Minister's name, and
- shipping regulations passed by IMO.

Above the timeline is the;

- international events,
- the EU legislation or policy, and
- the EU member states and the accession date.

The complexity of the subject is obvious when reading the text, and an understanding of the whole picture is not easily grasped. This was the role the Timeline served, to assist the author and the reader in understanding how events fit in time, how they align, and how complex policy making is.

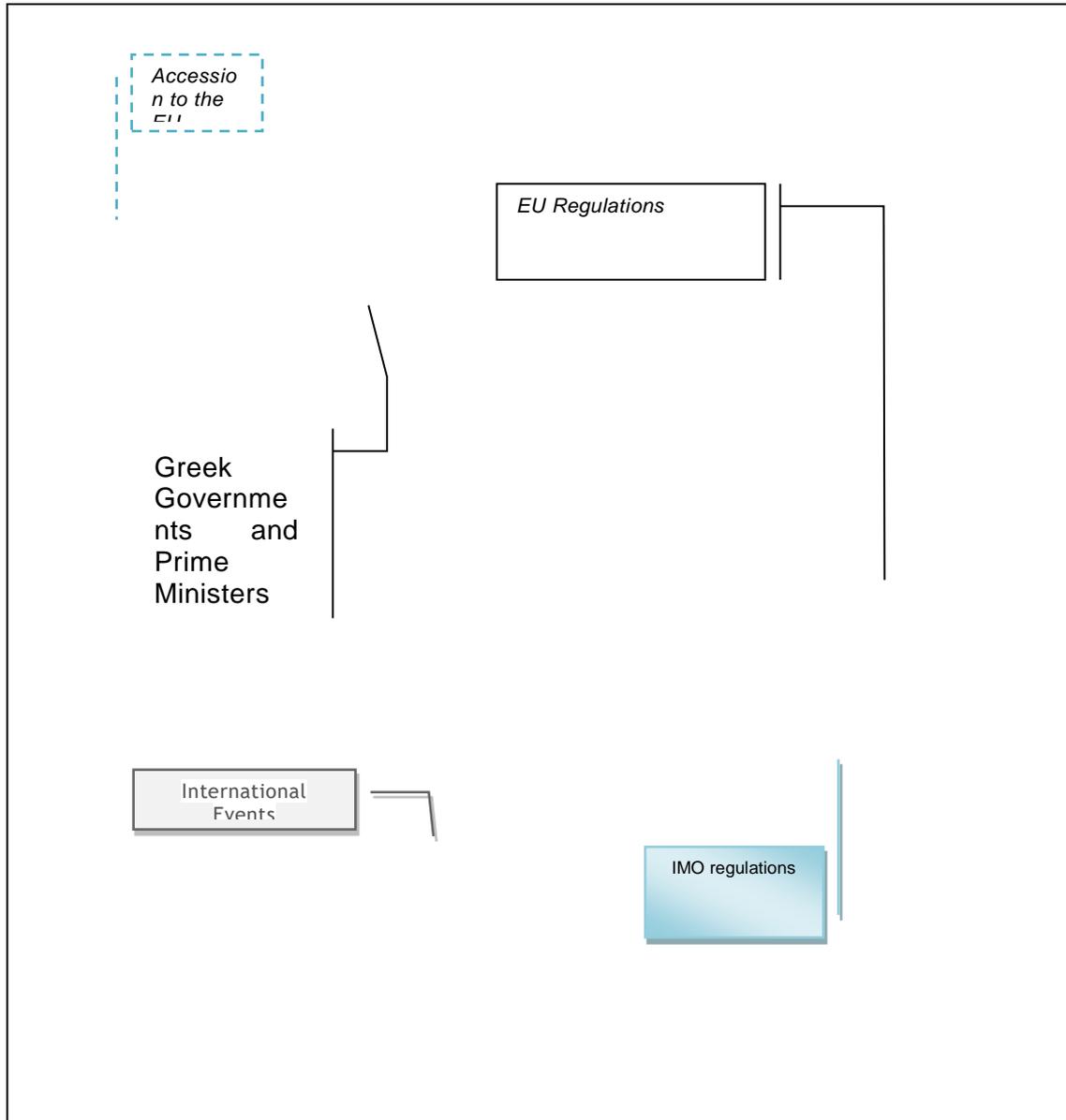


FIGURE 31. TIMELINE A TO Ω: BOXES & MEANING

Source: Developed by the author (2014)

Looking at the Timeline and working in the shipping industry some may find grounds to argue that shipping is overregulated. Concentrating on the positive effect of overregulation it can be noted that the Greek fleet benefited from the imposition of the regulations, and this further contributed to the quality of the fleet.

World Fleet (WF) (in '000GT)	342.162	372.000	393.678	406.002	413.021	419.911
World Seaborne Trade (WST)(in mil ton)	3.072	3.366	3.468	3.550	3.828	3.704
Greek Flag (GF)	25.108.441	28.660.875	33.752.076	36.314.066	38.570.128	41.421.925
Greek GDP (GRGDP)(in '000 US\$	28.643,08	31.276,99	36.306,60	44.418,01	54.684,25	57.054,21

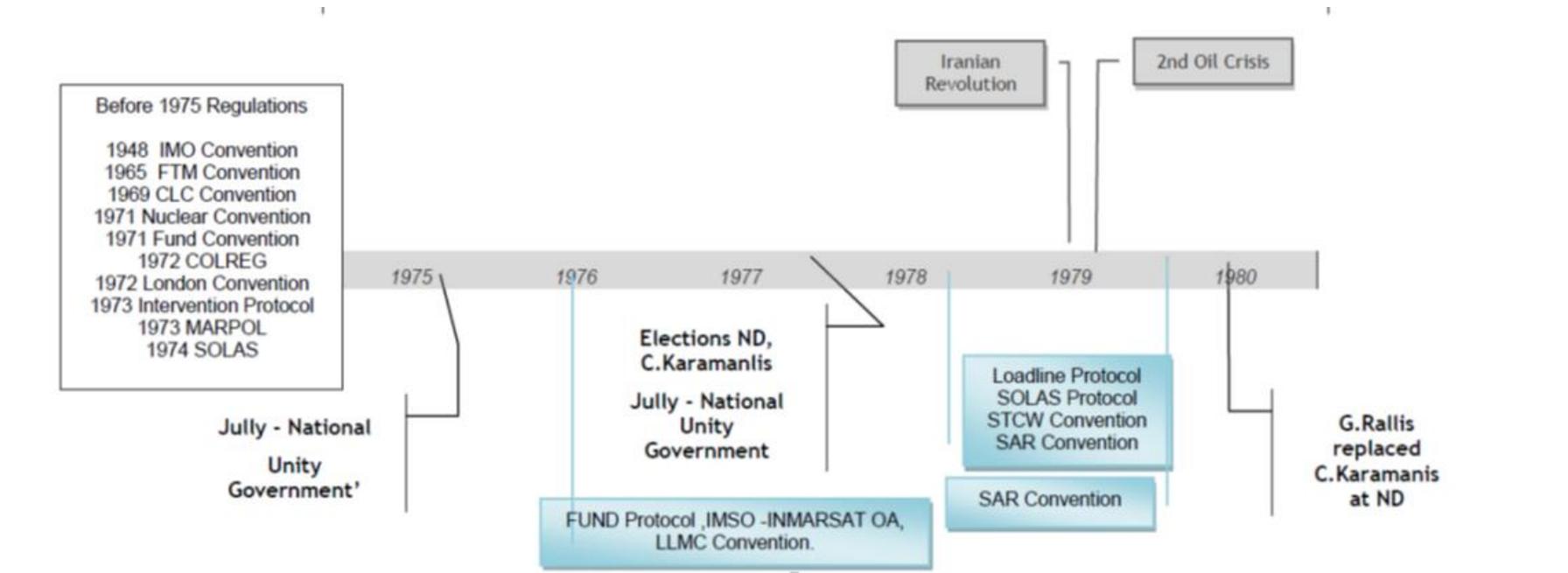


FIGURE 32. TIMELINE ALPHA TO OMEGA, 1975-1980

Source: Several sources used in Literature Review combined with the author's knowledge. Developed by the author (2014)

WF 420.835	424.742	422.590	418.682	416.269	404.910	403.498	403.406	410.481	423.627
WST 3555	3.273	3.231	3.364	3.330	3.385	3.505	3.735	3.940	4.008
GF 42.289.117	38.057.112	37.707.377	35.781.076	27.765.421	24.183.381	21.006.751	19.759.053	20.898.119	22.524.329
GRGDP52.537,02	54.806,12	49.603,31	48.198,60	47.992,73	56.587,20	65.887,55	76.539,25	79.453,78	98.254,21

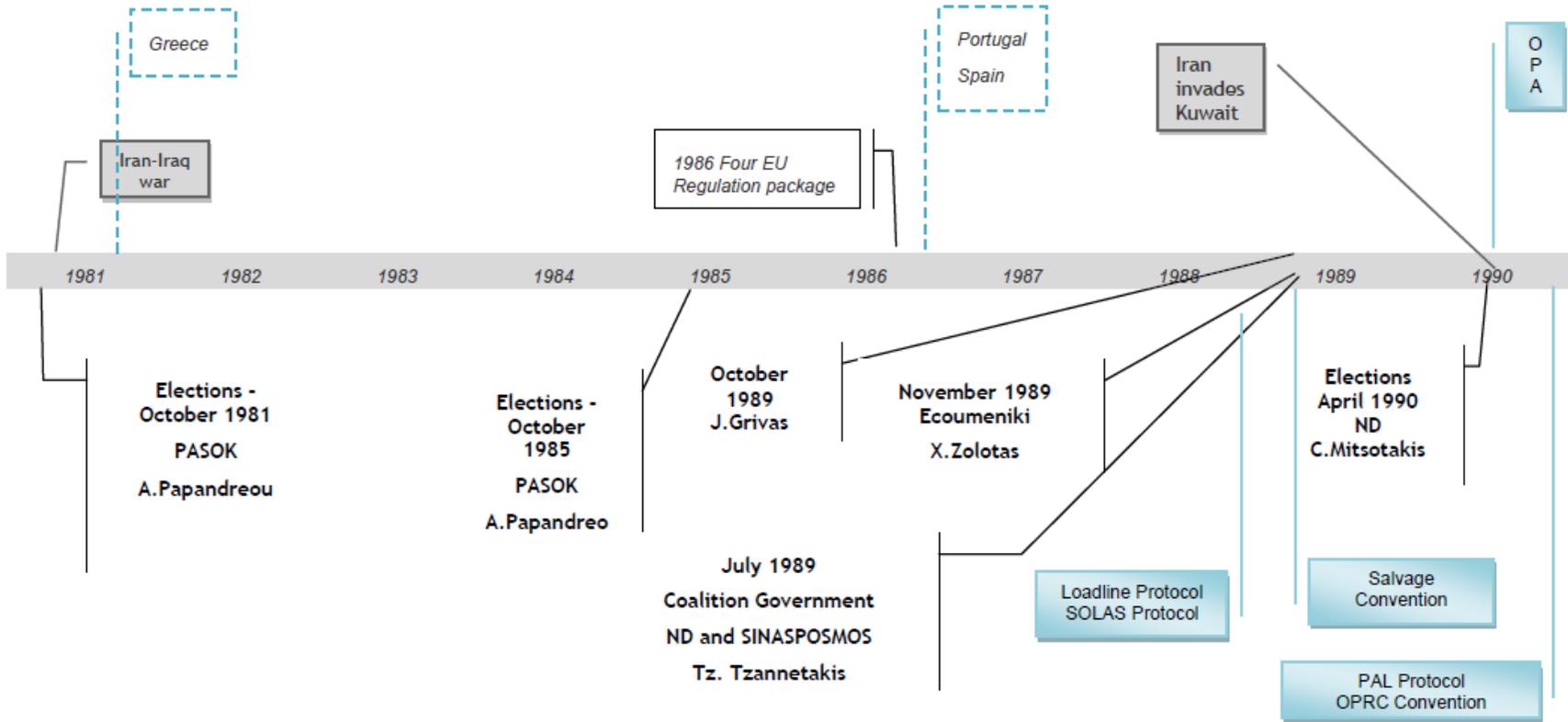


FIGURE 33. TIMELINE ALPHA TO OMEGA, 1981-1990

Source: Several sources used in Literature Review combined with the author's knowledge. Developed by the author (2014)

WF 436.027	445,169	457,915	475.859	490.662	507.873	522.197	531.893	543.610	558.054
WST 4008	4120	4220	4330	4485	4651	4758	4953	5631	5683
GF 24.082.483	26.055.932	29.671.983	30.535.560	30.220.636	27.935.053	25.708.074	25.689.500	25.002.463	26.769.502
GRGDP105.531,57	116.648,23	109.213,83	117.037,42	137.391,26	146.555,11	143.303,06	144.920,37	149.632,89	132.171,23

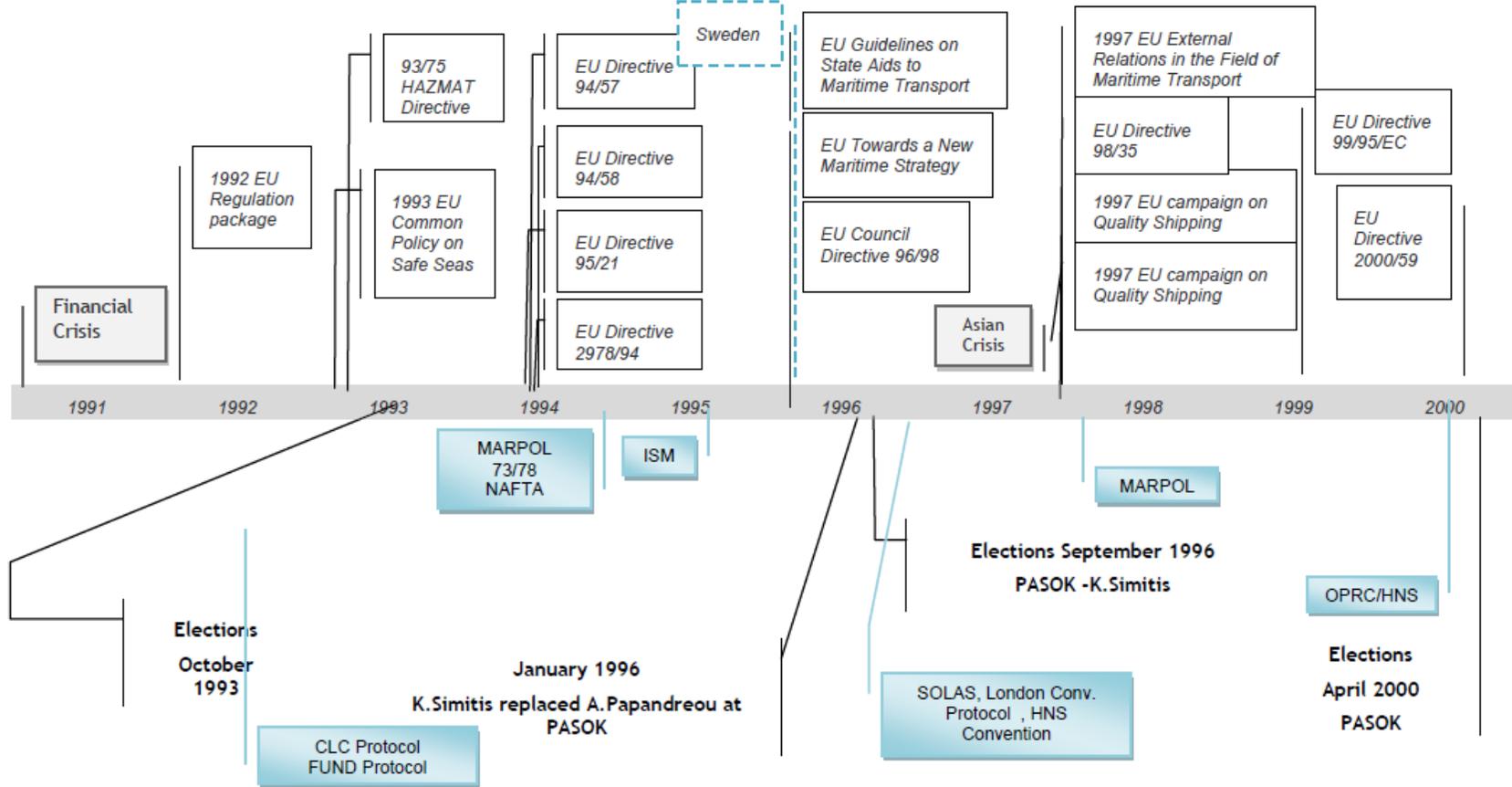


FIGURE 34. TIMELINE ALPHA TO OMEGA, 1991-2000

Source: Several sources used in Literature Review combined with the author's knowledge. Developed by the author (2014)

WF574.551	585.583	605.218	633.321	675.116	721.855	774.937	830.704	882.635	957.982
WST 6020	6127	6480	6758	7109	7700	8034	8229	7858	8409
GF 29.038.847	29.970.053	31.915.727	32.769.792	31,444,245	32,765,042	36,239,543	39,156,211	41,358,711	43,086,974
GRGDP136.005,05	152.721,04	2001.539,63	239.659,04	247.665,77	273.265,39	318,668,29	354.628,63	329.837,04	299.598,06

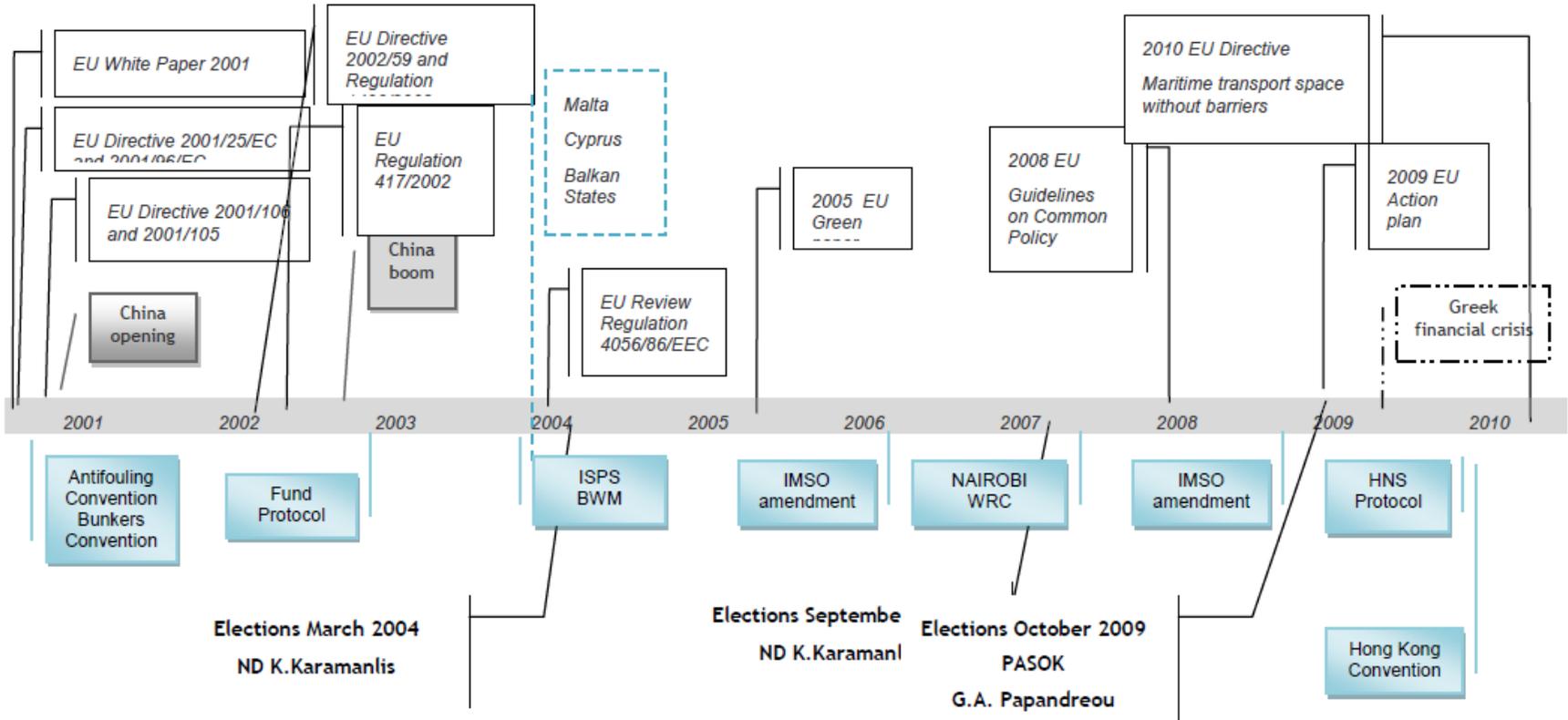


FIGURE 35. TIMELINE ALPHA TO OMEGA, 2001-2010

Source: Several sources used in Literature Review combined with the author's knowledge. Developed by the author (2014)

The Timeline indicates that from the period of 1975 to 2010, nine elections took place, and five non elected governments of necessity⁵² have resulted in fourteen governments leading the country (Table 39) .

TABLE 39. SUMMARIES OF GREEK GOVERNMENTS SINCE 1974

	Period	Party	Prime Minister
1	July 1974 - November 1974	"National Unity Government" /ND	Constantine Karamanlis
2	November 1974 -May 1980	"National Unity Government" /ND	Constantine Karamanlis
3	May 1980 - October 1981	N.D.	George Rallis
4	October 1981 -June 1989	PASOK	Andreas Papandreou
5	June 1989 - October 1989	"Coalition Government" - (N.D. and SYNASPISMOS)	Tzanis Tzannetakis
6	October 1989 - November 1989	Senior Judge, Head of caretaker government	John Grivas
7	November 1989 - April 1990	"Ecumenical Government" - (N.D.,PASOK and SYNASPISMOS)	Xenophon Zolotas
8	8 th of April 1990 - September 1993	N.D.	Constantine Mitsotakis
9	9 th of October 1993 - January 1996	PASOK	Andreas Papandreou
10	1 st of January 1996 -March 2004	PASOK	Kostas Simitis
11	11 th of March 2004 -	N.D.	Kostas Karamanlis
12	September 2007	N.D.	Kostas Karamanlis
13	October 2009	PASOK	Georgios Papandreou

Source: Information gather from different sources in literature, mostly from Lyrintzis and Nikolakopoulos (2011) and the knowledge of the author, Developed by the Author (2014)

The two main political parties in Greece were the conservative and the socialist parties each had a completely different agenda in governance. Taking into consideration that fourteen governments were in power during the thirty five years changing from conservatism to socialism and vice versa implies that there was no continuity in the shipping policy. In addition the time spent in power was not always continuous and when tenure was less than four years even if a solid strategy was implemented, it was not always effectively applied.

⁵² In 1974 twice, and other three in 1989 to 1990 three times.

Throughout 1975 to 2010, Greek-flagged ships both bulk carriers and tankers were continuously serving world shippers. The demand for shipping capacity came from the world shippers, and in the absence of trading links between the shipowners and the state⁵³ made policy making difficult. The literature highlights that shipping is characterised by internationally derived demand and shipping cycles. This is reflected in Greek shipping and indicates that the Greek governments seemed not to understand that dealing with the tramp Greek shipping industry they dealt with a sector that was not dependable for the Greek state. It was cyclical in nature, and with the Greek shipowner being subject to the dynamics of the derived demand, the shipping cycles and the international markets. Further shipping was not treated in equal terms when other industries were subsidised (tourism and agriculture) and the Greek Registry was not equally subsidised.

The shipowners were always in a powerful position and every government seems to have taken for granted that they could not create impact and control over the fleet. The reasons are presented in Table 40. Those reasons merely explain the passive approach or political inaction of all the governments in developing a dynamic shipping policy with continuity and prospects.

Literature developed in this study indicates that all governments without exception, stated that their prior aim was to support shipping, but without the shareholders perceiving this support.

⁵³ In the form of carrying national cargoes or direct subsidization.

TABLE 40. REASONS WHY GREEK GOVERNMENTS COULD NOT EFFECT THE GREEK-FLAGGED OCEAN-GOING FLEET.

- (a) the country did not have sufficient cargoes to be carried by the national fleet;
- (b) the country could not subsidize directly its fleet due to either the under developed, and not competitive shipbuilding industry and on the non discrimination provisions of EU legislation;
- (c) the international nature of shipping and being subject to international economics, laws and regulations;
- (d) the Greek flag could not compete with flags of convenience;
- (e) the easiness of shipping companies relocating their business activities in another country, and
- (f) the mobility and adaptability of the Greek shipowners to new and international environments.

Source: Developed by the Author (2016)

The strongest players and lobbies of the Greek maritime policy formulation were the shipowners and the seafarers. The shipowners' attitude throughout the decades was "do not touch... and leave us alone" while being close to all governments and affecting policy making in their favour. On the other hand the Greek seafarers while being one of the most important pillars of Greek-flagged shipping (Theotokas *et al* 2014) did not have a similar effect on the government and the policy making. Their contribution was crucial since they contributed to the GDP and the foreign exchange inflow, to the quality of the ship and the industry with their knowledge, skills, and loyalty. The seafarers unions of the ocean going shipping were not as powerful because the seafarers especially in the 70s or the 80s where on board for long periods, they did not have a union culture, and maybe they were afraid that their involvement in the unions would affect their employment.

Looking at the Timeline Alpha to Omega from Figure 32 to Figure 35 it is obvious that shipping has developed in the "new political order" reaching its peak in 1981. The fall of Junta and the promising stability offered by the democratic forces after 1974 seem to have contributed to attracting new ships to the fleet. The benefits of full tax exemption and the fact that there

was no obligation to keep accounting records, and the fear that the Law Degree 2687/53 would be excluded from the new Constitution of 1975 were enough to motivate shipowners to register their ships. The benefits derived after the Second World War and from Junta paid off when the democratic forces brought about a stable environment.

In 1975 the reopening of the Suez Canal came as a relief for ship operating costs. The right wing government (New Democracy) in the 1975s was the most successful government without doing much since the legislative framework was enacted combined with the taxation privileges these changes seemed to pay off. The contribution of the state to the maritime schools and the remuneration of crews with Greek drachmas instead of dollars was a political move by the Government to support shipping. The payroll was in drachmas when at the same time freights were paid to the shipowners (income) in dollars, and the saving from the exchange rate was received as a bonus to the shipowners.

After the Junta shipping could not have been a priority for the government since the aim of the government was the restoration of democracy and rebuild of the state. Additionally other industries, agriculture and tourism were regarded as the promising contributors to the rebuilding of the state, and involved more of the population and were in a more obvious need of support. With the increase in the flag from 1973 to 1981 more Greeks engaged in shipping regarding it as a source of a good income compared to jobs on shore. Shipping provided them the ability to travel abroad which they would not have done otherwise and was considered the only alternative job

they could get. Equally important was the seafarers passion for shipping and family tradition, most of the shipowners and seafarers come from the traditional shipping islands such as Chios, Andros and Kassos. Many Captains become shipowners, and the reason for their success as entrepreneurs was not just their ability to grasp a business opportunity, but equally their ultimate knowledge of the ship itself, and the seaborne trade.

In 1977 elections were held and the same party regained power, Greece joined NATO and the membership agreement with the EU was signed. At the end of this decade the second oil crisis in 1979 came but there was no decrease on the size of the Greek fleet since Greeks were more into bulk carriers than tankers. Greeks were buying ships when the prices were low and they were selling when the market was reaching the higher levels and that is why they were criticised for being asset players, instead of being admired as good entrepreneurs.

After 1974 the situation for liquid cargoes changed dramatically. The tanker market by 1981 was depressed with low freights and the shipowners had to scrap relatively new ships or lay them up. The dry bulk sector increased both in volume and share in the seaborne trade. The crises of 1973 to 1974, 1978 and 1981 to 1986 forced Greek owners to reduce their participation in liquid trades. Greeks invested mostly in second hand ships in the dry sector they were hardly affected by the crisis. Their ability to foresee the drop in freights allowed them to immediately react to market changes. The downturn started with the dry market struggling and ships flagging out constantly from the Greek flag. The underlying principle being that in times

of low freight rates the shipowners looked to lower costs and the solution was flagging out to the flags of convenience.

During 1979 to 1981 freights were increased and that contributed to the increase of the Greek flagged fleet share⁵⁴ (from 52% in 1975, to 56.7% in 1976, 63.8% in 1977, 69.2% in 1978, 72.8% in 1979, 77.2% in 1980 and the highest ever 77.9% in 1981). The peak stage of 1979-1981 and the trough stage of the 1982-1983 for the bulk carriers are reflected in the Registry (Figure 36).

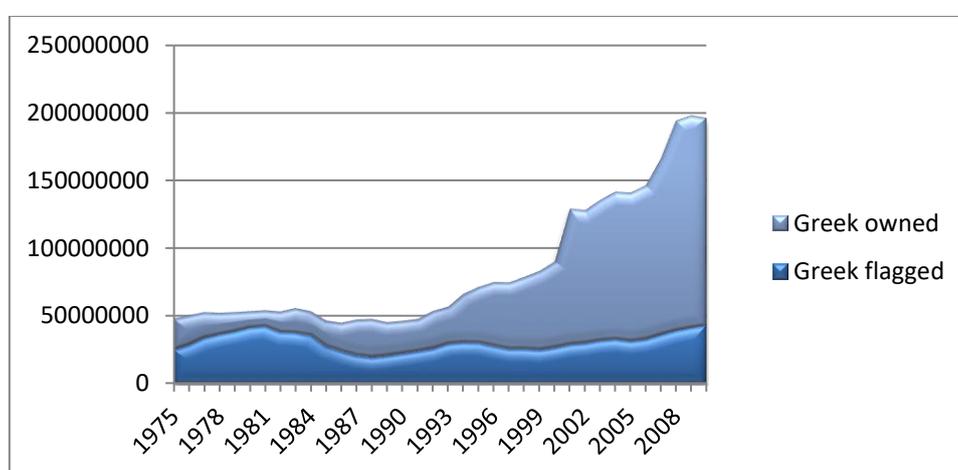


FIGURE 36. TOTAL CAPACITY OF THE GREEK-FLAGGED AND GREEK-OWNED SHIPS, 1975-2010

Developed by the author using data from Naftika Xronika and: the Greek Chamber of Commerce , Developed by the author (2014)

The contribution of Greek-flagged ships within EU shipping was significant. When Greece joined the EU in 1981 the EU did not have a shipping policy, since the initial members did not have fleets that could justify an interest in the development of relevant shipping policies. Thus, the EU members with fleets were acting unilaterally following the international regulations imposed by the IMO. After Greece joined as well as other nations with

⁵⁴ This is the percentage of the Greek flagged ships out of the total Greek owned ships, see also the relevant Tables in Literature Review Chapter and Table 44.

significant fleets, EU policies and regulations began to be developed. The EU focused on shipping sectors rather than the tramp which was the sector Greece was mainly involved in, and the policies enacted did not affect the positive impact on the national fleet.

The advantages for the Greek flag in the 70s and 80s were taxation, the legal framework, political stability, the ITF inspections, the embargos, and the political situations with other flags. Taxation was one of the most influential factors since the taxation of ships under the Greek flag was calculated on the tonnage and the age of the ship. This system proved to be advantageous due to simplification, certainty, efficiency, transparency and cost cutting. The literature does not include as an advantage the human resource factor although it is mentioned that it contributed to the success of shipping. Investment into second hand ships requires capable, skilled and loyal seaman all advantages for Greece and the boom in the freight rates developed potential for the Greek flag.

Considering the advantages of the Greek flag it seems that shipowners had no reason to flag out. However, the cost of maintaining the Greek flag with limitations imposed increased their costs. Limitations on the numbers of crew and the nationality and age of the vessel resulted in flagging out of the Greek flag. The crew cost was a drawback but some shipowners regarded it as a trade off to the maintenance and the quality of the ship and others found another way round this problem and while flying a flag a convenience they still employed Greeks on board either paying contributions to the social

seafarers' fund or not when pensioners were employed. Still, Greece was not the only country that suffered from flagging out to flags of convenience.

The period when the socialist government came into power saw that the Greek flagged fleet was strong. As illustrated in timeline Alpha to Omega (from Figure 32 to Figure 35), from 1982 to 1986 the freights reached the worse ever point, the prices of ships fall and the banks were not keen to lend. This is reflected in the fleet share denoted by the percentage falling to 71.2% in 1982 with a number of elements contributed to the down turn of the flag. These include; the declining market, the effect of the second oil pollution, the political situation in the Iran-Iraq region, the cost paradise that the flags of convenience offered, and in the long run the lack of initiatives provided by the socialist party (PASOK). Still, it would be naïve to say that because the socialists were in power for one year the shipowners left the Greek Registry.

1985 was a turning point for Greeks investing in tankers due to the increase in freights, predicting shortage in supply, realising the ageing in their fleet and their attempt to diversify investment. During this period the war between Iran and Iraq started and Iran invaded Kuwait in 1990. It was argued that following the 1979 oil crisis, the accession in the EU in 1981 and the election of a socialist government, Greece entered into the 1980s with a problematic financial situation. At the same time the percentage of the Greek flagged fleet declined further to 67.1% in 1983, 66.7% in 1984, 59.2% in 1985, 53.6% in 1986, 44.2% in 1987, and 41.1% in 1988 (Figure 36).

1985 finds world shipping in a continuous decline which reached its worse stage in 1988. From 1982 until 1988 the fleet decreased continuously and the socialist party (PASOK) was in power for the second time. The socialist government realising the downturn of the Greek fleet and under pressure from the shipowners undertook a number of initiatives which included reduction in the remuneration of foreign crew, reductions in taxation for the large ships and crew bilateral wage agreements. These cost cutting initiatives came with the intent of promoting the flag but taking into consideration the forthcoming crisis they were undertaken with delays, and not as a part of long term policy. These initiatives did not have the immediate effect of increasing the Greek flagged fleet and in 1987 the fleet reached the lowest point. On top of that certain regulations adopted by the socialist government affected the flag negatively. These being; the controls in preventing illegal national currency exports by shipping companies, and the 'recycling of crews'. Shipowners felt that what was given to them was taken back. At the same time society and especially the seafarers were expecting that the socialist government would cut off the privileges shipowners enjoyed, and they would benefit instead, but this was never the case. Seafarers were granted a couple tax reductions, and society was left expecting social justice.

In 1986 Spain and Portugal joined the EU. During this year the EU evidences the downturn of its members' fleet and the fact that shipping was excluded from the Union policy forced the development of the first maritime package. The second EU package of measures comes in 1989/1991 positive measures with legislation occurred in 1992. It was the Greek

passenger shipping that benefited most as opposed to the Greek flagged ocean carriers.

The 1989 the dry and tanker market peaked and this was reflected in the slight increase in the Greek flag to 45.8% in the same year, 48.3%, in 1990 and 50.2% in 1991. As indicated in the timeline Alpha to Omega (Figure 32) 1989 was a year of political crisis and corruption in Greece and the right wing party (New Democracy) was elected in 1990. The Greek government had to deal with major issues such as stabilisation of the economy, strikes and foreign affairs. In 1992 the economy was moving into recession, and at the same time the Greek owners ship orders reached a low. The slight increase in the Greek flag lasted up to 1991, decreasing in 1992, and increasing again in the next year. In 1992-1993 no drastic measures were taken. In 1992 the share of the Greek Registry dropped to 48.3%, and in 1993 slightly increased to 52.1% along with the freight rates.

An early elections were held in Greece and the socialist party (PASOK) won the elections. From 1993 to 1994 the flagging out continues from 46% to 42.1%. Although 1995, was a significant year for the dry bulks the Greek-owned fleet increased and the Greek-flagged falls to 42.1% and in 1996 to 37.1%.

The Greek owned fleet although it increased in volume it decreased as a percentage against the Greek-controlled fleet (Figure 36 and 37). It also progressed at a slow rate going through several fluctuations but it never accelerated as the controlled shipping did (Figure 36 and 37). Ships flagged out of the Greek Registry to flags of convenience and a minor amount of

ships due to age limitations went for scrap. The flags of convenience such as the flag of Panama were no longer regarded as flags of shame but instead exceptional quality ships were registered under this flag.

In the following figure (Figure 37) Figure 16 from the Literature Review chapter is contrasted against Figure 36 in this chapter. Although the literature indicates that the Greek flag was not only affected by the international environment and the derived demand of seaborne trade it can be easily observed that the Greek owned fleet did not react to world seaborne trade, in the same strong way the Greek controlled fleet did.

The short Greek recession from 1981 to 1983 seems to have no effect since there was no significant flagging out. The short recession of 1987 and 1993 seem to be irrelevant or have little effect on the Greek flag since flagging out increased in the years 1987 and 1994 to 1999. Based on these observations it could be considered that the short crisis affected national fleets due to certain reasons, these reasons are presented in Table 41.

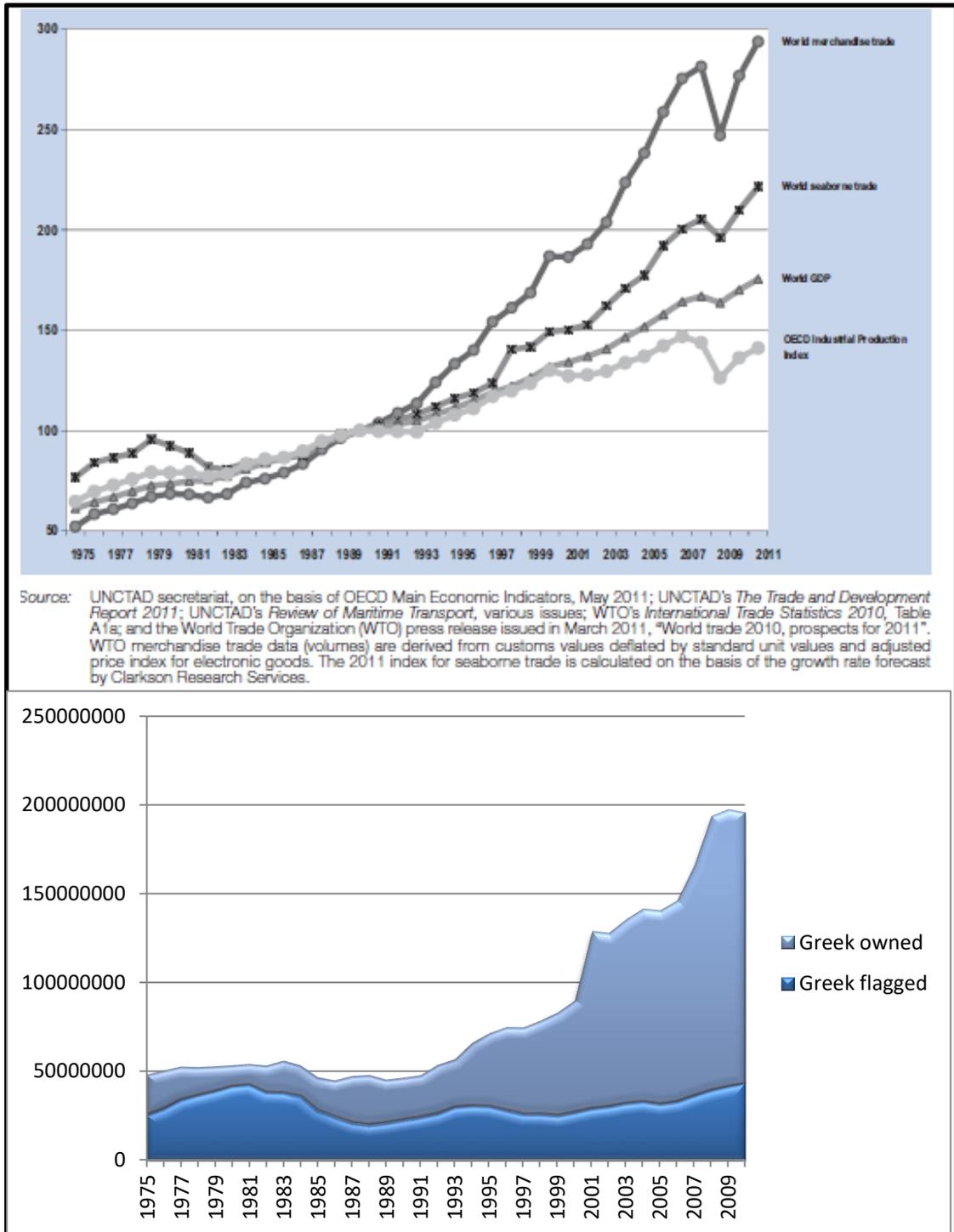


FIGURE 37. FIGURE 16 (WORLD SEABORNE TRADE) AGAINST FIGURE 36 (GREEK FLAGGED AND GREEK-OWNED SHIPS), 1975-2010'

Developed by the author (2013)

TABLE 41. WHY SHORT CRISIS MAY AFFECT NATIONAL FLEETS

Reason 1: due to the actual effect of the short crisis to the stability of the state.

Reason 2: due to the reluctance or weakness of the government to support the fleet.

Developed by the author (2014)

As the Timeline illustrates in Figure 34 the socialist party (PASOK) was in power from 1993 to 2000, and adopted further reductions on crews. The trough stage of the cycle for the bulk trades is reflected in 1995-1998 registrations with the 1996 dry market recession as well as the peak stage from 2002. The 1997 financial crisis in Asia associated with the Russian crisis resulted in low freights for all segments. In the same decade, the heavy scrapping in tanker markets resulted in freight peaks, but the deep recession in the Atlantic, and Asian economies affected production and seaborne trade. Which affected the demand for tankers as well as bulk carriers thus, from 1996 to 2001 the Greek flag falls to 28.9% along with the freight rates.

The Greek flag was affected by EU policy from 1993 with the Common policy on Safe Seas and after 1995 with the emphasis applied to core shipping sectors and the associated problems. Such as; safety, flagging out, the shrinkage of the maritime labour force, the strengthening of competitiveness of the EU fleet, the EU fleets replacement of normal corporate taxation by a tonnage tax, the reducing of social contributions for employers, the investment aid, and aid restructuring.

In 1996 Sweden and Finland join the EU with small fleets. From 1996 towards 2001 the EU undertook policies to promote the quality and safety.

These measures were forced to be taken when major accidents took place (for example The Erika disaster in 1999).

Although the EU took significant steps in protecting and advancing the shipping industry, the IMO remains the major regulatory body for the shipping industry. The IMO regulations that govern shipping are more focused, proactive, international and cover the industry in scope and in depth. The EU tried through an overall policy to focus on the development, integration and sustainability of the EU shipping. Policies oriented from both the EU and the IMO contributed to the development of the Greek flag in the long run but in the short term costs increased. Seen with the phasing out measures for single hull tankers from EU ports, and the IMO's ISM code.

In this study reference is not made to the affect of the IMO regulations since they are internationally applicable, and this study's focus is on the national perspective of shipping, In the Timeline Alpha to Omega the most important regulations are presented in order to reflect the complexity of the industry and the work load and cost for the shipping companies (which always depends on the structure and organisation of each company) and at the same time to indicate the quality.

There is no special reference made to the NAFTA agreement since it did not apply or directly affect Greek shipping however, it is included in the timeline as a historic shipping event. It must be noted however that Greek shipping has been affected overall by the Oil Pollution Act (OPA) with the requirement for financial certificates but there is not literature which refers to this.

In the years to come the low price investing strategy adopted by Greek shipowners was altered since they either had the equity to invest or they could borrow from the banks (due to their track record). Once more the decision making patterns of the past are repeated (diversification, fleet renewal) and they invested in tankers (Figure 38), and in the newbuilding market. Figure 38 indicates that in 1994 there is turning point by Greeks to the tanker market. That means that if they decided on new ship building in 1994, the order for the new builds were implemented in the yard 18 months to two years earlier, plus at least 6 months to a year for the decision to be taken. This means that the Greeks had foreseen the problems in the dry bulk market at least three years beforehand. The adaptability, methodical strategy, and proactive attitude of the Greek shipowners to new situations is evidenced.

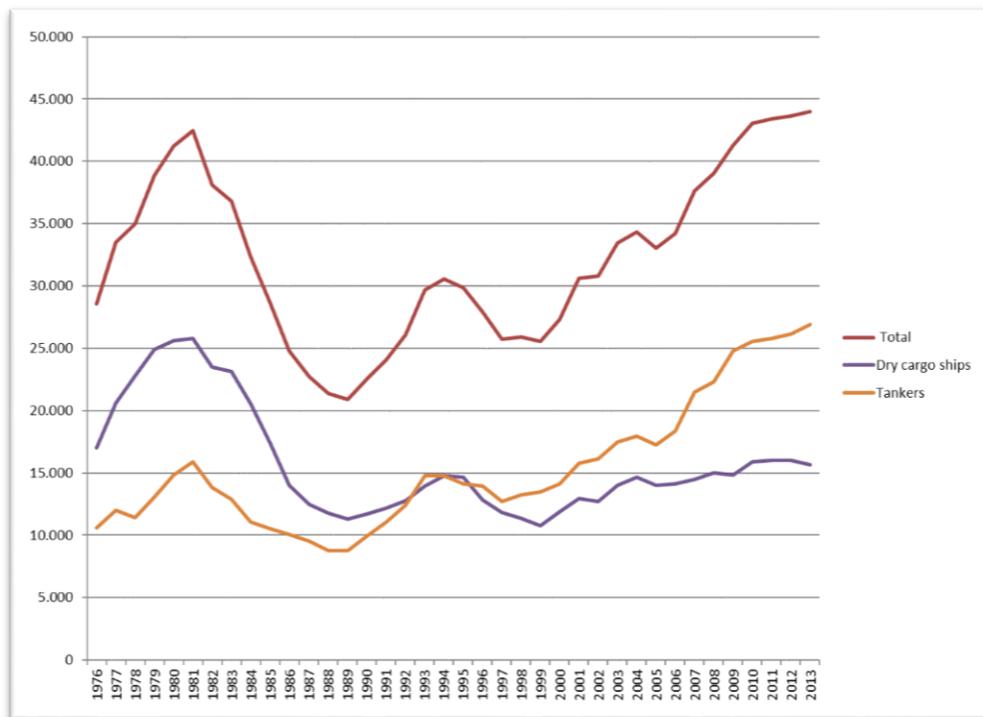


FIGURE 38. GREEK FLAGGED SHIPS- BULK CARRIERS AND TANKERS, 1976-2013

Source: HAS several sources, Developed by the author (2014)

Other reasons for investing in new ship building were (a) constraints imposed by the international regulations requirements for tanker ships (for example MARPOL 1973/1978 and OPA 1990), and (b) the currency exchange and its importance in choosing the country where the ships would be built. For example yen was favorable and this led Greeks to build bulk carrier ships in Japan. That improved the age profile for Greek-flagged ships, and consequently their quality. Though the need to renew their fleet did not stop them from continuing to invest in second hand ships.

As the literature indicates in 1999 a new system was adopted for the keeping of statistical records nationally, and 1999 was the first year of the application of the new system. Thus, reliable statistics can be observed after 2000. The contributions of shipping to the state (Table 42) included both Greek flagged and Greek owned shipping and the table illustrates this.

TABLE 42. RECEIPTS FROM SEA TRANSPORTS AND MAIN FIGURES IN GREEK ECONOMY (DUPLICATED TABLE)

Receipts from sea transports and main figures of Greek economy														
billion €	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
GDP (current prices)	136.7	145.1	155.2	170.9	183.6	193.1	208.6	223.2	233.2	231.1	222.2	208.5	193.4	182.1
- Trade balance	-21.9	-21.6	-22.7	-22.6	-25.4	-27.6	-35.3	-41.5	-44.1	-30.8	-28.3	-27.2	-19.6	-17.2
from which: ships' balance	0.0	0.0	0.4	0.1	0.1	-0.7	-3.4	-5.5	-4.7	-3.4	-3.6	-3.3	-1.0	-1.5
Export of goods	11.1	11.5	10.4	11.1	12.7	14.2	16.2	17.4	19.8	15.3	17.1	20.2	22.0	22.5
Imports of goods	33.0	33.2	33.1	33.8	38.1	41.8	51.4	58.9	63.9	46.1	45.4	47.5	41.6	39.8
- Services balance	8.7	9.2	10.8	11.5	15.5	15.4	15.3	16.6	17.1	12.6	13.2	14.6	15.1	17.0
Tourism receipts	10.1	10.6	10.3	9.5	10.3	10.7	11.4	11.3	11.6	10.4	9.6	10.5	10.4	12.2
Tourism revenues	4.9	4.7	2.5	2.1	2.3	2.4	2.4	2.5	2.7	2.4	2.2	2.3	1.8	1.8
Tourism balance	5.2	5.9	7.8	7.4	8.0	8.3	9.0	8.8	8.9	8.0	7.4	8.2	8.6	10.4
- as % of GDP	3.8	4.1	5.0	4.3	4.4	4.3	4.3	3.9	3.8	3.5	3.3	3.9	4.4	5.7
- as % of services balance	59.8	64.1	72.2	64.3	51.6	53.9	58.8	53.0	52.0	63.5	56.1	56.2	57.0	61.2
- as % of imports of goods (coverage ratio of imports)	15.8	17.8	23.6	21.9	21.0	19.9	17.5	14.9	13.9	17.4	16.3	17.3	20.7	26.1
Annual % change of tourism balance		13.5	32.2	-5.1	8.1	3.8	8.4	-2.2	1.1	-10.1	-7.5	10.8	4.9	20.9
Receipts from sea transports	8.2	8.5	8.0	9.0	12.4	13.0	13.3	15.7	17.6	12.3	14.0	12.7	11.8	10.7
Payments for sea transports	3.6	4.3	4.0	3.8	4.5	4.6	5.0	5.4	6.5	4.8	5.9	5.1	4.4	3.1
Net receipts from sea transports	4.6	4.2	4.0	5.2	7.9	8.4	8.3	10.3	11.1	7.5	8.1	7.6	7.4	7.6
- as % of GDP	3.4	2.9	2.6	3.0	4.3	4.4	4.0	4.6	4.8	3.2	3.6	3.6	3.8	4.2
- as % of services balance	52.9	45.7	37.0	45.2	51.0	54.5	54.2	62.0	64.9	59.5	61.4	52.1	49.0	44.7
- as % of imports of goods (coverage ratio of imports)	13.9	12.7	12.1	15.4	20.7	20.1	16.1	17.5	17.4	16.3	17.8	16.0	17.8	19.1
Annual % change of net receipts from sea transports		-8.7	-4.8	30.0	51.9	6.3	-1.2	24.1	7.8	-32.4	8.0	-6.2	-2.6	2.7

Source: Bank of Greece, published information from various sources found in the official site: <http://www.bankofgreece.gr/>, Developed by the author (2015)

It can be observed In Table 42, that the main contributors of foreign exchange inflow are travel/tourism and shipping. From 2000-2003 travel/tourism was the major contributor, but in 2004 shipping became the major contributor. 2004 is very important Greece was hosting the Olympic Games, and it would have been expected that the inflow from travel/tourism would have been higher.

On January 1, 2001, Greece became the twelfth member of the euro area. The effect of euro on shipping is questionable. However, the government provided new tax reductions to shipowners and some tax reliefs to seafarers. In 2001 and 2002 the socialist government (PASOK) (Figure 35) was in power, and in 2003 another package of initiatives was offered to shipowners. However, the 2004 elections brought the right wing party (New Democracy) into government thus, the 2003 initiatives were not realised. The right wing government undertook measures emphasising the competitiveness of the Greek registry supporting Greek shipping interests and promoting Piraeus as an international shipping and financial centre.

The shipping market reached a peak in 2002 and the Greek flag increased from 30.5%, and in 2003 to 32.1%. Another accident (The Prestige sinking in 2002) enacted further EU and IMO regulatory action on single hull tankers.

The 2004 to 2008 period was a “golden period” for the Greek economy, but the fiscal situation was uncertain. In 2004 the right wing party (New Democracy) won the Greek elections.

In the same year new members joined the EU, namely Malta, Cyprus, Lithuania and Estonia. The accession of these member states may be considered as having a positive and negative affect on the Greek flag. The Maltese and Cypriot registries were strong and leading registries. The registry of Malta was the strongest in the EU taking the place of Greece with many Greeks registering their ships to this flag. On the other hand, when more shipping oriented nations with fleets enter the EU this attracts more attention to shipping, supports shipping as an activity, and enhances healthy competition.

In 2004 the shipping freights increased, lasting up to 2008 which was the downturn point. The super Boom resulting from an unexpected boom of the Chinese markets lasted for five years. The market reached two peaks in 2004 and 2008, and the Greek flag increased to 33.7% in 2004, 32.3% in 2005, 36.9% in 2006, 36.5% in 2007, 40.1% in 2008. The 2007 elections took place in Greece and right wing (New Democracy) won.

In 2005 the EU focused on; the standards of steaming, investigation on new casualties, civil liability and financial securities of shipowners, classification societies, port state control regimes and traffic monitoring. The civil liability of seafarers found strong opposition from the Greek unions and shipowners. Additionally the global financial crisis that erupted in August 2007, following the collapse of the US subprime mortgage market initially had a little impact on Greek financial markets

In 2008 the crisis started while in 2009 the socialist party (PASOK) took power. The new government ceased the Ministry of Shipping, and its

functions were undertaken by two other ministries. Since 1975 the Ministry of Shipping had changed several names, but this was the first time its entity was altered. The increase in the Greek flag continued the two following years with 41.7% in 2009 and 43.3% in 2010.

From 2000 to 2010 the Greek flag continuously increased but this appears to be mostly due to the Chinese boom. At the same time regulations were enacted by both the EU and the IMO.

4.3 Analysis of Literature and Analysis of Secondary Data

The following analysis is based on comparing and contrasting the literature findings in conjunction with secondary data highlights, and the authors first hand knowledge and experience in Greek and international shipping.

4.3.1 Focusing on the Greek policy making and the Greek Ship Registry

The literature highlights that the fleets' capacity fluctuates constantly. The nature of seaborne trade with the derived demand and the shipping cycles affects the development of fleet size, and what is evidenced is a battle of reaching equilibrium in demand and supply of shipping services. In that context Greek-controlled shipping succeeded in being in first place for ship ownership. It is observed that the majority of national shipowners from the top countries of ownership registered their ships in a large percentage to foreign flags. For example, according to Table 1, in 2016 the percentage of national controlled fleets registered to foreign flags was 77.92% of the Greek-controlled shipping, 87.43%, of the Japanese, 53.36%, of the Chinese, 90.51% of the German, 79.57% of the Korean, 86.47% of the

United States, 89.80 % of the United Kingdom. Obviously registering to a foreign flag rather than the national flag was an issue for all shipping nations (resulting in losses in the contributions to GDP, employment, and political power), and all states established policies to retain the existing fleet and to attract ships to their registries.

According to Porter the success of a nation's industries depends on their home environment, and the governmental policies to promote national competitiveness. The policy formulation for the Greek registry was, as for every nation, part of the general economic policy, since every decision taken affected the balance of payments. Theory states that policies have aims and objectives, and since 1975 all Greek governments had the same aim to make the Registry more competitive and attractive and develop Piraeus as a shipping center. The importance though is not to just set the aims and objectives, but also a) those aims to be achieved, b) to measure the extent of achievement and impact, c) to be flexible in reconsiderations, and d) to maintain the workings of the system. As discussed in the previous section, and considering the flagging out rates, and the inability to attract new tonnage, it is observed that the aims and the objectives of all Greek governments were vague, and no strategic planning was adopted.

The most important policies and the cornerstone of the Greek maritime policy lay in the Law 2678/53 that was enacted before 1975. The Law 2678/53 refers to the Greek-controlled shipping companies and Greek-flagged ships. Article 13 provides for foreign legal entities to register their

ships with the Greek registry by fulfilling certain requirements. The primary focus for the policy was on the Greek flag and Piraeus as a center.

On top of that the tonnage tax was an important factor which could influence the repatriation of ships into the Greek flag. The tonnage tax not being calculated on the net profits of the shipping company, but according to the tonnage and age of each meant that the shipowners still had to pay the tax even if they did not make a profit out of the ships. In addition to that no tax was paid on profits or dividends or on the purchase or transfer of a Greek ship; or the transfer of shares in a shipping company. Also the recording of maritime loans and the registration of the mortgage was made without paying duty. Additionally any excess value realised following the sale of the ship or the collection of indemnity insurance or for any other reason was deemed to be income exempted from taxation as long as profits were derived from the ship's exploitation.

Since 1975 the tonnage tax was constantly adopted, the only change being the level of taxation following the market fluctuations with the aim of maintaining the competitiveness of shipping. The successful adoption and maintenance of the tonnage tax meant that for policies to be effective they must be appropriate, directed, and transparent.

It must be noted that the Greek ship taxation system although beneficial to the shipowners stability still meant Greek owners would have to pay more

than that if ships were registered to another flag during and before the 2004 era, for example with the UK Registry⁵⁵.

Greece was always trying to persuade the other EU shipping member states to adopt the tonnage tax. The Europeans adopted the tonnage tax policy⁵⁶, and by doing so they became more competitive to the world shipping arena. The effect of tonnage tax on the attraction of more ships (being registered in other traditional flags and registered in flags of convenience) is debatable. Greek and EU shipowners could establish branches⁵⁷ in Greece having their ships with any other flag than the Greek, and the Greek flag being a traditional flag, by definition was not competitive to the flags of convenience and the tonnage tax did not make a difference.

The critical point of this policy explains the use of Authorising Acts⁵⁸. This article allowed a legislative resolution capability outside the parliament and an agreement made between the Minister and the shipowners. Further, article 10 meant non-discrimination among ships; when a ship agreed to the same kind of special treatment this also extended and applied to all other ships as long as this was requested by the other shipowner(s). The agreement did not change only if the shipowner gave consent, incorporated any terms; and there was no time limit for the investment. Every Authorising act can be regarded as an issue that dealt in one to one cases between the shipowner and the Ministry of Shipping. If the shipowner made an offer to

⁵⁵ The tax for ships in the UK was on profits up to 2000.

⁵⁶ Holland (1996), Germany (1999), United Kingdom (2000), Spain (2002), Norway (2002) and Denmark (2002).

⁵⁷ Subject to the restrictions the relevant law requires.

⁵⁸ Law 2678/53, article 13, states that the introduction of foreign capital must be under the authorization of the Greek state by the "Authorizing Act".

the government to bring to the register specific capacity. Depending on the political party in power, the Minister, the economical state of the country, the amount of the dwt and the power of the shipowner a deal would be made. The actual agreement is between the Minister and the shipowner. Apart from the bureaucratic procedure and the decision of the Minister it is published, and requires the signing of three Ministers to be finalised. The Authorising Acts may be appropriately, directed, but the negotiations are not transparent, and this is equally important to note. What is not identified at all in the literature is how the Registry approaches potential shipowners or visa versa. Also of note is that the taxation on ships is not altered by the Authorising Acts.

Taxation although important is not the only element in the formulation of a maritime policy. Various regulations were passed which included ministerial decisions and laws regulating the composition of the crew on board of ships and the percentage of foreign crew. That involved the bilateral trading agreements to avoid double taxation of Greek ships and to regulate the employment of foreigners.

Although the Greek shipping industry mostly believes that the socialist government (PASOK) did not support shipping, on the contrary, the socialists introduced several crew cuts as well as the most integrated package of 44 points in 2003, but it was never realised. Thus, all governments offered initiatives for the existing shipowners not to flag out or to attract more ships whether socialists or conservatives. For example, both Prime Ministers, Karamanlis (right wing) and Simitis (socialist) offered tax

reductions to shipowners, and the latter took a few measures lowering the tax burdens for seafarers.

It is observed in the literature that shipowners' lobbying was strong, and governments for fear of shipowners flagging out decided upon large reductions in the composition of crews, (in both terms: nationality and numbers). The reductions were also required due to the larger and more technologically advanced ships which needed lower *number* of crew members to operate them. The reason shipowners were lobbying for foreign nationals on board was that foreign crews were not paid the same as the Greeks or Europeans, but what they would have been paid in their countries of origin. It must be noted that the ITF power over the years was fading out, and with seafarers not being ITF members, the bilateral agreements found no opposition. When more foreign crews are employed costs are lowered, and that makes the flag more competitive but at the same time the Greek state does not benefit. The reasons are a) foreign crews do not pay contributions to Seaman's Social Security and Pension Fund (NAT), b) higher unemployment rates will result among Greek seafarers, and c) the unemployed young people will not go to the sea contributing to the Greek seafarers' shortage. In addition governments are always in fear that by lowering the crew numbers or altering the composition of crews further, the Greek Registry might end up a flag of convenience.

Since the crew contributes to the quality of the ship the state developed Maritime Academies, many times with the support of the shipowners but these schools have not been properly maintained by the state. The support

of the shipowners faded since they did not employ only Greeks but foreign crews too, and they established training centers and maritime schools abroad.

The shortage of Greek seafarers accelerated throughout 1997 to 2010. This shortage is observed in the Greek market on two levels, one is the lack of competent Greek seafarers to cover the required manning positions on board ships, and those that will later staff the shipping offices.

The Greek cluster has been further developed because of the government initiative⁵⁹ which permits the establishment of the offices or branches of foreign shipping companies of any type or form, including agents⁶⁰ provided they engage in activities for example ship management, ship operation, and chartering. Equally or more important is that companies enjoy full tax exemption. Additionally the initiatives given for the repatriation of Greek companies (with ships registered in other flags) increased the demand for services provided and the Greek register benefited from that.

4.3.2 The 50% Rule

As discussed in the literature the criterion urging the need for a national maritime policy were realised when Greek-flagged shipping amounted to around 50% of the total owned fleet. That 50% is the boarder line, and an arbitrary criterion. As illustrated in Table 43 the 50% limit was reached several times.

⁵⁹ Article 25 of Law 27/1975) , as replaced by article 28 of Law 814/78.

⁶⁰ article 8, Law 2234/94 article 4 (which replaced article 8 of Law 814/78)

TABLE 43. GREEK-FLAGGED V. OWNED SHIPS, 1975-2010

Year	Greek-flagged	Greek-owned	% in the Greek flag
1975	25.108.441	23.189.995	52
1976	28.660.875	21.923.713	56.7
1977	33.752.076	19.111.751	63.8
1978	36.314.066	16.193.615	69.2
1979	38.570.128	14.379.967	72.8
1980	41.421.925	12.203.959	77.2
1981	42.289.117	12.028.656	77.9
1982	38.057.112	15.397.870	71,2
1983	37.707.377	18.431.381	67,1
1984	35.781.076	17.820.386	66,7
1985	27.765.421	19.143.454	59,2
1986	24.183.381	20.920.969	53,6
1987	21.006.751	26.529.937	44,2
1988	19.759.053	28.287.135	41,1
1989	20.898.119	24.656.291	45.8
1990	22.524.329	24.056.210	48.3
1991	24.082.483	23.824.369	50.2
1992	26.055.932	27.835.596	48.3
1993	29.671.983	27.246.285	52.1
1994	30.535.560	35.806.486	46.0
1995	30.220.636	41.446.307	42.1
1996	27.935.053	47.221710	37.1
1997	25.708.074	49.274.036	34.3
1998	25.689.500	53.211.343	32.5
1999	25.002.463	58.452.427	29.9
2000	26.769.502	63.457.989	29.6
2001	29.038.847	100,220,348	28.9
2002	29.970.053	98,195,100	30.5
2003	31.915.727	103,807,860	32.1
2004	32,769,792	108,929,135	33.7
2005	31,444,245	109,377,819	32.3
2006	32,765,042	113,603,803	36.9
2007	36,239,543	129,765,470	38.5
2008	39,156,211	154,599,221	40.1
2009	41,358,711	156,214,619	41.7
2010	43,086,974	152,616,046	43.3

Source: various sources from Naftika Xronika and Greek Chamber of Commerce, Developed by the author (2014)

In the literature Goulielmos includes the below 50% range in 1991 whereas the numbers used in this analysis indicated otherwise. During 1975-1986,

1991 and 1993 the Greek-flagged fleet was 55% and over the limit, with 1981 having 77.9% of the total Greek-owned ships under the Greek flag.

The following questions arise by observing Table 43:

1. When the flag percentage **was below the 50%** boarder line what policies were undertaken by the state?
2. When the flag percentage **was above the 50%** boarder line what policies were undertaken by the state?

The rationale for those two statements is that policies should be differentiated depending on the case they apply to. When the fleet in 1981 represented 77.9% of the total Greek-owned fleet, bearing in mind the political, economic, social, technological, and regulatory environment, a different policy should have been adopted as in 2001 when the fleet represented 28.1%. This can be justified by the different aims the government should adopt. For example, in the first case the aim was to retain and expand, where as in the second to survive, expand and reach at least a percentage close to the 50%.

It is evidenced in the literature that no policy applied was based on the 50% rule, and cost cutting measures were taken as a result of pressures from the shipowners. It is also evidenced that politics involved promises made, and then most of the promises were not realised. Further, the parties in government took decisions on the spot, and did not develop a constant and continuing shipping policy. Overall, depending on the pressures imposed, governments provided the shipowners with further initiatives, mostly related

to cost cutting. Governments seem not to have the ability to understand the cyclicity of the market, foresee any potential crisis, and based on that to undertake measures. Instead they delayed taking measures and anticipate crises. Further, measures were undertaken which were shortly taken back, in order to put pressure to shipowners. For example the socialist government (PASOK) introduced controls in preventing illegal national currency exports by shipping companies, and the Law of 'recycling of crew'. In other cases the timing was wrong. For example, measures undertaken such as, the Law of 'recycling of crew', and the bilateral agreements were taken later when the crisis was at its peak.

Although the Greek government was criticised by the shipowners as not supporting the Greek interests there is evidence that the Greek interests were protected for example the tough post-Prestige proposals for shipping approved during the Greek presidency the Greek government proposed that all non-MARPOL tankers of up to 5,000 dwt be excluded from EU accelerated phase-out legislation altogether.

The Greek shipping policies are mostly dictated at the level of a series of personal choices, and subjective measures. Thus, the policy evolved into a settlement of personal relationships, and personal strategies processed through a series of personal relationships. There is a no more striking example than when in 1991 a newspaper owned by the Alafouzos drew the attention and anger of the right wing Prime Minister Mitsotakis. Who in return attacked the shipowner and media owner Alafouzos, and ordered a probe of various aspects of the family's media division. Then Alafouzos considered

flagging 25 vessels out of the Greek flag, and Mitsotakis pulled back. This example also verifies the influence and power shipowners have.

Other legal instruments as the Law Degree 2687, Law 3899/58, and Law 1989/67 refer to non Greek-flagged shipping which is still part of an overall policy approach. The allowance of Greek interests being represented in Greece but flying other flags are contributing to the Greek economy and empower the development of the strong cluster in Piraeus.

The remarkable flagging out of the 1980's led to the proposals of a second registry but Greece never developed a parallel registry. It is still arguable, according to the literature, that since ships of Greek interest not flying the Greek flag can affiliate with the national seaman's social security fund (NAT)⁶¹ there is no need for a second register. Allowing ships flying foreign flags to operate from Greece and Greek seafarers insured at NAT could be regarded as a parallel Greek register and can be regarded as competitive to the Greek Registry.

The contribution of the euro to shipping is debatable, although it is considered that it has provided stability. There is a contradiction at this point in the literature is that when Greece entered the Eurozone, Piraeus started attracting more Greek shipowners. It is not clear though if that was the effect of the Euro or another factor.

The Greek stock exchange opened up to oceangoing operators. The legislation for maritime stocks, under the pressure of shipowners does not

⁶¹ Law 3170/28-3-1955

include in the eligibility criteria the fleets age. Also although the seafarers tried to keep the opening only to the Greek flagged vessels, they failed, and all ships under any flag can be accepted provided they are registered with the Greek Seamen's Pension Fund (NAT).

International regulations initiated by the IMO other organisations or countries such as the USA affected Greek-flagged shipping. For example Marpol and OPA affected the costs of the ship and increased the administrative expenses for the shipping companies. The age of ships being another contributor to quality of the flag was enhanced by the international regulations, and the strictness on standards by the Greek state. For example in 2000 the average age of ships in the Greek registry was 9 years in 2000 whereas the world shipping average age was 12.9 years. The quality of the fleet in practice depends on the Registry and the other relevant organisations such as Port State Control. Every registry belongs to a system and each member is responsible for contributing to quality. The Registry maintained the quality by the ratification and enforcement of international regulations and auditing. The shipowners maintained quality by managing the ships to the utmost quality which was mainly set by the requirements of the traders as the customers and receivers of the service offered, the qualified crew with the skill and knowledge and finally the classification and the Port State control with the audits performed.

The Greek government was faced with difficulties in setting the political agenda and developing policies, while different shareholders with contradicting views have also to come to an agreement. The socialist

Minister of Shipping, Papoutsis, in an attempt to modernise ocean going shipping asked the Union of Greek Shipowners and the Panhellenic Seafarers Federation, providing them with a specific a deadline, to come up with a mutual proposal for operating conditions under the Greek flag for the future otherwise he would do what was required. It did not work.

Ship owners always claimed that the governments had a lack of political will to productively connect the ship with the national economy. Governments claimed that they would not adopt policies that would allow the Greek flag to become a flag of convenience. The job of the government was to balance the 'leave us alone' attitude of the shipowners and on the other hand the seafarers who have valid grounds to believe that the state did not protect them.

Shipowners and seafarers always put pressure on the governments. Sometimes the pressure pays off and other times does not. The government is in between the shipowners and seafarers. The shipping game is not played locally but internationally. On the one hand there is the threat of losing capacity and having shipowners flagging out, and on the other is the pressure of seafarers with strikes and the impact on Greek society. On an international level the government is in favour of retaining the fleet in the Greek Registry and supporting the competitiveness of the flag.

Although multiple actors or strong interests are involved in governance and affect decisions for shipping related matters indeed the actual governors of public service organisations are responsible for governance and states remaining central to the shipping policy. In every country the governors

carry the responsibility to ensure the consideration of the public interest within the regulatory environment and finally alongside their accountability to government.

The role of the Ministry of Shipping, the Ministers and its composition are questionable. The role of Ministry is to develop policies in the form of laws and regulations. It must be noted that all 26 Ministers have been criticised for being unfamiliar with shipping, and that they lacked appropriate knowledge. Additionally the presence of the coastguard is criticised since their presence developed power and the political parties had the control in the succession of officers and their changes in the hierarchy.

In addition the Ministry of shipping was always under the threat of being merged with another Ministry, for example transport, environment, economics which has been realised several times with the shipowners and seafarers for the first time agreeing on something and hardly criticising this action. Private sources reveal that it was the shipowners' pressure on government that altered this policy.

Shipping is a globalised industry and indeed globalisation is the triumph of makers over governments. Ships will always flag in traditional flags and they will flag out because they simply have the option to, and globalisation allows them to do so. If they flag out of the traditional registries they never return. Globalisation places severe limits on a country's ability to pursue national policies in global markets but this does not mean that national policies are not needed or that they can influence the worlds shipping governance to the extent they can.

Since 1982 a total of more than 2,000 ships had been forced out of the Greek flag. Equally many more remained on the flag. Consequently Greek shipping policies adopted as the Registry must be effective to allow it to remain on top for so many years.

4.4 Delphi Analysis

As illustrated in Table 44, the initial 125 potential participants that the survey was sent to who were invited to participate. 42 agreed to participate (representing 33.6% of the total potential participants), 21 although agreed never completed the survey (16.8% of the total potential participants), and 62 refused to participate (representing 49.6% of the total potential participants).

TABLE 44. RESPONSE RATES – DELHI ROUND 1

Responses	Individuals	Percentage
Participants	42	33.6%
Will Participate but did not	21	16.8%
Refused to participate	62	49.6%
Invitations to survey participations	125	100%

Source: Developed by the Author, (2016)

4.4.1 Profile on Expert Panel

In total the participants in the survey amounted to 42 representing the Greek shipping shareholding. The organisations represented are presented in percentages in Table 45. In all three rounds the individuals, size, and the structure of the panel remained the same.

Table 46 presents the experience of the panel members and involvement in Greek shipping. All participants are Greek residents with international work experience in top managerial or academic positions. A minimum of 10 years of experience was set to validate expertise. The participants with 31 to 40

years of work experience are represented by 42.9% and those with 41 or more years by 26.3%. The participants with 10 to 20 years of working experience was 19%, 21 to 30 by 11.9% and 31 to 40 by 42.9% (Table 46).

TABLE 45. ALL 3 ROUNDS – PARTICIPANTS AND GREEK CLUSTER SHAREHOLDING

Type of Company/Organization	Response Percent	Response Count
Academic Institution	9.5%	4
Agents	2.4%	1
Bank/Financial Institute	7.1%	3
Consultant	2.4%	1
Government /Registry/Chamber of Shipping	4.8%	2
Insurance/Protection and Indemnity	4.8%	2
Media	4.8%	2
Law office	2.4%	1
Maritime Academy	2.4%	1
Sale & Purchase Broker	4.8%	2
Ship Broker	9.5%	4
Ship management	7.1%	3
Shipowner	19.0%	8
Classification Society	4.8%	2
Union	7.1%	3
Ship Yard	2.4%	1
Salvage	2.4%	1
Trader	2.4%	1
Total Survey participation	100%	42

Source: Developed by the Author, (2016)

TABLE 46. ALL 3 ROUNDS – YEARS OF WORKING EXPERIENCE

Answer Options	Response Percent	Response Count
10 - 20 years	19.0%	8
21 - 30 years	11.9%	5
31 - 40 years	42.9%	18
41 or more years	26.2%	11
Total	100%	42

Source: Developed by the Author, (2016)

The years of experience indicate the age of the participants. The author was targeting panellists with long term experience consequently panellists being over 60 that have themselves experienced the developments of Greek flagged ocean shipping, and they have personally and professionally developed alongside the progress of the Greek state. In total 69.1% of the

participants were involved in Greek shipping in the period under examination from 1975 to 2010 and afterwards. In order to eliminate bias from personal experiences 19% of the sample is represented by younger participants and 11.9% by middle aged participants that for example have not experienced the years of Junta and the beginning of political reform but they are politically aware and are judging from a distance (Table 46).

4.4.2 Round I: Results and Analysis

The statements with the survey replies and the AMPO rate consensus for Round 1 Statement are illustrated in Table 47. In the following pages the statements, quantitative information, and critical discussion for every statement are presented. As discussed in the Methodologu chapter, the cut-off rate of 70% was applied. In the following pages each individual Statement is analysed.

TABLE 47. STATEMENTS IN ROUND 1 AND AMPO RATE CONSENSUS 70%

(Round1) Statement 1: Do you believe that the Greek government protected the Greek-flagged shipping during 1975-2010?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
1	2	16	10	11	3	42	76.19048	YES DISAGREE

(Round1) Statement 2: Do you believe that there was potential in the Greek flag?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
2	0	4	8	22	8	41	80.95238	YES AGREE

Please note: The Table continues on the next page

Please note: The Table continues from the previous page

(Round1) Statement 3: Do you believe that the individual initiative and not the government assistance affected the development of the Greek-flagged shipping?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
3								
	0	2	4	12	23	41	90.2439	YES AGREE

(Round1) Statement 4: Do you believe that the Greek-flagged shipping was competitive the last 40 years?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
4								
	3	14	5	12	6	40	87.5	YES AGREE

(Round1) Statement 5: Do you believe that the Greek-flagged shipping could have become more competitive the last 40 years?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
5								
	0	1	6	24	10	41	85.36585	YES AGREE

(Round1) Statement 6: Do you believe that the Government played an important role in the development of the Greek-flagged shipping?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
6								
	5	17	9	10	1	42	78.57143	YES DISAGREE

(Round1) Statement 7: Do you believe that there was any legislation passed that affected positively the growth of Greek-flagged shipping?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
7								
	2	26	3	5	0	36	91.66667	YES DISAGREE

(Round1) Statement 8: Do you believe that there was any legislation passed that affected negatively the growth of Greek-flagged shipping?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
8								
	1	2	6	29	3	41	85.36585	YES AGREE

Please note: The Table continues on the next page

Please note: The Table continues from the previous page

(Round1) Statement 9: Do you believe that the Greek government could have protected and promoted the Greek-flagged shipping?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
9								
	0	5	1	24	12	42	97.61905	YES AGREE

(Round1) Statement 10: Do you believe that the choice of flying the Greek flag on board of ships is just due to patriotism during 1975-2010?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
10								
	1	7	7	21	6	42	83.33333	YES AGREE

(Round1) Statement 11: Do you believe that the EU membership affected the Greek-flagged shipping?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
11								
	1	7	4	28	1	41	90.2439	YES AGREE

(Round1) Statement 12: Do you believe that the EURO currency affected the Greek-flagged shipping?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
12								
	1	14	9	15	3	42	78.57143	YES AGREE

(Round1) Statement 13: Do you believe that the taxation was in favor of the shipowner who flies the Greek flag on board of ships for the last 40 years?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
13								
	4	20	3	10	2	39	92.30769	YES DISAGREE

(Round1) Statement 14: Do you believe that the shipowners that fly the Greek flag are preferentially treated?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
14								
	1	25	2	12	1	41	95.12195	YES DISAGREE

Please note: The Table continues on the next page

Please note: The Table continues from the previous page

(Round1) Statement 15: Do you believe that the development of the composition of crews in the Greek flag will motivate young people to get into shipping?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
15								
	1	13	1	22	1	39	97.36842	YES AGREE

(Round1) Statement 16: Do you believe that the composition of crews on board of the Greek-flagged ships will make young Greeks to get into shipping?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
16								
	0	9	2	29	0	40	95	YES AGREE

(Round1) Statement 17: Do you believe that there was a limited active aid from the state for the Greek-owned shipping which reached its status of world supremacy with no palpable state support only a tacit one?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
17								
	0	1	13	21	4	39	66.66667	NO

(Round1) Statement 18: Do you believe that without the support of the state after the World War II the Greek-owned shipping would never have increased as much as it did?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
18								
	0	18	5	18	1	42	88.0952	YES AGREE

(Round1) Statement 19: Do you believe that is due to the advantages of the flags of convenience that Greek shipowners' flag out the Greek flag?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
19								
	0	5	5	19	10	39	87.17949	YES AGREE

(Round1) Statement 20: Do you believe that the governments have given initiatives to attract ships in the Greek registry since the 80's?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
20								
	2	17	11	10	0	40	72.5	YES DISAGREE

Please note: The Table continues on the next page

Please note: The Table continues from the previous page

(Round1) Statement 21: Do you believe that Greece not being an exporting country is not able to assist the Greek-flagged ships

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
21								
	2	12	10	13	3	40	75	YES AGREE

(Round1) Statement 22: Do you believe that the Greek state ignored the Greek-flagged shipping?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
22								
	1	8	13	14	4	40	67.5	NO

(Round1) Statement 23: Do you believe that the Greek governments had a systematic plan for the development of the national registry?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
23								
	6	27	6	1	0	40	85	YES DISAGREE

(Round1) Statement 24: Do you believe that there are political issues which do not allow shipowners to register their ships under the Greek flag?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
24								
	2	19	7	11	1	40	82.5	YES DISAGREE

(Round1) Statement 25: Do you believe that there are operational issues which do not allow shipowners to register their ships under the Greek flag?

Statements	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
25								
	1	9	5	20	4	39	87.17949	YES AGREE

(Round1) Statement 26: Do you believe that there are cost issues which do not allow shipowners to register their ships under the Greek flag?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
26								
	1	4	3	25	7	40	87.17949	YES AGREE

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(Round1) Statement 27: Do you believe that there are any other issues which do not allow shipowners to register their ships under the Greek flag?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
27	1	3	11	21	4	40	72.5	YES DIAGREE

(Round1) Statement 28: Which are the attributes which have contributed to the success of the Greek-flagged ocean-going shipping? Shipowners, the state, the seafarer, the seaborne trade, the cluster, all together?

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	AMPO %	CONSENSUS ACHIEVED
28							
The state	18	11	0	5	8	100	YES DISAGREE
The Shipowner	0	12	0	8	22	100	YES AGREE
The seafarer	5	8	0	7	22	100	YES AGREE
The Seaborne trade	3	1	2	12	24	95.2381	YES AGREE
The cluster	6	7	4	20	5	90.47619	YES AGREE
All together	4	2	0	5	31	100	YES AGREE

Source: Developed by the Author, (2015).

Hereafter the Statements from Round 1 will be analyzed.

(Round1) Statement 1: Do you believe that the Greek government protected the Greek-flagged shipping during 1975-2010?

Statement 1	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	2	16	10	11	3	42	76.19048	YES DISAGREE

This is a fundamental statement to the research and denotes the overall feeling and perception of participants. The word protection incorporates the word promotion, and further on it can be debated the extent to which the state could take action or not. Most participants (18 out of 42 participants) support the view that the government did not protect Greek-flagged shipping during this period. Further those participants that did not agree with the statement (14 out of 42 participants) claim that the approach of the Greek governments was indifference and further on they emphasise the inadequacy of the governments in training the Greek seafarers. The views of 2 participants that strongly disagree with the statement and 3 strongly agree reflect, (a) what was evidenced in the literature and (b) the strong representation of the shipowning interest in the sample, by including sectors that rely on them (other than the government, the unions). All participants were invited to comment further but no all did. It is noticeable that 10 participants neither agree nor disagree.

(Round1) Statement 2: Do you believe that there was potential in the Greek flag?

Statement 2	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	0	4	8	22	8	41	80.95238	YES AGREE

Consensus was achieved among participants although it is obvious that potential must exist for Geeks to be successful in shipping with Greece

being a shipping nation. 22 participants agreed with the statement and 8 strongly agree. Only 4 participants disagree and 8 neither agree nor agree. The disagreement is due to the fact that the Greek flag is not competitive to the flags of convenience thus in that sense, there is no great potential for the Registry. Further they add that other reasons contribute the potential of the Registry such as the seaborne trade developments, state initiatives, and that there were times that shipowners took high risks, and they proved to be lucky.

Other participants commented that the potential of Greek shipping depends on the phase of the shipping cycle, which is also evidenced in the literature review.

One participant states that the potential relies on the shipowner's profile and business approach. Greeks up to the mid-1990s have been adopting conservative attitude towards new types of ships as they used to trade for decades with second hand ships, and this attitude was prudent when the market was declining.

Statement 1 and 2 are related since it seems that for the Greek flag to be successful it should have potentials. Thus, the government should have protected the flag. It might be the case though that that potential was either not observed or acknowledged by the government or the government had other priorities.

In an attempt to combine the outcomes of Statement 1, 2, and 3, it is evidenced that logic implies that there should have been a potential for the

success to be explained. Further the consensus achieved in Statement 3 implies that it was the individual initiative that contributed to the development of the flag. Thus, it was the shipowner who recognised and realised the potential of the flag.

(Round1) Statement 3: Do you believe that the individual initiative and not the government assistance affected the development of the Greek-flagged shipping?

Statement 3	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	0	2	4	12	23	41	90.2439	YES AGREE

Although the literature identifies disagreement whether the state or the individual initiative assisted Greek flagged shipping participants come to a high consensus that it was the individual initiative moreso than the governmental assistance that affected the development of Greek-flagged shipping. This statement further explains Statement 2 and proves that the Greek flag had prospects (Statement 1) and those prospects were realised in successful results. As the literature indicates the Greek national flag is the only traditional flag that had increased its deadweight capacity and remained on the top of the national registered fleets. Further, Greek shipping within the framework of the Greek flag had potential and it survived within the constraints of the Greek flag.

A participant provided the statement that the government never understood shipping. This supports what was stated in the literature in 1964 by the Prime Minister of Greece, George Papandreou.

Other participants commented that policy makers considered shipping as a sector that could be regulated or a sector to intervene. Thus, there were periods of intense catastrophic intervention and decisions by shipowners to flag in was affected, and periods of mild or no intervention. Shipowners most of the times asked for the State to stay away given that ‘ships have their flag in the propeller’. On the other hand the state benefited shipping in various but a few occasions in 1946 (liberty ships), in 1983 (reducing tonnage tax), and since 1953 (in providing an ideal legal framework protected by Constitution).

Another participant stated that the Greek shipowners wished to support the flag and have always tried to bring vessels under the Greek flag but bureaucracy has always been an obstacle.

(Round1) Statement 4: Do you believe that the Greek-flagged shipping was competitive the last 40 years?

Statement 4	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	3	14	5	12	6	40	87.5	YES AGREE

Panel members agreed to the competitiveness of Greek-flagged shipping and justify the literature findings that Greek-flagged shipping was competitive, not just in terms of volume of its deadweight or the number of ships, but equally the quality of the crew and the ship.

A participant comments that efforts were exerted but the flag was not always that flexible accommodating the shipowners’ needs.

Another participant comments that the competitiveness is owed to the quality and not the cost element.

A third comment refers to the importance of the human element to quality and that although the Greek flag is of high quality, still the cuts in crew numbers and the increase of foreigner crews negatively affected the quality of the flag.

(Round1) Statement 5: Do you believe that Greek-flagged shipping could have become more competitive the last 40 years?

Statement 5	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	0	1	6	24	10	41	85.36585	YES AGREE

Statement 4 and 5 refer to the potential of Greek-flagged shipping in terms of competitiveness. A consensus is achieved in Statement 5. Thus, the ship registry had the potential (Statement 2) and it was competitive (Statement 5) but being protected by the state was questionable (Statement 1) results with certainty are that the individual initiative contributed to its development (Statement 3). Consequently for the discussion the Greek-flagged shipping would have been more competitive if it was supported by the state.

A participant stated that competition and competitiveness in shipping is a relative concept. Shipping companies' competitiveness remains in the running costs of the company but the cost is more or less the same among competitors especially with the use of dual registers. The competitive advantage comes from crew cost, taxation, and less from, for example the cost of maintenance. Consequently, there is not much space for cost

advantages including any shipping policy to minimise off-hire times. Another element is the marketing strategy and shipowners' eligibility in searching and securing cargoes. Just waiting for cargoes to find ships worked well with the tankers when oil majors provided the long-term charter and Greeks combined it with economies of scale deriving from large ships and big fleets. Thus, competition depends on crew costs and taxation. This is required by the Greek flag which was unable to offer as the other flags were.

(Round1) Statement 6: Do you believe that the Government played an important role in the development of the Greek-flagged shipping?

Statement 6	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	5	17	9	10	1	42	78.57143	YES DISAGREE

The representation of the shipowners, ship managers and the Chamber of Shipping and on the other side the seafarers, academics and unions is reflected.

The literature identifies that in general governments play an important role in the development of their ship registries. It is also evidenced that there is consensus in identifying if the role of the government was important and contributed to the development of the ship registry.

The comment of a participant summarises the role and assistance of the government. The Greek government helped shipping at times. For example the government permitted labor bilateral agreements with foreign crews being paid not as the Greek crew but with wages as in the countries crew originated from and with no pension contributions. This was a substantial

help from the government. Minor assistance was considered, the reduction in crew complement in the 1980s and 2000s and the reduction in taxation in 1990s.

Another participant commented that the government assisted the shipowners with tax issues but he emphasises that lacking was that all governments did not have an overall strategy on all related aspects.

(Round1) Statement 7: Do you believe that there was any legislation passed that affected positively the growth of Greek-flagged shipping?

Statement 7	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	2	26	3	5	0	36	91.66667	YES
								DISAGREE

36 participants replied to this statement with 4 skipping it. Out of the 36 replies 28 disagreed with the statement. The trend in views indicates that there was no legislation that positively affected the Greek flag. The fact is that the legislation which affected Greek flagged shipping, as the literature indicates was adopted before 1975 and was still in use.

A participant suggested that incentives provided from 2005 to 2007 and another participant said that there was no legislation that positively affected the growth of the fleet. This comes in contrast with the literature where there are identified a number of reductions in taxation and other positive measures. The contradiction between the seafarers and shipowners is reflected in the replies.

(Round1) Statement 8: Do you believe that there was any legislation passed that affected negatively the growth of Greek-flagged shipping?

Statement 8	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	1	2	6	29	3	41	85.36585	YES AGREE

This statement is the opposite of statement 7. The panel comes to a consensus in this statement agreeing that there was legislation that negatively affected the growth of Greek-flagged shipping.

A participant states that an example of the negative effect is the legislation that restricted crew labor work to seven and half months, the ‘recycling of crews’. The dual registers equalised competition between nations and thus the advantages of Greek flagged ships were lost. So Greeks had to abandon their flag to face international competition at equal terms but this, he adds is misleading as Greek controlled shipping grew faster. Other participants commented that there was neither positive nor negative effect.

(Round1) Statement 9: Do you believe that the Greek government could have protected and promoted the Greek-flagged shipping?

Statement 9	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	0	5	1	24	12	42	97.61905	YES AGREE

Although the literature does not clarify if the Greek government could have protected and promoted Greek-flagged shipping the panel agreed that the government could and should. This Statement clarifies further Statement 1 and justifies that shipping was not as protected as it could have been.

Participants commented that examples of protection and promotion are the Norwegian register's initiatives or a point taxation system.

(Round1) Statement 10: Do you believe that the choice of flying the Greek flag on board of ships is just due to patriotism during 1975-2010?

Statement 10	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	1	7	7	21	6	42	83.33333	YES AGREE

It has been argued in the literature that the reason shipowners are flying the Greek flag is patriotism. The business principles identify that there might be a couple of shipowners that are patriots but Greek shipowners are entrepreneurs. The panel agreed that patriotism is a strong element with a consensus of 83.33%.

A participant in supporting the above view suggested that if Greek flagged and Greek-controlled shipping is compared, then then it is clearly proven that patriotism is not the reason. He then added that the attraction to the flag depends on privileges awarded, such as the benefits offered during dictatorship are reflected to the sizes of the fleet at that time. Another reason is the quality of the flag.

Another participant agreeing with the above Statement suggested that patriotism is definitely the reason but also that all other flags have been chasing owners to flag their ships with huge initiatives, referring moslty to the flags of convenience.

(Round1) Statement 11: Do you believe that the EU membership affected the Greek-flagged shipping?

Statement 11	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	1	7	4	28	1	41	90.2439	YES AGREE

The panel achieved consensus agreeing that the EU affected Greek flagged shipping. That comes in contrast with the literature which finds no affect and it is well explained in the participants' comments that the EU is a regulatory institution and Greeks dislike regulatory mechanisms, especially at regional or peripheral levels. On the contrary Greeks accept IMO and global regulations that apply to all nations or those being ratified by the majority of the world.

Another comment clarifies that the accession to the EU did not negatively affect Greek shipping, and it has broadened the choices and options.

(Round1) Statement 12: Do you believe that the EURO currency affected the Greek-flagged shipping?

Statement 12	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	1	14	9	15	3	42	78.57143	YES AGREE

The shipping currency has always been the dollar. Shipowners were paid in dollars, but they were paying off their expenses of running the companies in drachmas from 1975 to 2000 and the Greek crew for a short period in 1977. From 2000 to 2010 the company expenses were paid in the Euro currency and the crews in dollars. In addition according to the literature

shipowners also took advantage over the exchange rates of other currencies such as the yen against the dollar and purchased ships from Japan.

It has been claimed by the participants that the cost of crew for the Greek flag in 2005 was 60% higher than the foreign flags. The volatility of the currencies and conversion costs is considered as a disadvantage for the Greek flag, affecting its competitiveness.

The panel agreed that the EURO currency has affected shipping.

(Round1) Statement 13: Do you believe that the taxation was in favor of the shipowner who flies the Greek flag on board of ships for the last 40 years?

Statement 13	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	4	20	3	10	2	39	92.30769	YES DISAGREE

The panel consent that they disagree with the statement and that the taxation was not in favor of the Greek shipowner. The reasons being that the taxation was neutral and equal for all being based on tonnage, age and size, and not on profits, and further on the that Greek flag was disadvantaged compared to other flags for example the flag of Cyprus. 3 participants skipped the statement.

(Round1) Statement 14: Do you believe that the shipowners that fly the Greek flag are preferentially treated?

Statement 14	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	1	25	2	12	1	41	95.12195	YES DISAGREE

Consensus was achieved for disagreeing with this statement. That can be explained since Greece has no substantial trades, no other competitive initiatives being provided by the state, the initiatives provided by the flags of convenience resulted in flagging out. Additionally this verifies Statement 12 which refers to the taxation.

On the contrary the explanation of the 13 participants agreeing with the Statement is justified by the literature that identifies that shipowners flying the Greek flag are preferentially treated. This is mostly reflecting the authorising acts and the taxation.

(Round1) Statement 15: Do you believe that the development of the composition of crews in the Greek flag will motivate young people to get into shipping?

Statement 15	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	1	13	1	22	1	39	97.36842	YES AGREE

There are no initiatives for young people to go to sea with the merchant marine education in need of reform and the reductions of crews. The motives will most probably be monetary supported by the economic crisis and high unemployment onshore industries.

The panel comments that the composition of crews in Greek flagged ships have less foreigners than the flags of convenience. That means more

opportunities for the Greeks which explains further the agreeing consensus of the panel.

(Round1) Statement 16: Do you believe that the composition of crews on board of the Greek-flagged ships will make young Greeks to get into shipping?

Statement 16	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	0	9	2	29	0	40	95	YES AGREE

Statement 16 is the same as Statement 15 with the panel coming to consensus for both. Which means that the composition of crews on Greek flagged ship give more opportunities to young Greeks than the flags of conveniences.

(Round1) Statement 17: Do you believe that there was a limited active aid from the state for the Greek-owned shipping which reached its status of world supremacy with no palpable state support only a tacit one?

Statement 17	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	0	1	13	21	4	39	66.66667	NO

As the literature identifies the state aid was limited with no palpable support but only a tacit one. Although consensus is not achieved a rate of 66.66667% was reached with, 13 participants choosing the “neither disagree nor agree” opinion, 1 disagreeing and 25 agreeing with the Statement. The statement is rephrased and asked again in Round 2, taking into consideration the 13 participants choosing the “neither disagree nor agree” opinion, and the following comments made by the panel: (a) The aid

to Greek-controlled and not just flagged shipping was indeed not palpable but a tacit one with a couple exceptions as in 1946, 1953, 1983, 1990 and 2000. Greeks through the decades have traded internationally and globally, being always located where finance was provided; cargoes; and crews, and (b) shipowners are not made by laws but by knowhow.

(Round1) Statement 18: Do you believe that without the support of the state after the World War II the Greek-owned shipping would never have increased as much as it did?

Statement 18	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	0	18	5	18	1	42	88.0952	YES
AGREE								

A statement referring to a historical event, which took place after the Second World War finds consensus. The contradiction in replies is identified in the literature. Since the views are almost equally divided the 5 participants that have neither disagree nor agreed will determine the consensus.

(Round1) Statement 19: Do you believe that is due to the advantages of the flags of convenience that Greek shipowners' flag out the Greek flag?

Statement 19	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	0	5	5	19	10	39	87.17949	YES
AGREE								

The strong consensus results from 29 participants agreeing and 5 disagreeing. Thus, the panel come to a consensus that it was due to the advantages provided by the flags of convenience, that Greek shipowners'

flag out of the Greek flag. As the literature supports this was the case for other European countries as well.

(Round1) Statement 20: Do you believe that the governments have given initiatives to attract ships in the Greek registry since the 80's?

Statement 20	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	2	17	11	10	0	40	72.5	YES DISAGREE

The literature identifies that all governments aimed to attract ships to the registry and repatriate shipowners. Initiatives were given by all governments even when not expected by the socialist government but at the same time shipowners never seem to be satisfied. **The question raised in this statement is if there were initiatives. Although the literature identifies otherwise most of the panelists disagree with this statement and consensus is reached (72.5%).**

A participant commented that taking measures depends on the philosophy and political determination of the government being socialism or liberalism.

(Round1) Statement 21: Do you believe that Greece not being an exporting country is not able to assist the Greek-flagged ships

Statement 21	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	2	12	10	13	3	40	75	YES AGREE

Greece not being an exporting country forced Greek shipping to offer its services to other exporting or exporting countries.

14 participant disagree supporting the view that Greece should find other ways to assist its industry, and 16 agree supporting that since Greece has no cargo of its own it cannot assist the shipowners in the short run, but this could be considered in the long run as part of strategic competitive planning. Of course the latter was never viable mainly due to the constant succession of political parties in government or when the same party was in government for a number of years the leader of the party was not the same. Most importantly to develop strong exporting trends takes decades and huge investment.

The statement will be redefined and re addressed in Round 2.

(Round1) Statement 22: Do you believe that the Greek state ignored the Greek-flagged shipping?

Statement 22	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	1	8	13	14	4	40	67.5	NO

The role of the state in the literature and through this analysis is vague. That is why the author is extravagant in this Statement by using the word “ignored”. Ignored either means refuse to take notice of, acknowledge, or disregard intentionally.

The panel did not achieve consensus with most participants agreeing with the statement but some participants claim that this was not exactly the case.

If the state did not protect, why did it not ignore? Consequently the non consensus further indicates that the state was involved and took measures favorable or not.

The statement will be redefined and re addressed in Round 2.

(Round1) Statement 23: Do you believe that the Greek governments had a systematic plan for the development of the national registry?

Statement 23	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	6	27	6	1	0	40	85	YES DISAGREE

The purpose of Statement 23 was to double check Statement 17. Since consensus of 85% was reached in Statement 23 and a consensus of 66.66667% in Statement 17 the following considerations can be made: (a) statement 23 was complicated, (b) Statement 22 was strong and affected the views of the participants, or (c) (in Statement 17) 7 out of 13 participants “neither disagree nor agree” changed their answer to disagree, 20 of 21 changed their answer to disagree.

As stated from a couple of participants there was never a national strategy adopted (due to the lack of homogeneous thinking and common objective) but there were good occasional efforts, policy being determined by shipowners with the participation of state.

(Round1) Statement 24: Do you believe that there are political issues which do not allow shipowners to register their ships under the Greek flag?

Statement 24	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	2	19	7	11	1	40	82.5	YES DISAGREE

The literature identifies that the shipowners were surprised and threatened when the socialist party came to power. In another case there was a personal conflict with a right wing Prime and a shipowner.

Consensus is achieved with comments from participants disagreeing further with the statement. It is also noted that shipowning is free to be located where appropriate conditions are provided. Shipowners do not leave the flag because they do not agree with the party in governance. This cost benefit analysis justifies why Greek dictatorship attracted almost all tonnage under the Greek flag. Other participants also believe that other factors affect the flag choice.

(Round1) Statement 25: Do you believe that there are operational issues which do not allow shipowners to register their ships under the Greek flag?

Statement 25	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	1	9	5	20	4	39	87.17949	YES AGREE

The panel achieved consensus agreeing that indeed that operational issue is a factor which according to the panel relates to cost. Also the slow adaptability to competition from the part of the state, and bureaucracy are also translated into additional costs.

Comparing Statement 24 with Statement 25 it is evidenced that operational issues are more important than political issues. The pure entrepreneurship culture of the Greek shipowners is also reflected in the participants agreement.

(Round1) Statement 26: Do you believe that there are cost issues which do not allow shipowners to register their ships under the Greek flag?

Statement 26	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	1	4	3	25	7	40	87.17949	YES AGREE

The panel agreed that cost is a reason not to register a vessel under the Greek flag and thus, taking into consideration Statement 25 and 24, political reasons, operational and cost issues are factors that affect registration can be prioritised as 1) cost. 2) operational issues, and 3) political issues.

(Round1) Statement 27: Do you believe that there are any other issues which do not allow shipowners to register their ships under the Greek flag?

Statements 27	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	Response Count	AMPO %	CONSENSUS ACHIEVED
	1	3	11	21	4	40	72.5	YES DIAGREE

The purpose of this statement is to identify any other issues apart from cost, operational and political (Statements 24-26) that can affect registration under the Greek flag. Consensus has been achieved and the panel further indicated factors, such as: shortage of Greek officers, the place where the management company operates, bureaucracy, not very shipping friendly state attitude 2009-2011, syndicates, support, flexibility, legislative and

stable environment, charterers and bankers demands, and slow adaptability to new rules and changes.

A participant commented that a flag is like a hotel thus what matters is quality of service given cost, willingness to serve, no bureaucracy, secrecy and proper treatment, number of stars, speed of satisfaction of requests and overall a better stay than most of other hotels.

(Round1) Statement 28: Which are the attributes which have contributed to the success of the Greek-flagged ocean-going shipping? Shipowners, the state, the seafarer, the seaborne trade, the cluster, all together?

Statement 28	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	AMP O %	CONSENSUS ACHIEVED
The state	18	11	0	5	8	100	YES DISAGREE
The Shipowner	0	12	0	8	22	100	YES AGREE
The seafarer	5	8	0	7	22	100	YES AGREE
The Seaborne trade	3	1	2	12	24	95.2381	YES AGREE
The cluster	6	7	4	20	5	90.47619	YES AGREE
All together	4	2	0	5	31	100	YES AGREE

The panel agreed that there is not just one attribute which has contributed to the success of Greek-flagged ocean-going shipping but all attributes together. That justifies the use of Porter's theory on the success of Greek-flagged ocean-going shipping.

Further, although they agree that the shipowner, the seafarer, seaborne trade, and the cluster contributed to the success they disagree on the state, although since most agreed to “all elements” as in the state as well.

4.4.3 Round 2: Statements and Analysis

The Round 2 statements are designed taking into consideration the replies from Round 1, and with the intention to get a better insight to the research and achieve the objectives set.

The two Statements that have not reached consensus in Round 1 (see Table 48, Statement 17 and Statement 22) are incorporated, and reflected in the Statements in Round 2.

TABLE 48. STATEMENT 17 AND 22, IN ROUND 1 - AMPO RATE CONSENSUS LESS THAN 70%

	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	AMPO
17	0	1	13	21	4	66.66667
22	1	8	13	14	4	67.5

Source: Developed by the Author (2015)

The Statements in Round 2 are structured as a yes/no statements, Likert 1 to 5, and ranking.

(Round 2) Statement 1: Every Greek government provided initiatives to retain capacity to the Greek flag. Please answer YES or NO. Feel free to comment on the statement in the comment box.

The literature and replies in Round 1 reveal that every government provided in general initiatives for the Greek Registry. If the government offered initiatives then why did shipowners flag out? The first Statement of

Round 2 requires clear cut answers (yes or no) from the participants as to what is their overall perception and experience.

The purpose of this statement is to identify if overall the Greek government, no matter which party was in power, supported the Greek flag by offering initiatives to the shipowners to remain in the registry.

Someone could argue that this statement could not be answered with a yes/no reply. In every political situation nothing is either black or white but somewhere in between. Taking that into consideration participants were also invited to elaborate further in the comment box.

(Round 2) Statement 2: During which years did the governments supported shipping more? Please rank the periods 1975-1980, 1981-1989, 1990-1993, 1994-2004, 2005-2009, 2009-2010. Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the statement in the comment box.

Several elections took place from 1975 to 2010. The socialist and the conservative party were exchanging places, or a party won the elections two or three times in a row. Consequently, in total the exchange of power from one party to the other took place six times. That explains the six periods set in the Statement: 1975-1981, 1981-1989, 1990-1993, 1993-2004, 2004-2009, and 2009-2010.

The purpose of this statement is to identify which political party supported the Greek flag and when, without stating the words 'socialist party' and 'conservative party' in the statement, with the aim to eliminate bias.

Participants were required to tick as appropriate and choose from strongly disagree to strongly agree. If they wished they may comment in the comment box.

(Round 2) Statement 3: Did the other parties in the parliament (other than PASOK and New Democracy) strongly supported, and proposed policies that could support the Greek-flagged shipping? Please answer YES or NO. Feel free to comment on the statement in the comment box.

The purpose of this statement is to identify what the other parties in the parliament did. It is not just the responsibility of the government, but all parties in the parliament share to an extent the responsibility of governance.

In the literature there is no reference identified to the contribution of the other political parties in shipping policies. When the author approached all parties to participate in this study, and further asked them for information and documentation on their views towards maritime policies, they did not want to participate in the research as representatives of the political parties, and also replied that they have no documentation which illustrates their views and proposals on maritime policies.

This is a yes/no answer. The participants are also offered the option to further comment on their answer.

(Round 2) Statement 4: The short Greek national/local recessions of 1981-1983, in 1987, and 1993 affected the Greek flag. Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the statement in the comment box.

The purpose of this statement is to determine if the national events affect the Greek flag. Participants are required to answer this Likert 1 to 5 scale statement, strongly disagree to strongly agree. **The participants are also offered the option to further comment on their answer.**

(Round 2) Statement 5: The merge of the Ministry of Shipping with other Ministries was a positive policy. Please answer YES or NO. Feel free to comment on the statement in the comment box.

The literature does not examine the merger of the Ministry of Shipping with other Ministries. The purpose of this statement is to identify the attitude of the state towards the overall shipping policy and more specifically the working of the organs which deals with the Greek registry.

The participants were asked to answer yes or no but also offered the option to further comment on their answer.

(Round 2) Statement 6: The EU shipping policies affected positively the Greek flag with respect to the tramp market. Please answer YES or NO. Feel free to comment on the statement in the comment box.

According to the literature a number of policies have been adopted since Greece became an EU member. It is important to identify the effect of the policies (positive) on Greek-flagged shipping. The participants are required to answer with a yes or no option and they are also offered the option to further comment on their answer.

(Round 2) Statement 7: Other EU flags have affected the competitiveness of the Greek flag. Please answer YES or NO. Feel free to comment on the statement in the comment box.

A number of the EU members are maritime nations with strong fleets. This is a more of a direct statement that tries to identify if the other EU flags had an effect on the Greek flag.

The participants are required to answer with a yes or no option and they are also offered the option to further comment on their answer.

(Round 2) Statement 8: Is the Greek flag assigned with lower taxation than the other EU states? Please answer YES or NO. Feel free to comment on the statement in the comment box.

This statement focuses in comparing the Greek flag to the other EU flags, with respect to taxation. Literature identifies that Greece has been criticised for using the tonnage tax system although most of the other EU countries use the same system.

In Statement 12 - Round 1 the panel agreed that the EURO currency has affected Greek flagged shipping. Taking it one step further it would be interesting to see if the members relate that to the EURO currency.

The participants are required to answer with a yes or no option and they are also offered the option to further comment on their answer.

(Round 2) Statement 9: Is the Greek-flagged shipping treated with lower taxation than other industries (tourism, agriculture etc)? Please answer YES or NO. Feel free to comment on the statement in the comment box.

This statement is trying to identify whether Greek governments are treating the shipping sector in a preferential way to other industries or vice versa. This is important to shipping policy making.

The participants are required to answer with a yes or no option and they are also offered the option to further comment on their answer.

(Round 2) Statement 10: All governments in Greece had clear policy objectives or strategy for the Greek flag. Please answer YES or NO. Feel free to comment on the statement in the comment box.

The literature does not clarify if the Greek governments had clear policy objectives or strategies. This statement tries to determine that. This is also to verify Statement 17 from Round 1. The results have reached a close agreement but not the final consensus of 70% or above.

The participants are required to answer with a yes or no option and they are also offered the option to further comment on their answer.

(Round 2) Statement 11: There was no continuity by the state on the Greek flag strategy. Please answer YES or NO. Feel free to comment on the statement in the comment box.

Several elections have taken place from 1975 to 2010. Following Statement 2 in Round 2, the purpose of this statement is to identify if there was continuity in the development of the Greek registry.

The participants are required to answer with a yes or no option and they are also offered the option to further comment on their answer.

(Round 2) Statement 12: There are the policies that contributed to the competitiveness of the Greek flag. Please answer YES or NO. Feel free to comment on the statement in the comment box.

The Greek flag is a competitive flag bearing in mind the capacity being registered. Thus, there must be policies that have contributed to this competitiveness. The purpose of this statement is to determine that.

The participants are required to answer with a yes or no option, and they are also offered the option to further comment on their answer.

(Round 2) Statement 13: Was there any successful policy for the Greek-flagged ships in the tramp sector as cabotage was for the Greek Ferry Industry in the Aegean Sea? Please answer YES or NO. Feel free to comment on the statement in the comment box.

Cabotage is regarded as the most successful policy which contributed to the development of the Greek ferries. This policy reflects that the Ministry of Shipping had an active role in supporting and protecting the local shipping industry, undertaking policies and actions.

With this statement the existence of state successful policies applied to the tramp Greek fleet will be identified.

The participants are required to answer with a yes or no option and they are also offered the option to further comment on their answer.

(Round 2) Statement 14: There was always a strong shipping know-how in Greece. Please answer YES or NO. Feel free to comment on the statement in the comment box.

The literature identifies there has always been a strong shipping know how in Greece and for example indemnifies the role of the seafarers in the shipping development. The statements's purpose is to determine that for the whole period of 1975-2010.

The participants are required to answer with a yes or no option and they are also offered the option to further comment on their answer.

(Round 2) Statement 15: There is a strong shipping cluster in Piraeus. Please answer YES or NO. Feel free to comment on the statement in the comment box.

The literature identifies that all governments since 1975 aimed at developing Piraeus as a shipping center and acknowledge it, but there is no research which identifies its development and dynamics.

The statements's purpose is to determine that. The shipping cluster is mostly developed because of the increase in the shipowning establishments in Piraeus with ships being registered to foreign flags. That benefited the Greek flag.

Participants are required to answer with a yes or no option and they are also offered the option to further comment on their answer.

(Round 2) Statement 16: Should Greece have developed a second, parallel ship register? Please answer YES or NO. Feel free to comment on the statement in the comment box.

Other EU members have second registers. Bearing in mind that shipowners flag out because of the cost of traditional flags to the flags of convenience, why has Greece not developed a parallel registry in order to absorb flagging out from the traditional flag? It might be the case that having a second registry would be catastrophic for the Greek flag, or not. Catastrophic because the second register may have retained elements of the traditional flag (such as quality and prestige) while offering the services and costs of a flag of convenience and this would be a very attractive flag. That might encourage more ships to flag out of the Greek Registry to the second registry. On the other hand, that might encourage flagging out of the flag of convenience to the Greek parallel registry, and the Greek state would benefit

from the capacity being potentially attracted, which would never be expected for the Greek flag. The benefits foreseen for the Greek flag could be minor, but still it would not be under the pressure of cutting costs.

The participants are required to answer with a yes or no option and they are also offered the option to further comment on their answer.

(Round 2) Statement 17: Is the local competition/domestic rivalry between Greek-flagged companies enhancing development? Please answer YES or NO. Feel free to comment on the statement in the comment box.

Porter (1990) states that local competition/domestic rivalry between companies enhances development. This statement aim is to identify the applicability of this theory to the Greek shipping market.

This is a yes/no or other. If other is chosen the participants are asked to further comment.

(Round 2) Statement 18: Which of the following 11 elements are the most and less important determinants of a strong maritime policy for Greek registry? Please rank from 1-11, 1 being the most important and 11 the less important. The elements in question being: authorising acts, competition of crews, cluster in greece, legal status of company, national stability, other flag systems and stability, provision of quality education and training, quality of flag, service offered by the flag, taxation, and other. In case your answer ranks OTHER at 1-10 priority ranks, please state which is the OTHER factor which is not included in

the above list. Feel free to comment on the statement in the comment box.

The purpose of this statement is to determine **which are the most important and less important elements (ranking in priority) that determine a strong maritime policy for Greek registry.**

Goulielmos stated in the literature about what made the Greek flag attractive was (a) taxation, (b) legal framework, (c) ITF's actions, (d) the political situation in Greece, (e) embargos over the world, and (f) the political situation in other flag states. Taking into consideration that times change (for example, ITF is not as powerfull nowadays, the ships are more technologically advanced) which are those deteminants today?

The 10 deteminants have been decided for the panel to choose from as being identified by the latest literature, and verified by the author's experience.

In case participant's answer OTHER at 1-10 priority ranks, participants are required to state which is the OTHER factor which is not included in the statement.

Also the panel is invited to comment on the statement in the comment box.

The Kendall's coefficient of concordance is used for this statement and then it ris e-examined in Round 3 in Statement 1.

(Round 2) Statement 19: Which are the major advantages of the Greek flag? Please rank from 1-9, 1 being the most important and 9 the less important. The elements being: authorizing acts, cost for

registering, cost of operating ships, legal framework, service, stability, status and quality, taxation, and other. In case your answer ranks OTHER at 1-8 priority ranks, please state which is the OTHER factor which is not included already in the above list. Feel free to comment on the statement in the comment box.

The literature mostly identifies why ships flag out from registers. The success of the flag to be considered or when policies are to be undertaken, also should be considered why ships flag in or remain on the register. On that grounds this statement was set.

The author identified certain elements by analysing literature and from her experience in the shipping market.

In case participant's answer OTHER at 1-8 priority ranks, participants are required to state which is the OTHER factor which is not included in the statement.

Also the panel is invited to comment on the statement in the comment box.

The Kendall's coefficient of concordance is used for this statement and then it reexamined in Round 3 in Statement 2.

(Round 2) Statement. 20: Why shipowners flag out? Please rank from 1-10, 1 being the most important and 10 the less important. The reasons are: anonymity, bureaucracy, contributions towards NAT, flexible crew composition, highly qualified foreign crew, lower crew costs, lower operational costs, lower taxation, resilient and stable tax

system, and other. In case your answer ranks OTHER at 1-9 priority ranks please state which is the OTHER factor which is not included already in the above list. Feel free to comment on the statement in the comment box.

There are many reasons that shipowners flag out. The author identified certain elements by analysing literature and from her experience in the shipping market.

The purpose of this question is to identify why ships flag out of the Greek flag.

The panel must identify what are the reasons shipowners flag out. The answer will identify the most important factors and the less important factors.

In case participant's answer OTHER at 1-8 priority ranks, participants are required to state which is the OTHER factor which is not included in the statement.

Also the panel is invited to comment on the statement in the comment box.

The Kendall's coefficient of concordance is used for this statement and then it reexamined in Round 3 in Statement 3.

(Round 2) Statement 21: Which of the following factors contribute to Greece as a shipping nation and the competitors does not commence and it is difficult or expensive to obtain? Please rank from 1-17, 1 being the most important and 17 the less important. The factors are: different

management practices, education and training, experience, funds, human resources, know-how, long term involvement in shipping, loyalty, regulatory framework, related and supporting industries, rivalry, skill, support of the state, technology, tradition, willingness to take the risk, and other. In case your answer ranks OTHER at 1-16 priority ranks, please state which is the factor which is not included already in the above list. Feel free to comment on the statement in the comment box.

Porter (1990) states that there must be certain factors the nation has and competitors do not possess, or it is difficult or expensive to obtain. This statement is aiming to identify those factors for Greece as a shipping nation. Participants are required to rank the contributing factors to a descending order.

The author identified certain elements by analysing literature and from her experience in the shipping market.

In case participant's answer OTHER at 1-16 priority ranks, participants are required to state which is the OTHER factor which is not included in the statement.

Also the panel is invited to comment on the statement in the comment box.

The Kendall's coefficient of concordance is used for this statement and then it is re-examined in Round 3 in Statement 1.

4.4.3.1 Round 2: Results and Analysis

All statements in Round 2 have achieved consensus. When the participants were provided with their replies no alterations were made. The Round 2 consensus cut off rate is more than 70%.

The replies and the consensus in the Round 2 are presented in Table 49. In the following pages the statements, quantitative information, and critical discussion for every statement are presented.

TABLE 49. STATEMENTS IN ROUND 2, AMPO RATE CONSENSUS 70%, AVERAGE AND KENDALL'S COEFFICIENT

(Round 2) Statement 1: Every Greek government provided initiatives to retain capacity to the Greek flag. Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	CONSENSUS ACHIEVED
1	35	7		
				YES
	83.33333%	16.66667	84%	DISAGREE

(Round 2) Statement 2: During which years did the governments supported shipping more? Please rank the periods 1975-1980, 1981-1989, 1990-1993, 1994-2004, 2005-2009, 2009-2010. Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the statement in the comment box.

2	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	AMPO %	CONSENSUS ACHIEVED
1975-1980	4	10	0	7	21	100	AGREE
1981-1989	16	9	2	7	8	95.2381	DISAGREE
1990-1993	18	12	3	3	6	92.85714	DISAGREE
1994-2004	13	20	3	2	4	92.85714	DISAGREE
2005-2009	8	6	2	17	9	95.2381	AGREE
2009-2010	14	10	3	7	8	92.85714	DISAGREE

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(Round 2) Statement 3: Did the other parties in the parliament (other than PASOK and New Democracy) strongly supported, and proposed policies that could support the Greek-flagged shipping? Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	CONSENSUS ACHIEVED
3	42	0		YES
	100	0	100%	DISAGREE

(Round 2) Statement 4: The short Greek national/local recessions of 1981-1983, in 1987, and 1993 affected the Greek flag. Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the statement in the comment box.

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	AMPO %	CONSENSUS ACHIEVED
4							
1981-1983	12	15	6	9	0	85.71428571	YES
							DISAGREE
1987	7	21	5	9	0	88.0952381	YES
							DISAGREE
1993	0	13	7	22	0	83.33333333	YES
							AGREE

(Round 2) Statement 5: The merge of the Ministry of Shipping with other Ministries was a positive policy. Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	CONSENSUS ACHIEVED
5	42	0		
	100	0	100%	YES
				DISAGREE

(Round 2) Statement 6: The EU shipping policies affected positively the Greek flag with respect to the tramp market. Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	Consensus
6	6	36		
	14.28571	85.71429	86%	YES
				AGREE

(Round 2) Statement 7: Other EU flags have affected the competitiveness of the Greek flag. Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement				CONSENSUS ACHIEVED
7	No	Yes	%	
	7	35		
	16.66667	83.33333	84%	YES
				AGREE

(Round 2) Statement 8: Is the Greek flag assigned with lower taxation than the other EU states? Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement				CONSENSUS ACHIEVED
8	No	Yes	%	
	38	4		
	90.47619	9.52381	91%	YES
				DIAGREE

(Round 2) Statement 9: Is the Greek-flagged shipping treated with lower taxation than other industries (tourism, agriculture etc)? Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement				CONSENSUS ACHIEVED
9	No	Yes	%	
	7	35		
	16.66667	83.33333	84%	YES
				AGREE

(Round 2) Statement 10: All governments in Greece had clear policy objectives or strategy for the Greek flag. Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement				CONSENSUS ACHIEVED
10	No	Yes	%	
	42	0		
	100	0	100%	YES
				DIAGREE

(Round 2) Statement 11: There was no continuity by the state on the Greek flag strategy. Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement				CONSENSUS ACHIEVED
11	No	Yes	%	
	4	38		
	9.52381	90.47619	91%	YES
				AGREE

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(Round 2) Statement 12: There are the policies that contributed to the competitiveness of the Greek flag. Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	CONSENSUS ACHIEVED
12	7	35		
	16.66667	83.33333	84%	YES
				AGREE

(Round 2) Statement 13: Was there any successful policy for the Greek-flagged ships in the tramp sector as cabotage was for the Greek Ferry Industry in the Aegean Sea? Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	CONSENSUS ACHIEVED
13	37	5		
	88.09524	11.90476	88%	YES
				DISAGREE

(Round 2) Statement 14: There was always a strong shipping know-how in Greece. Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	CONSENSUS ACHIEVED
14	1	41		
	2.380952	97.61905	98%	YES
				AGREE

(Round 2) Statement 15: There is a strong shipping cluster in Piraeus. Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	CONSENSUS ACHIEVED
15	7	35		YES
	16.66667	83.33333	84%	AGREE

(Round 2) Statement 16: Should Greece have developed a second, parallel ship register? Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	CONSENSUS ACHIEVED
16	7	35		YES
	16.66667	83.33333	84%	AGREE

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(Round 2) Statement 17: Is the local competition/domestic rivalry between Greek-flagged companies enhancing development? Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	CONSENSUS ACHIEVED
17	4	38		
	9.52381	90.47619	91%	YES
				AGREE

(Round 2) Statement 18: Which of the following 11 elements are the most and less important determinants of a strong maritime policy for Greek registry? Please rank from 1-11, 1 being the most important and 11 the less important. The elements in question being: authorising acts, composition of crews, cluster in Greece, legal status of company, national stability, other flag systems and stability, provision of quality education and training, quality of flag, service offered by the flag, taxation, and other. In case your answer ranks OTHER at 1-10 priority ranks, please state which is the OTHER factor which is not included in the above list. Feel free to comment on the statement in the comment box.

Statement	1	2	3	4	5	6	7	8	9	10	11
18											
Taxation	16	7	7	6	0	0	0	0	0	0	6
Quality of flag	3	7	7	3	7	3	0	0	3	6	3
Composition of crews	0	5	7	6	0	7	0	7	6	0	4
National Stability	0	0	7	7	4	7	6	6	5	0	0
Cluster in Greece	4	8	5	10	10	0	0	0	5	0	0
Authorizing acts	3	3	3	6	7	4	8	3	0	5	0
Legal status of company	5	4	4	5	5	3	0	6	5	5	0
Provision of quality education and training	0	4	5	0	0	5	7	8	4	5	4
Other flag systems and stability	0	5	0	0	5	6	8	5	9	4	0
Service offered by the flag	0	4	4	4	4	4	5	5	5	7	0
Other	6	0	0	0	6	6	0	0	0	7	17

(Round 2) Statement 19: Which are the major advantages of the Greek flag? Please rank from 1-9, 1 being the most important and 9 the less important. The elements being: authorizing acts, cost for registering, cost of operating ships, legal framework, service, stability, status and quality, taxation, and other. In case your answer ranks OTHER at 1-8 priority ranks, please state which is the OTHER factor which is not included already in the above list. Feel free to comment on the statement in the comment box.

Statement	1	2	3	4	5	6	7	8	9
19									
Taxation	9	5	4	4	7	4	0	5	4
Status & Quality	0	11	7	0	10	6	0	8	0

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Stability	0	7	8	6	4	7	4	3	3
<i>Cost of operating ships</i>	5	7	5	13	0	0	4	4	4
<i>Legal framework</i>	0	8	7	10	12	2	1	2	0
<i>Cost for registering</i>	0	7	7	0	0	13	11	4	0
<i>Authorizing Acts</i>	7	7	4	7	7	1	9	0	0
<i>Service</i>	0	0	6	7	0	9	4	12	4
<i>Other</i>	1	0	0	0	0	0	0	10	31

(Round 2) **Statement 20:** Why shipowners flag out? Please rank from 1-10, 1 being the most important and 10 the less important. The reasons are: anonymity, bureaucracy, contributions towards NAT, flexible crew composition, highly qualified foreign crew, lower crew costs, lower operational costs, lower taxation, resilient and stable tax system, and other. In case your answer ranks OTHER at 1-9 priority ranks please state which is the OTHER factor which is not included already in the above list. Feel free to comment on the statement in the comment box.

Statement	1	2	3	4	5	6	7	8	9	10
20										
<i>Lower taxation</i>	18	5	5	1	1	2	4	2	2	2
<i>Lower crew cost</i>	5	12	6	4	3	2	2	2	1	5
<i>Resilient & stable tax system</i>	1	1	17	2	1	5	5	3	3	4
<i>Flexible crew composition</i>	8	2	6	10	6	2	2	2	2	2
<i>Contributions towards NAT</i>	0	5	2	1	19	4	4	4	1	2
<i>Lower operational costs</i>	6	1	7	6	6	10	5	1	0	0
<i>Bureaucracy</i>	8	2	6	4	4	2	10	2	2	2
<i>Anonymity</i>	5	5	5	3	6	2	2	12	1	1
<i>Highly qualified foreign crew</i>	0	5	3	3	4	4	5	3	5	10
<i>Other</i>	1	3	2	3	2	3	3	6	6	13

(Round 2) **Statement 21:** Which of the following factors contribute to Greece as a shipping nation and the competitors does not commence and it is difficult or expensive to obtain? Please rank from 1-17, 1 being the most important and 17 the less important. The factors are: different management practices, education and training, experience, funds, human resources, know-how, long term involvement in shipping, loyalty, regulatory framework, related and supporting industries, rivalry, skill, support of the state, technology, tradition, willingness to take the risk, and other. In case your answer ranks OTHER at 1-16 priority ranks, please state which is the factor which is not included already in the above list. Feel free to comment on the statement in the comment box.

Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
21																	
<i>Know-how</i>	26	10	2	2	1	0	0	0	0	0	0	0	0	0	0	0	1
<i>Experience</i>	10	23	5	2	1	0	0	0	0	0	0	0	0	0	0	1	0

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<i>willingness to take the risk</i>	0	1	25	4	1	1	1	2	0	1	0	1	1	1	1	2	0
<i>different management practices</i>	0	1	2	8	2	3	2	5	2	4	2	7	3	1	0	0	0
<i>Skill</i>	0	1	2	0	8	2	6	2	1	6	1	5	4	3	1	0	0
<i>human resources</i>	1	5	10	6	0	15	0	0	0	0	1	0	0	1	1	1	1
<i>Rivalry</i>	0	1	1	2	1	8	2	2	1	1	8	5	1	1	4	4	0
<i>Loyalty</i>	0	1	1	2	2	1	12	5	5	2	2	2	1	1	3	1	1
<i>regulatory framework</i>	0	0	1	1	1	1	2	12	8	4	6	5	0	0	0	1	0
<i>education and training</i>	0	1	1	1	1	2	2	3	15	3	3	2	2	1	1	2	2
<i>related and supporting industries</i>	0	1	1	1	1	1	1	2	4	17	4	1	2	3	1	2	0
<i>Funds</i>	0	0	1	1	1	1	1	4	4	4	15	4	1	2	1	1	1
<i>Technology</i>	1	2	1	3	10	1	1	7	0	0	1	14	0	0	1	0	0
<i>long term involvement in shipping</i>	0	2	2	2	0	2	3	2	2	3	6	2	7	4	3	2	0
<i>Tradition</i>	2	0	1	1	1	0	2	2	5	3	2	4	4	12	1	1	1
<i>support from the state</i>	1	1	0	0	1	2	1	0	5	5	3	2	2	4	2	10	3
<i>Other</i>	1	0	1	1	2	1	1	1	1	4	3	5	2	2	1	1	15

Source: Developed by the Author, (2015).

Hereafter the analysis of the Round 2 statements begins. Each of the statements is discussed herein making use of the comments from the panel.

(Round 2) Statement 1: Every Greek government provided initiatives to retain capacity to the Greek flag. Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	CONSENSUS ACHIEVED
1	35	7		
	83.33333%	16.66667	84%	YES
				DISAGREE

The Greek state, in the form of every consecutive government did not provide shipowners in accordance to the literature, with initiatives in order to remain in the Greek Registry. 84% of the panel believes that the state has not provided initiatives and 17% that the state offered initiatives. It is noteworthy that the constitution of the panel (in terms of size, years of experience, age of participants) allows for fair representation of stakeholders and smoothes the percentages of the contradicting views.

The literature identifies that all governments provided shipowners with some kind of initiatives.

It must also be taken into consideration that ships flag out not only because they will be registered to other flags. In the 80s and 90s many ships went for scrap.

The Greek governments argue that the Registry is a traditional flag and if more initiatives are given to the shipowners it would become a flag of convenience or a quasi flag of convenience. Additionally that shipping is not the only sector in Greece that needs support and the support for all industries comes out of the same budget. It is argued that other sectors such as tourism and agriculture are disadvantaged compared to shipping with respect to the taxation (this will be considered in another Statement in

this Round). Equally when initiatives such as less tax or crew cuts are introduced the income of the state and the social fund decline, while unemployment increases. The Greek seafarers were lobbying for more Greeks on board and increases in their remunerations and contributions of shipowners to the social fund. The state has to balance the initiatives given to shipowners, seafarers, other shipping sectors, and industries. Is the lobbying of the Greek seafarers strong? Ocean going ships are not like passengers ships whereby when seafarers are on strike the ships do not operate as scheduled. Ocean going ships are all over the world, and not always in ports which either does not allow for the organisation of strikes or even if strikes take place they would have no effect.

In the world markets, Greek flagged ships are competing on international levels and competing with ships flying the flags of convenience thus, it is an uneven battle, in terms of cost. Equally competing on a EU level with the provisions given by other European countries such as national cargoes, legal requirements for establishment and funding structures put the Greek flag at a disadvantage.

The disagreeing panel consensus should not be considered as the Greek government never supporting shipping but as (a) the support was tactical lacking continuity and strategy, (b) the timing was not effective, and (c) the initiatives were modest instead of strong. Thus, this statement will be considered in conjunction with the other questions asked in this Round for example Statement 2 and 12.

(Round 2) Statement 2: During which years did the governments supported shipping more? Please rank the periods 1975-1980, 1981-1989, 1990-1993, 1994-2004, 2005-2009, 2009-2010. Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the statement in the comment box.

2	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	AMPO %	CONSENSUS ACHIEVED
1975-1980	4	10	0	7	21	100	AGREE
1981-1989	16	9	2	7	8	95.2381	DISAGREE
1990-1993	18	12	3	3	6	92.85714	DISAGREE
1994-2004	13	20	3	2	4	92.85714	DISAGREE
2005-2009	8	6	2	17	9	95.2381	AGREE
2009-2010	14	10	3	7	8	92.85714	DISAGREE

Four observations can be made on the above results (a) the more support came after the Junta era and during the 'new political order', (b) the governmental support is declining though the years, (c) the left wing government supported more shipping, (d) the government is not taking into consideration the shipping cycles and vulnerability of the sector, (e) when the market boomed in 2004 with the increase of all fleets and the opportunities of gaining more capacity, the government supported the Greek flag to a lesser extent.

As the literature suggests the socialist government was not welcomed by the shipowners. The results of this statement indicate that the socialist government provided the shipowners with benefits as well as with catastrophic intervention during the period 1981 to 1989. This is though an example of wrong timing. Thus, the outcome is that the benefits a shipping policy provides must be given at the right time otherwise they are not as effective as they intended to be. The right timing is considered as before ships flag out or even before that and not when a crisis has erupted or an increase in the demand of shipping services is enacted. The right wing government supported the shipowners (2005-2009) but the national instability affected the shipowners (1990-1993).

(Round 2) Statement 3: Did the other parties in the parliament (other than PASOK and New Democracy) strongly supported, and proposed policies that could support the Greek-flagged shipping? Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	CONSENSUS ACHIEVED
3	42	0		YES
	100	0	100%	DISAGREE

The parties not in power do not have the role of developing and proposing laws and regulations to the parliament, but they contribute to their development and ratification. They can make proposals and include the Greek Registry in their party's agenda and programme. All 42 participants agreed that the parties not in government did not support or propose policies

that could support Greek flagged shipping. This illustrates further the state's unawareness of shipping.

(Round 2) Statement 4: The short Greek national/local recessions of 1981-1983, in 1987, and 1993 affected the Greek flag. Strongly Disagree, Disagree, Neither Disagree Nor Agree, Agree, Strongly Agree. Please tick as appropriate. Feel free to comment on the statement in the comment box.

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	AMPO %	CONSENSUS ACHIEVED
4 1981-1983	12	15	6	9	0	85.71428571	YES
							DISAGREE
1987	7	21	5	9	0	88.0952381	YES
							DISAGREE
1993	0	13	7	22	0	83.33333333	YES
							AGREE

The purpose of this statement is to determine if the national events that affected the Greek flag.

The panel comes to consensus for all years of the short Greek national recessions and their effect on shipping. Participants agreed that the short Greek national/local recessions of 1981-1983, in 1987 did not affect the Greek flag and for 1993 they also agreed the Greek flag was affected (83.3% rounded to 84%).

1993 was as a result of many years of mismanagement from the state. From 1989 Greece went through several elections and unexpected co-operations between the left and the right and with no agreement a short term all-party

government; ‘ecoumeniki’ resulted and finally the right party was elected. The government had to stabilise the economy, deal with strikes, and foreign affairs and the ‘Macedonian issue’ and at the same time prepare the state for the participation in the single currency. In 1993 the government called for early elections when the social party won while the leader of the party and afterwards the Prime Minister was in poor health. That was not a situation which favored the development of the Greek flag. Additionally this identifies that political instability is a reason to flag out, and stability to flag in.

(Round 2) Statement 5: The merge of the Ministry of Shipping with other Ministries was a positive policy. Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	CONSENSUS ACHIEVED
5	42	0		
	100	0	100%	YES
				DISAGREE

The literature does not examine the merger of the Ministry of Shipping with other Ministries. The only reference was that shipowners did not welcome this policy. The trend reflected in the literature is that governments have either changed the name of the Ministry or the name and its entity many times. The panel representing all interests (100%) of the stakeholders disagreed with the Statement that the merging of the Ministry of Shipping with other Ministries was a not positive policy in full consensus.

Participants commented that changing the name of the Ministry is minor compared to the alteration of its entity. Greece being a shipping nation and due to the internationalisation of the industry, the Ministry of Shipping is of value and importance.

In the panel's comments the inadequacy of the Shipping Ministers is raised (subject to couple exceptions). Table 11 illustrates the 26 Greek Shipping Ministers who were assigned, and the author can verify that none of them had hands on experience in shipping, all being fully qualified in other professions.

Another comment is made on the personality of the Shipping Ministers and Prime Ministers in Greece. The Greek Prime Ministers were dominant personalities, and the allocation of the Ministers to the Ministries is commonly based on their personal preferences. Analysis of the literature indicates that although Greece went through several elections three Prime Ministers served in this position for more than eight years. These were Constantine Karamanlis with an overall service record of over thirteen years, Andreas Papandreou, whose term reached ten years, and Constantine Simitis, who served for 8 years as Prime Minister. These three Prime Ministers and their cabinets should have realised the particularity of the shipping industry, and allocate an individual with an appropriate profile to the position. That further explains why the state has never deeply understood shipping. Private anonymous sources reveal that internal party political games frustrated Ministers that wanted to bring forward an integrated shipping policy. For example reflections of an integrated

approach was the policy with an agreement between Greece and China, where Greek shipowners consent to ship building in China but spare part for those ships would be produced in Greece. This policy although it was close to agreement was never realised.

(Round 2) Statement 6: The EU shipping policies affected positively the Greek flag with respect to the tramp market. Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	Consensus
6	6	36		
	14.28571	85.71429	86%	YES
				AGREE

According to the literature a number of policies from 1986 have been adopted since Greece become an EU member. The overall effect of the EU was positive according to the participants. Although according to the participants comments on the positive effect they refer to the quality of ships and safety.

This statement is prepares the participants for the EU related statements. It is closely related to Statement 14 with the aim to dinstiguish between quality and safety, and policies which allow fleet expansion.

(Round 2) Statement 7: Other EU flags have affected the competitiveness of the Greek flag. Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	CONSENSUS ACHIEVED
7	7	35		
	16.66667	83.33333	84%	YES
				AGREE

The literature analysis and the participants' comments reveal that (a) the EU accession of new shipping states, with large fleets has reduced the power of Greece within the EU, and (b) Greece has found supporters in the USA, since the latter EU maritime nations are participating more in the tramp than the liner trade.

(Round 2) Statement 8: Is the Greek flag assigned with lower taxation than the other EU states? Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	CONSENSUS ACHIEVED
8	38	4		
	90.47619	9.52381	91%	YES
				DIAGREE

This panel consensus with 91% disagrees with the statement that the Greek flag is assigned with lower taxation.

Further the panel supports this disagreement in their comments that (a) if the Greek flag is offering lower taxation why do other EU shipowners not register their ships under the Greek flag, and (b) most of the EU fleets have adopted the tonnage tax as well.

(Round 2) Statement 9: Is the Greek-flagged shipping treated with lower taxation than other industries (tourism, agriculture etc)? Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	CONSENSUS ACHIEVED
9	7	35		
	16.66667	83.33333	84%	YES
				AGREE

The panel agreed and consensus was reached with 84%.

The panel agreed that Greek-flagged shipping is treated with lower taxation, and further commented that (a) the risk shipowners are undertaking is higher than entrepreneurs in other sectors, (b) shipping companies can be easily relocated, and (c) shipping was never subsidised in contrast with the tourism and agricultural sectors in Greece. Thus, overall shipping have not been preferentially treated.

(Round 2) Statement 10: All governments in Greece had clear policy objectives or strategy for the Greek flag. Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	CONSENSUS ACHIEVED
10	42	0		
	100	0	100%	YES
				DIAGREE

The literature analysis indicates that the Greek governments did not have clear policy objectives or strategy. The consensus achieved is 100% with no comments made by the participants, and fully supports the literature analysis findings.

(Round 2) Statement 11: There was no continuity by the state on the Greek flag strategy. Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	CONSENSUS ACHIEVED
11	4	38		
	9.52381	90.47619	91%	YES
				AGREE

The panel supports the view that there was no continuity in the strategies for the Greek registry with a 91% consensus.

Participants also commented that there was no continuity evidenced when the same government in power changed, but also within the same government.

(Round 2) Statement 12: There are the policies that contributed to the competitiveness of the Greek flag. Please answer YES or NO. Feel free to comment on the statement in the comment box.

No	Yes	%	CONSENSUS ACHIEVED
7	35		
16.66667	83.33333	84%	YES

The Greek flag ranks for many years on the top traditional flags. Thus, there must have been policies that contributed to its competitiveness.

The agreeing consensus of the panel should be regarded in conjunction with statement 1. The governments over the years, although they did not provide the shipowners with strong initiatives (Statement 1), they supported and benefited them after the Second World War, primarily the junta and after all democratic governments after 1975 without having a vision they were injecting the Greek flag with benefits. That explains why the panel agreed with Statement 12.

(Round 2) Statement 13: Was there any successful policy for the Greek-flagged ships in the tramp sector as cabotage was for the Greek Ferry Industry in the Aegean Sea? Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	CONSENSUS ACHIEVED
13	37	5		
	88.09524	11.90476	88%	YES
				DISAGREE

Cabotage was the most successful policy, apart from the problems emerging towards the end of it's expiration, which contributed to the development of the Greek ferries. The panel disagrees that there was a policy such as cabotage for the ferry industry in Greece that contributed to the development of the fleet. That reflects that governments support sectors that can easily regulate and control. Tramp shipping is not controllable being easily relocated.

(Round 2) Statement 14: There was always a strong shipping know-how in Greece. Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	CONSENSUS ACHIEVED
14	1	41		
	2.380952	97.61905	98%	YES
				AGREE

The literature identifies that shipowners and seafarers have a strong know how and that contributed to the development of the fleet. The know-how is an important element in Porter's success of nations in an industry. The panel agrees (98%), and further comments that the know how is not limited to the actual operations of the ship by capable seafarers or to shipowners but also to shipbrokers, financiers, lawyers, insurers, educators and so on.

The participants that disagreed also commented that the know how developed throughout the decades in professions other than seafarers and shipowners such as lawyers, insurers, financiers and so on.

(Round 2) Statement 15: There is a strong shipping cluster in Piraeus. Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	CONSENSUS ACHIEVED
15	7	35		
	16.66667	83.33333	84%	YES
				AGREE

The panel agreed that there is a strong cluster in Greece, mostly located in Athens and Piraeus. The panel agrees (with 84%) and further comments that the size of the Greek cluster is due to the fact that it serves the Greek controlled fleet in total and not just the Greek flagged. According to Porter (1990) this is an important element which contributes to the success of the Greek shipping industry.

(Round 2) Statement 16: Should Greece have developed a second, parallel ship register? Please answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	CONSENSUS ACHIEVED
16	7	35		YES
	16.66667	83.33333	84%	AGREE

The panel comes to a consensus (with 84%) that Greece should have developed a second, parallel ship register which could give prospects to Greek shipping and the country, but will most probably affect the Greek registry with a decline in capacities.

The author has observed that before 2015 the discussion on the parallel registry would not find such consensus. It should be mentioned that this reply might be affected by the Greek crisis which Greece was going through when the survey was undertaken.

(Round 2) Statement 17: Is the local competition/domestic rivalry between Greek-flagged companies enhancing development? Please

answer YES or NO. Feel free to comment on the statement in the comment box.

Statement	No	Yes	%	CONSENSUS ACHIEVED
17	4	38		
	9.52381	90.47619	91%	YES
				AGREE

The panel agrees (91%) with the statement and supports Porter’s theory on the role of domestic rivalry.

Participants comment that flying the Greek flag is considered prestigious, although it must be mentioned that it also fits the requirements of the charterers as a quality flag for traders in the tanker trades.

(Round 2) Statement 18: Which of the following 11 elements are the most and less important determinants of a strong maritime policy for the Greek registry? Please rank from 1-11, 1 being the most important and 11 the less important. The elements in the question being; authourising acts, compositition of crews, cluster in greece, legal status of a company, national stability, other flag systems and stability, provision of quality education and training, quality of flag, service offered by the flag, taxation, and other. In case your answer ranks OTHER at 1-10 priority ranks, please state which is the OTHER factor which is not included in the above list. Feel free to comment on the statement in the comment box.

The MATCH Excel Microsoft Office function is applied to data and the rank is developed (see last column in the above table with the results).

Testing the hypothesis that H0 there is no consensus in the rating i.e.w=0, then by calculating the Kendall's coefficient of concordance as 0,0232 , it is obvious that the H0 hypothesis is not valid and that there is some evidence of consensus.

Statement 18	1	2	3	4	5	6	7	8	9	10	11	max per series	match in row
- Taxation	16	7	7	6	0	0	0	0	0	0	6	16	1
- Quality of flag	3	7	7	3	7	3	0	0	3	6	3	7	2
- Composition of crews	0	5	7	6	0	7	0	7	6	0	4	7	3
- National Stability	0	0	7	7	4	7	6	6	5	0	0	7	3
- Cluster in Greece	4	8	5	10	10	0	0	0	5	0	0	10	4
- Authorizing acts	3	3	3	6	7	4	8	3	0	5	0	8	7
- Legal status of company	5	4	4	5	5	3	0	6	5	5	0	6	8
- Provision of quality education and training	0	4	5	0	0	5	7	8	4	5	4	8	8
- Other flag systems and stability	0	5	0	0	5	6	8	5	9	4	0	9	9
- Service offered by the flag	0	4	4	4	4	4	5	5	5	7	0	7	10
- Other	6	0	0	0	6	6	0	0	0	7	17	17	11
<i>sum per preference</i>	37	47	49	47	48	45	34	40	42	39	34		

Table 50 illustrates the calculations prepared with MS Excel, for finding the coefficient of concordance and testing chi-square distribution for statistical acceptance. All p values for the scenarios are greater than 0.05 and then the hypothesis H1 is accepted and there is concordance in the results.

TABLE 50. STATEMENT 18: CALCULATIONS FOR W AND TESTING HYPOTHESIS

How the values were calculated	Scenario 1	Scenario 2	Scenario 3
horizontal choices	n 11	n 11	n 11
vertical choices	m 11	m 11	m 11
s=devsp(arrayof sums)	s 310	s 140.1818	s 122
$w=12s/(m^2(n^3-n))$	w 0.023291	w 0.010532	w 0.009166
$\text{chi sq} = m*(n-1)*w$	chi sq 2.561983	chi sq 1.158527	chi sq 1.008264
degrees of freedom= n-1	df 10	df 10	df 10
p value =chisq.dist.rt(chi sq, df)	p value 0.989941 >0.05	p value 0.999663 >0.05	p value 0.999821 >0.05

Ho : There is no concordance in the findings

H1 : There is concordance in the findings

Please note:

For analyzing the samples one statistic (sum of answers, max number of responses, preference with max number of responses per question) is used from the sample, thus different scenarios have been prepared using different statistics. The three scenarios are:

Scenario 1. The statistic used was the sum of the answers for each preference

Scenario 2. The statistic used was the max number of responses for each question

Scenario 3. The statistic used (and using the match function of excel) the preference with the max number of responses per question asked.

Source: Developed by the author (2016).

A strong maritime policy for the Greek shipping register is determined by all 10 factors. The panel members consent as most important; taxation, the quality of flag, the composition of crews and the national stability, and as less important the legal status of companies and provision of education and training, other flag systems and stability and service offered by the flag. The determinants as the most important factors are constantly negotiated by the stakeholders whereas the less important such as education and training, the authorising acts, legal status of companies are either already available or obtained from other sources abroad.

As participants commented, the combination of the first two determinates can be proved as a difficult task balancing tax cuts and improvement in quality. On the other hand, less tax will automatically mean less income for the state. The determinants of a strong maritime policy must take into consideration the seaborne trade, and the timing the policies are adopted. The censuses in the ranking resulted in this Round will be considered in Round 3

(Round 2) Statement 19: Which are the major advantages of the Greek flag? Please rank from 1-9, 1 being the most important and 9 the less important. The elements being: authorizing acts, cost for registering, cost of operating ships, legal framework, service, stability, status and quality, taxation, and other. In case your answer ranks OTHER at 1-8 priority ranks, please state which is the OTHER factor which is not included already in the above list. Feel free to comment on the statement in the comment box.

The MATCH Excel Microsoft Office function is applied to data and the rank is developed (see last column in the above table with the results). Testing the hypothesis that H_0 there is no consensus in the rating i.e. $w=0$, then by calculating the Kendall's coefficient of concordance as 0,44, it is obvious that the H_0 hypothesis is not valid and that there is a strong evidence of consensus (W is near 0,5).

Table 51 illustrates the calculations prepared with MS Excel, for finding the coefficient of concordance and testing chi-square distribution for statistical

acceptance. All p values for the scenarios are greater than 0.05 and then the hypothesis H1 is accepted and there is concordance in the results.

Statement 19	1	2	3	4	5	6	7	8	9	max per series	match in row
- Taxation	9	5	4	4	7	4	0	5	4	9	1
- Status & Quality	0	11	7	0	10	6	0	8	0	11	2
- Stability	0	7	8	6	4	7	4	3	3	8	3
- Cost of operating ships	5	7	5	13	0	0	4	4	4	13	4
- Legal framework	0	8	7	10	12	2	1	2	0	12	5
- Cost for registering	0	7	7	0	0	13	11	4	0	13	6
- Authorizing Acts	7	7	4	7	7	1	9	0	0	9	7
- Service	0	0	6	7	0	9	4	12	4	12	8
- Other	1	0	0	0	0	0	0	10	31	31	9
sum per preference	22	52	48	47	40	42	33	48	46		

TABLE 51. STATEMENT 19: CALCULATIONS FOR W AND TESTING HYPOTHESIS

how the values were calculated	Scenario 1	Scenario 2	Scenario 3
horizontal choices	n 9	n 9	n 9
vertical choices	m 9	m 9	m 9
s=devsp(arrayof sums)	s 698	S 386.8889	s 60
$w=12s/(m^2(n^3-n))$	w 0.143621	w 0.079607	w 0.012346
chi sqr =m*(n-1)*w	chi sqr 10.34074	chi sqr 5.731687	chi sqr 0.888889
degrees of freedom= n-1	df 8	df 8	df 8
p value =chisq.dist.rt(chi sqr,df)	p value 0.24192 >0.05	p value 0.677258 >0.05	p value 0.998858 >0.05

Ho : There is no concordance in the findings

H1 : There is concordance in the findings

Please note:

For analyzing the samples one statistic (sum of answers, max number of responses, preference with max number of responses per question) is used from the sample, thus different scenarios have been prepared using different statistics. The three scenarios are:

Scenario 1. The statistic used was the sum of the answers for each preference

Scenario 2. The statistic used was the max number of responses for each question

Scenario 3. The statistic used (and using the match function of excel) the preference with the max number of responses per question asked.

Source: Developed by the author (2016).

The Greek flag as a traditional registry has proven quality through the Port State Control records, accidents recorded, and with a young fleet that impart prestige. These elements attract high quality customers and are freight generators. The cost related factors as to cost of operating ships under the Greek flag is higher than that of the flags of convenience by definition, the cost of registering is not a considerable cost, the service the flag provides is characterised as bureaucratic, the national stability of Greece is challenged in the last years and there are no commercial and political reasons that generate for example cargoes.

The censuses in the ranking resulted in this Round will be considered in Round 3.

(Round 2) Statement. 20: Why do shipowners flag out? Please rank from 1-10, 1 being the most important and 10 the less important. The reasons are: anonymity, bureaucracy, contributions towards NAT, flexible crew composition, highly qualified foreign crew, lower crew costs, lower operational costs, lower taxation, resilient and stable tax system, and other. In case your answer ranks OTHER at 1-9 priority ranks please state which is the OTHER factor which is not included already in the above list. Feel free to comment on the statement in the comment box.

The MATCH Excel Microsoft Office function is applied to data and the rank is developed (see last column in the above table with the results). Testing the hypothesis that H_0 there is no consensus in the rating i.e. $w=0$, then by calculating the Kendall's coefficient of concordance as 0,0754, it is obvious

that the H0 hypothesis is not valid and that there is some evidence of consensus.

Statement 20	1	2	3	4	5	6	7	8	9	10	max per series	match in row
• Lower taxation	18	5	5	1	1	2	4	2	2	2	18	1
• Lower crew cost	5	12	6	4	3	2	2	2	1	5	12	2
• Resilient & stable tax system	1	1	17	2	1	5	5	3	3	4	17	3
• Flexible crew composition	8	2	6	10	6	2	2	2	2	2	10	4
• Contributions towards NAT	0	5	2	1	19	4	4	4	1	2	19	5
• Lower operational costs	6	1	7	6	6	10	5	1	0	0	10	6
• Bureaucracy	8	2	6	4	4	2	10	2	2	2	10	7
• Anonymity	5	5	5	3	6	2	2	12	1	1	12	8
• Highly qualified foreign crew	0	5	3	3	4	4	5	3	5	10	10	10
• Other	1	3	2	3	2	3	3	6	6	13	13	10
<i>sum per preference</i>	52	41	59	37	52	36	42	37	23	41		

Table 52 illustrates the calculations prepared with MS Excel, for finding the coefficient of concordance and testing chi-square distribution for statistical acceptance. All p values for the scenarios are greater than 0.05 and then the hypothesis H1 is accepted and there is concordance in the results.

Indeed the reasons the shipowner flags out are many and varied. The panel considered the ranking to be a challenge as all factors are interrelated. In the times of low freight the shipowners wanted to minimise expenses and the Greek flag is considered an expensive flag.

The censuses in the ranking resulted in this Round will be considered in Round 3.

TABLE 52. STATEMENT 20: CALCULATIONS FOR W AND TESTING HYPOTHESIS

how the values were calculated	Scenario 1		Scenario 2		Scenario 3	
horizontal choices	n	10	n	10	n	10
vertical choices	m	10	m	10	m	10
$s = \text{devsp}(\text{arrayof sums})$	s	938	s	114.9	s	90.4
$w = 12s / (m^2(n^3 - n))$	w	0.113697	w	0.013927	w	0.010958
$\text{chi sqr} = m * (n - 1) * w$	chi sqr	10.23273	chi sqr	1.253455	chi sqr	0.986182
degrees of freedom = n-1	df	9	df	9	df	9
$\text{p value} = \text{chisq.dist.rt}(\text{chi sqr}, \text{df})$	p value	0.331975	p value	0.998596	p value	0.999469
		>0.05		>0.05		>0.05

Ho : There is no concordance in the findings

H1 : There is concordance in the findings

Please note:

For analysing the samples one statistic (sum of answers, max number of responses, preference with max number of responses per question) is used from the sample, thus different scenarios have been prepared using different statistics. The three scenarios are:

Scenario 1. The statistic used was the sum of the answers for each preference

Scenario 2. The statistic used was the max number of responses for each question

Scenario 3. The statistic used (and using the match function of excel) the preference with the max number of responses per question asked.

Source: Developed by the author (2016).

(Round 2) Statement 21: Which of the following factors contribute to Greece as a shipping nation and the competitors does not commence and it is difficult or expensive to obtain? Please rank from 1-17, 1 being the most important and 17 the less important. The factors are: different management practices, education and training, experience, funds, human resources, know-how, long term involvement in shipping, loyalty, regulatory framework, related and supporting industries, rivalry, skill, support of the state, technology, tradition, willingness to

take the risk, and other. In case your answer ranks OTHER at 1-16 priority ranks, please state which is the factor which is not included already in the above list. Feel free to comment on the statement in the comment box.

The MATCH Excel Microsoft Office function is applied to data and the rank is developed (see last column in the above table with the results). Testing the hypothesis that H0 there is no consensus in the rating i.e. $w=0$, then by calculating the Kendall's coefficient of concordance as 0,0202, it is obvious that the H0 hypothesis is not valid and that there is some evidence of consensus.

Statement	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	max per series	match in row
Statement 21																			
Know-how	26	10	2	2	1	0	0	0	0	0	0	0	0	0	0	0	1	26	1
Experience	10	23	5	2	1	0	0	0	0	0	0	0	0	0	0	1	0	23	2
willingness to take the risk	0	1	25	4	1	1	1	2	0	1	0	1	1	1	1	2	0	25	3
different management practices	0	1	2	8	2	3	2	5	2	4	2	7	3	1	0	0	0	8	4
Skill	0	1	2	0	8	2	6	2	1	6	1	5	4	3	1	0	0	8	5
human resources	1	5	10	6	0	15	0	0	0	0	1	0	0	1	1	1	1	15	6
Rivalry	0	1	1	2	1	8	2	2	1	1	8	5	1	1	4	4	0	8	6
Loyalty	0	1	1	2	2	1	12	5	5	2	2	2	1	1	3	1	1	12	7
regulatory framework	0	0	1	1	1	1	2	12	8	4	6	5	0	0	0	1	0	12	8
education and training	0	1	1	1	1	2	2	3	15	3	3	2	2	1	1	2	2	15	9
related and supporting industries	0	1	1	1	1	1	1	2	4	17	4	1	2	3	1	2	0	17	10
Funds	0	0	1	1	1	1	1	4	4	4	15	4	1	2	1	1	1	15	11
Technology	1	2	1	3	10	1	1	7	0	0	1	14	0	0	1	0	0	14	12
long term involvement in shipping	0	2	2	2	0	2	3	2	2	3	6	2	7	4	3	2	0	7	13
Tradition	2	0	1	1	1	0	2	2	5	3	2	4	4	12	1	1	1	12	14
support from the state	1	1	0	0	1	2	1	0	5	5	3	2	2	4	2	10	3	10	16
Other	1	0	1	1	2	1	1	1	1	4	3	5	2	2	1	1	15	15	17
sum per preference	42	50	57	37	34	41	37	49	53	57	57	59	30	36	21	29	25		

Table 53 illustrates the calculations prepared with MS Excel.

TABLE 53. STATEMENT 21: CALCULATIONS FOR W AND TESTING HYPOTHESIS

how the values were calculated	Scenario 1	Scenario 2	Scenario 3
horizontal choices	n 17	N 17	n 17
vertical choices	m 17	M 17	m 17
s=devsp(arrayof sums)	s 2392	S 543.0588	s 376.2353
$w=12s/(m^2(n^3-n))$	w 0.020286	W 0.004606	w 0.003191
chi sqr = $m*(n-1)*w$	chi sqr 5.517878	chi sqr 1.252731	chi sqr 0.867901
degrees of freedom= n-1	df 16	Df 16	df 16
p value =chisq.dist.rt(chi sqr,df)	p value 0.992517 >0.05	p value 1 >0.05	p value 1.000 >0.05

Ho : There is no concordance in the findings

H1 : There is concordance in the findings

Please note:

Scenario 1: calculations based on the sum of each preference

Scenario 2: calculations based on the max response per series answer

Scenario 3: calculations based on the match function per row or on what answer we had max positive responses

According to the calculations above for all scenarios, the p value for the hypothesis testing is greater than 0.05 , we statistically accept the H1 hypothesis for all cases

Source: Developed by the author (2016).

The above Table provides the calculations for finding the coefficient of concordance and testing chi-square distribution for statistical acceptance. All p values for the scenarios are greater than 0.05 and then the hypothesis H1 is accepted and there is concordance in the results.

Based on Porter's theory the most important factors for Greek shipping and flag are: know-how, experience, willingness to take risk, skill, education and training and human resources of medium importance are loyalty, the regulatory framework, the different management practices, the related and supporting industries, the funds available and less important technology, the

long term involvement in shipping, rivalry, tradition and the support from the state.

Although Porter's theory firstly emphasises the actual attributes and not on their importance the purpose of this study is to identify the importance of elements and their effect on the success of Greek-flagged ocean going shipping.

The censuses in the ranking resulted in this Round will be considered in Round 3.

4.4.4 Round 3: Statements and Analysis

All statements in Round 2 have achieved consensus. Although consensus has been achieved in the first two rounds still the author's aim is to elicit in depth information on the subject area. The panel was asked to elaborate on specific aspects as the elements that contribute to a strong shipping policy, the major advantages for the flag, why shipowners flag out. Questions as to the usefulness of the Delphi method and the survey process were also addressed. When the participants were provided with their replies no alterations were made.

(Round 3) Statement 1: Do you agree with the following ranking of policy determinants for a strong Greek registry? "Taxation" being the most important determinant and the "Service of the flag" as the least important determinant. Please tick as appropriate. Feel free to comment on the statement in the comment box.

The rank of the policy determinants agreed in the Round 2 Statement 18 will be examined for consensus in this round.

(Round 3) Statement 2: Do you agree that the following are the major advantages of the Greek flag? “Taxation” being the most important determinant and the “Service” as the least important determinant. Please tick as appropriate. Feel free to comment on the statement in the comment box.

The rank of the major advantages agreed in the Round 2 Statement 19 will be examined for consensus in this round.

(Round 3) Statement 3: Do you agree with the following rank of flagging out factors? “Lower Taxation” being the most important determinant and the “highly qualified crew” as the least important determinant. Please tick as appropriate. Feel free to comment on the statement in the comment box.

The rank of the major advantages agreed in the Round 2 Statement 20 will be examined for consensus in this round.

(Round 3) Statement 4: Do you agree with the following ranking of factors that contribute to Greece as a shipping nation and the competitors does not commence and it is difficult or expensive to obtain? “Know-How” being the most important determinant and the “Support for the state” as the least important determinant. Please tick as appropriate. Feel free to comment on the statement in the comment box.

The rank of the major advantages agreed in the Round 2 Statement 21 will be examined for consensus in this round.

(Round 3) Statement 5: Do you consider Delphi as an adequate method to apply to this study or in general shipping policy issues? Please answer YES or NO and If you choose “no” please suggest which you consider to be more appropriate methods.

The panel was asked to state if they consider the Delphi method as an appropriate method for evaluating shipping policy issues. Further they could comment and if they wish to provide alternative methods for this study or studies evaluating shipping policy issues.

(Round 3) Statement 6: Are you satisfied with the procedure, methods and questions followed in all 3 rounds. Please answer YES or NO and If you choose “no” please explain.

The panel is asked to the satisfaction of the procedures followed, methods and questions being asked in the survey. The satisfaction of the panel is important since the voluntarily contribute to this research. This question implies the appreciation for their contribution and gains information for evaluating the research and the way it has been undertaken.

4.4.4.1 Round 3: Results and Analysis

The replies and the consensus the Round 3 are presented in Table 54. In the following pages the statements, quantitative information, and critical discussion for every statement are presented.

TABLE 54. STATEMENT IN ROUND 3 AND AMPO RATE CONSENSUS 70%

(Round 3) Statement 1: Do you agree with the following ranking of policy determinants for a strong Greek registry? "Taxation" being the most important determinant and the "Service of the flag" as the least important determinant. Please tick as appropriately. Feel free to comment on the statement in the comment box.

Statement 1	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	AMPO	CONSENSUS ACHIEVED
Taxation	0	2	0	10	30	100	AGREE
Quality of flag	1	5	2	12	22	95.2381	AGREE
Composition of crews	0	12	1	9	20	97.61905	AGREE
National Stability	3	4	3	25	7	92.85714	AGREE
Cluster in Greece	7	6	3	20	6	92.85714	AGREE
Authorizing acts	5	3	2	25	7	95.2381	AGREE
Legal status of company	7	5	3	20	7	92.85714	AGREE
Provision of quality education and training	10	2	3	20	7	92.85714	AGREE
Other flag systems and stability	8	4	5	19	6	88.09524	AGREE
Service offered by the flag	5	3	4	23	7	90.47619	AGREE

(Round 3) Statement 2: Do you agree that the following are the major advantages of the Greek flag? "Taxation" being the most important determinant and the "Service" as the least important determinant. Please tick as appropriately. Feel free to comment on the statement in the comment box.

Statement 2	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	AMPO %	CONSENSUS ACHIEVED
Taxation	3	6	0	7	26	100	AGREE
Status & Quality	1	5	3	26	10	93.333333	AGREE
Stability	3	12	2	9	18	95.454545	AGREE
Cost of operating ships	2	4	1	3	33	97.674419	AGREE
Legal framework	5	5	3	26	6	93.333333	AGREE
Cost for registering	8	5	1	22	7	97.674419	AGREE
Authorizing Acts	7	5	1	23	7	97.674419	AGREE
Service	10	2	3	15	15	93.333333	AGREE

(Round 3) Statement 3: Do you agree with the following rank of flagging out factors? "Lower Taxation" being the most important determinant and the "highly qualified crew" as the least important determinant. Please tick as appropriately. Feel free to comment on the statement in the comment box.

Statement 3	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	AMPO %	CONSENSUS ACHIEVED
lower taxation	0	0	0	12	30	100	AGREE
lower crew costs	0	0	0	8	34	100	AGREE

resilient and stable tax system	3	5	2	20	12	95.2381	AGREE
flexible crew composition	2	8	1	19	12	97.61905	AGREE
reduction of contribution towards NAT	3	10	2	19	8	95.2381	AGREE
lower operational costs	2	1	0	20	19	100	AGREE
bureaucracy	3	3	3	27	6	92.85714	AGREE
Flexibility	4	4	2	20	12	95.2381	AGREE
Anonymity	9	2	3	25	3	92.85714	AGREE
highly qualified foreign crew	5	5	1	21	10	97.61095	AGREE

(Round 3) Statement 4: Do you agree with the following ranking of factors that contribute to Greece as a shipping nation and the competitors does not commence and it is difficult or expensive to obtain? "Know-How" being the most important determinant and the "Support for the state" as the least important determinant. Please tick as appropriate. Feel free to comment on the statement in the comment box.

Statement	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	AMPO %	CONSENSUS ACHIEVED
4							
Know-how	1	2	0	6	33	100	AGREE
Experience	0	1	0	13	28	100	AGREE
willingness to take the risk	10	2	2	23	7	95.454545	AGREE
different management practices	2	5	1	20	15	97.674419	AGREE
Skill	6	3	2	17	15	95.348837	AGREE
human resources	3	1	3	26	12	93.333333	AGREE
Rivalry	6	5	2	19	12	95.454545	AGREE
Loyalty	7	4	2	27	4	95.454545	AGREE
regulatory framework	0	8	4	23	9	90.909091	AGREE
education and training	6	5	4	20	11	91.304348	AGREE

related and supporting industries	5	5	3	28	4	93.333333	AGREE
Funds	10	2	2	18	12	95.454545	AGREE
Technology	8	8	3	21	6	93.478261	AGREE
long term involvement in shipping	6	8	3	19	9	93.333333	AGREE
Tradition	10	2	3	17	13	93.333333	AGREE
support from the state	6	5	3	18	12	93.181818	AGREE

(Round 3) Statement 5: Do you consider Delphi as an adequate method to apply to this study or in general shipping policy issues? Please answer YES or NO and If you choose "no" please suggest which you consider to be more appropriate methods.

Statement			%	CONSENSUS ACHIEVED
5	No	Yes		
	0	42		YES
	0	100%		AGREE

(Round 3) Statement 6: Are you satisfied with the procedure, methods, and questions followed in all 3 rounds. Please answer YES or NO and If you choose "no" please explain.

Statement			%	Consensus
6	No	Yes		
	0	42		
	0	100%		100%

Source: Developed by the Author, (2016).

Hereafter the analysis of the Round 3 statements begins. Each of the statements is discussed herein making use of the comments from the panel where appropriate.

(Round 3) Statement 1: Do you agree with the following ranking of policy determinants for a strong Greek registry? "Taxation" being the most important determinants and the "service of the flag" as the least important determinant.

The rank agreed by the panel in (Round 2) Statement 18 is tested for consensus in the Statements 1 in (Round 3). Consensus is achieved. It must be noted that the option “other” used in Statements 18 (Round 2) is not tested for consensus since the panel did not use the ‘other’ option to add another factor no comments were made.

Statement 1	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	AMPO	CONSENSUS ACHIEVED
1. Taxation	0	2	0	10	30	100	AGREE
2. Quality of flag	1	5	2	12	22	95.2381	AGREE
3. Composition of crews	0	12	1	9	20	97.61905	AGREE
4. National Stability	3	4	3	25	7	92.85714	AGREE
5. Cluster in Greece	7	6	3	20	6	92.85714	AGREE
6. Authorizing acts	5	3	2	25	7	95.2381	AGREE
7. Legal status of company	7	5	3	20	7	92.85714	AGREE
8. Provision of quality education and training	10	2	3	20	7	92.85714	AGREE
9. Other flag systems and stability	8	4	5	19	6	88.09524	AGREE
10. Service offered by the flag	5	3	4	23	7	90.47619	AGREE

(Round 3) Statement 2: Do you agree that the following are the major advantages of the Greek flag? Please rank from 1-11, 1 being the most important and 9 the less important. The elements being: , authorizing acts, shipping traditions, , service, , commercial or political reasons, cost for registering, In case your answer ranks OTHER at 1-10 priority ranks please state which is the OTHER factor which is not included already in the above list.

Statement 2	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	AMPO %	CONSENSUS ACHIEVED
1. Taxation	3	6	0	7	26	100	AGREE
2. Status & Quality	1	5	3	26	10	93.333333	AGREE
3. Stability	3	12	2	9	18	95.454545	AGREE
4. Cost of operating ships	2	4	1	3	33	97.674419	AGREE
5. Legal framework	5	5	3	26	6	93.333333	AGREE
6. Cost for registering	8	5	1	22	7	97.674419	AGREE
7. Authorizing Acts	7	5	1	23	7	97.674419	AGREE
8. Service	10	2	3	15	15	93.333333	AGREE

The rank agreed by the panel in (Round 2) Statement 19 is tested for consensus in the Statements 2 in (Round 3). Consensus is achieved. It must be noted that the option “other” used in Statements 19 (Round 2) is not tested for consensus since the panel did not use the ‘other’ option to add another factor no comments were made.

(Round 3) Statement 3: Do you agree with the following rank of flagging out factors? (with “Lower taxation” the most important and “highly qualified crew” the less important)

The rank agreed by the panel in (Round 2) Statement 20 is tested for consensus in the Statements 3 in (Round 3). Consensus is achieved. It must be noted that the option “other” used in Statements 20 (Round 2) is not tested for consensus since the panel did not use the ‘other’ option to add another factor no comments were made.

Statement 3	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	AMPO %	CONSENSUS ACHIEVED
1. lower taxation	0	0	0	12	30	100	AGREE
2. lower crew costs	0	0	0	8	34	100	AGREE
3. resilient and stable tax system	3	5	2	20	12	95.2381	AGREE
4. flexible crew composition	2	8	1	19	12	97.61905	AGREE
5. reduction of contribution towards NAT	3	10	2	19	8	95.2381	AGREE
6. lower operational costs	2	1	0	20	19	100	AGREE
7. bureaucracy	3	3	3	27	6	92.85714	AGREE
8. Anonymity	4	4	2	20	12	95.2381	AGREE
9. highly qualified foreign crew	9	2	3	25	3	92.85714	AGREE

(Round 3) Statement 4: Do you agree with the following ranking of factors that contribute to Greece as a shipping nation and the competitors does not commence and it is difficult or expensive to obtain? (The most important factor being the “know-how” and the less important the “support from the state”.)

The rank agreed by the panel in (Round 2) Statement 21 is tested for consensus in the Statements 4 in (Round 3). Consensus is achieved. It must be noted that the option “other” used in Statements 21(Round 2) is not tested for consensus since the panel did not use the ‘other’ option to add another factor no comments were made.

Statement 4	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree	AMPO %	CONSENSUS ACHIEVED
1. Know-how	1	2	0	6	33	100	AGREE
2. Experience	0	1	0	13	28	100	AGREE
3. Willingness to take the risk	10	2	2	23	7	95.454545	AGREE

4. Different management practices	2	5	1	20	15	97.674419	AGREE
5. Skill	6	3	2	17	15	95.348837	AGREE
6. Human resources	3	1	3	26	12	93.333333	AGREE
7. Rivalry	6	5	2	19	12	95.454545	AGREE
8. Loyalty	7	4	2	27	4	95.454545	AGREE
9. Regulatory framework	0	8	4	23	9	90.909091	AGREE
10. Education and training	6	5	4	20	11	91.304348	AGREE
11. Related and supporting industries	5	5	3	28	4	93.333333	AGREE
12. Funds	10	2	2	18	12	95.454545	AGREE
13. Technology	8	8	3	21	6	93.478261	AGREE
14. Long term involvement in shipping	6	8	3	19	9	93.333333	AGREE
15. Tradition	10	2	3	17	13	93.333333	AGREE
16. Support from the state	6	5	3	18	12	93.181818	AGREE

(Round 3) Statement 5: Do you consider Delphi as an adequate method to apply to this study or in general shipping policy issues? Please answer YES or NO and If you choose “no” please suggest which you consider to be more appropriate methods.

Statement 5	Disagree	Agree	%	CONSENSUS ACHIEVED
	0	42		YES
	0	100%		AGREE

All panel members were asked their opinions about Delphi and they all agreed that they were very satisfied with the approach used to collect data in relation to the success of Greek flagged shipping. They also noted that they were surprised that such research took place and they were part of it.

The academics participating commented on the lack of literature and data and the market professionals on the interesting subject.

(Round 3) Statement 6: Are you satisfied with the procedure, methods and questions followed in all 3 rounds. Please answer YES or NO and If you choose “no” please explain.

Statement 6	Disagree	Agree	%	Consensus
	0	42		
	0	100%		100%

The replies and comments from the panelists reflect their satisfaction. They noted that they felt comfortable answering questions freely since they are protected by anonymity although some questions were difficult to be determined.

4.5 How the Diamond Works: The Greek-flagged shipping

The aim of this section is to analyse and model the success of Greek-flagged ocean-going shipping based on Porter’s diamond theory.

It has to be mentioned that since the Greek flagged and Greek owned shipping grew alongside each other this model applies to both. Equally the model can be applied to every flag (see Chapter 5, Contribution to knowledge).

4.5.1 The settings of the Greek-flagged ocean going shipping Diamond Model

Taking into consideration the criticism on Porter’s model and its adaptability in this study, one alteration and two additions (Table 55) have been made to the model by the author.

TABLE 55. ALTERATION AND ADDITIONS TO THE BASIC PORTER’S MODEL

Alteration

The “diamond condition” refers to the international demand and not the national demand of the Greek flagged tramp shipping. The Greek flagged tramp shipping serves the international demand since there is not demand from the national market.

Addition 1

The “related and supported Industries” are considered in two levels (a) on national and (b) the international level.

Addition 2

The “factor condition” concentrates on Greece while the EU is also incorporated. Since the government has the role of developing policies or to incorporate policies deriving from the EU then its role must be considered separately. Davies and Ellis 2000, and Porter 1990 suggest that the government’s role is partial and indirect working in co-operation with the diamond’s conditions and creating a favorable environment for the companies to be competitive and that in other approach would result in companies problems. If this study was not about the Greek national ship register and it was on the success the success of another industry for example the automobile industry then the role of the government would have been as Davies and Ellis 2000, and Porter 1990 suggest. The case of the national registry differs by being national as an industry that belongs to the state. Thus in this case the government is included in the diamond and will be incorporated in the conditions.

Source: Developed by the Author, (2016).

Thus the model developed is presented in findings.

4.5.2 Analysis: The Greek-flagged ocean going shipping Diamond Model

Greece has since the ancient times been a seafaring nation with a plethora of skilled seaman, and an entrepreneurship culture. The combination of these two factors explains the driving force behind shipping.

Lean management is applied onboard and onshore as a systematic method for the elimination of waste. The managing culture of shipping companies was developed in the same lean, and strategic manner the ships were operated. Shipping offices were usually understaffed than overstaffed.

Emphasis in the early years was placed on ship operations, with the operations and the chartering function being the most important. In the later years many companies focused on the modern methods of financing as public offering and shipping derivatives, but not for all shipping companies. The Captains becoming shipowners adopted the same management practices as those adopted onboard. Skilled, intelligent, and loyal employees were the characteristics of the seafarers employed and the ashore personnel. The loyalty implied occultism, what was done in the company stayed in the company. The managers, Captains, and Chief Engineers and the rest of the seafarers were remunerated well above the Greek market rates. Shipowners traditionally had strict control and all decisions even routine decisions once they were taken or required their approval. The decisions were highly centralised and controlled. The centralised and tight decision making has resulted in a lean and innovative company structure, and related management practices. That allowed the shipowners to have control over the company. The loyalty of the Captains and the crew towards the company allowed for further control over the ships. The investment decisions were only taken by the shipowner without complicated research methods and being regarded proactive and prudent.

The case of Captains becoming shipowners was common. The owner was not just an investor but he commenced knowledge, passion, and skill. The poor economy of Greece, and especially the economy of the many islands being away from the mainland, lacking development in other industries and infrastructure, and with most people involved in shipping originating from the islands, forced Greeks to go to the sea.

The Greek environment, and mentality develops the patterns companies are set up, organised, and managed. The way Greeks manage shipping companies is unique. cannot be copied by competitors, and at the same time is universally suitable being adaptive to the seasonality, and the shipping cycles.

The allocation of resources was equally important. In the top management level Captains and Chief engineers were appointed the operation of the ship and were regarded as the heart of the company and the profits were gained out of it. Also, the right person was placed to the right position. On board a constant number of loyal, and capable Captains were employed on rotation on the company fleet. When Captains retired they were then employed onshore as operations managers.

Punishment and reward were directly and quickly applied. Bonuses were paid to staff that were performing as requested or exceptionally and staff were made redundant in cases where they did not perform up to the standards of the company. Executives were given shares on ships as bonus and reward.

The shipowners have enhanced emotional intelligence which is an important leadership skill, helping govern behavior and influencing their relationships with the employees onshore and ashore. They had the ability to identify, use, understand, and manage emotions in positive ways to communicate effectively, overcome challenges, and diffuse conflict. That contributed to the performance of the employees ashore as well the performance of the seafarers onboard. For example in the 70s and 80s before strict

restrictions were applied, the Captain and the Chief engineer were allowed to have their family onboard during the summer time which enhanced their productivity and loyalty to the company.

The talented seafarers maintained the ship in such a manner that second hand ships were in the utmost condition and that has affected their life expectancy. The good maintenance of the ships was also due to the innovative patents Greek seafarers were developing.

Greeks commenced a natural talent in foreseeing opportunities developed by shipping know-how and experience, adjoined with the will to undertake the risk. The asset playing was part of a holistic management strategy. The personal need to succeed, and prove themselves, and the intense local rivalry boosted entrepreneurship.

The ship operations know how grew quickly from the thirst for professionalism, success, exploration, experimentation, and cumulative experience. Private ownership, loyalty to their hometown for staff employment, the status acquired, and intense commitment spawned in the fear of not being familiar to another profession. Personalised relations and the same culture sharing made shipowners was stronger in anticipating difficulties. The backup of the Greek cluster and their international relations enhanced their tolerance and strength.

In the 1970's the Greek flagged ships were commonly managed from the Piraeus or London office. The ships were acquired on equity. Either the shipowner had the equity or the family and close relatives invested taking in

return shares (points, πόντοι). In the case a bank loan was acquired, the providing bank was foreign and the collateral was the charter party or the sister ship. Later in time international and national banks were willing to lend to shipowners in order to invest in ships and because of the stricter rules of the flag on ship age. In early times a charter parties submission to the bank was sufficient to grant a loan as collateral but that faded out. After the 80s shipowners acquired their ships through bank lending.

Operations still in the 80s were managed by the office in Piraeus while chartering from the London office. In regard to shipbuilding ships were built in foreign countries, but it was common that the maintenance and repairs onboard were undertaken by Greek third party companies. Since the 1990s and 2000s many Greek companies started timidly repatriating to Greece. Other companies⁶² followed with the aim to benefit from the proximity to the market. Piraeus is not the only place of establishment, although a shipping center, but equally the suburbance of Athens such as Glyfada, Voula, and Kifissia.

Also in times when overall the Greek owned shipping increased there was a move from second hand vessels to newbuildings. There were cases where ships were ordered in dozens with new materials and more technically advanced. Many Greeks left the Greek flag and moved to the flags of convenience but most of them kept operating their ships from Piraeus. The foreign crews were increasing following in a way the trend of the flags of convenience.

⁶² Such as: shipping banks, insurers, protection and indemnity clubs, lawyers, funds and flags.

The Greek flagged and Greek controlled shipping are closely related. A shipowner might have a fleet composed by the Greek flag and other flags, usually flags of convenience. That also allowed the development of the pool of seafarers, who realised the opportunities of employment. Shipowners were sourcing office staff from their hometowns but also being in the suburbs of the capital of Greece, (Athens) they could easily find experts as naval architects, accountants, financiers, lawyers and insurers.

The education and career path chosen by individuals contributes to the Greek flag success. The shipping education at the academies and the experiential training onboard affected the competitive performance of companies. Shipping studies were not developed from the early years Greeks were educated abroad and then were absorbed by the Greek shipping industry.

Due to the difficult political and economical situations in Greece, many Greeks emigrated to the rest of the world. That allowed and availed international networking. For example in Argentina or USA ports the Greek ships were served by Greek port agents. That underlines that the language and cultural barriers were overridden, although language or cultural differences were never identified as a problem. This international network with Greeks made the shipowners feel comfortable.

The Greek shipping cluster was developed on two levels the national and the international. The Greek shipping cluster (Figure 39) is presented in two layers, the national level and the global level. The international cluster was certainly not being developed because of the Greek emigrants. The

international nature of shipping itself creates the environment for such relations, and for the cluster to be developed. Shipowners being entrepreneurs were strongly participating in different networks. Greeks involved in shipping having developed an international culture treat the globe as a small village. They had always developed strong business relations abroad with traders, charterers, banks and so on. The advantages of being able to use different channels in the market offered cost effectiveness, efficiency in operations, access to sources and materials, flow of information, short and direct lines of communication, exchange of ideas, innovation and upgrading. Greek shipowners and shipping practitioners have built up their international relations throughout the years.

The contribution of Greek seaman is characterised as “the most valuable factor” to the development of Greek shipping. The fleet was managed by highly skilled, learned, committed and loyal seafarers and the committed mostly sourced from the islands of Chios, Andros, Kassos, and Syros. Actually Greece was segmented as a pool of talents, for example the most experienced Captains came from Chios Island, Chief engineers from Lesbos and Mani, and stewards from Syros. The shipping companies benefited from the local pool of experienced seafarers. It has to be mentioned that the shipowners projecting their culture, habits, and relations always preferred to employ from their hometowns. Ships sailed the world oceans while the onboard crew was related.

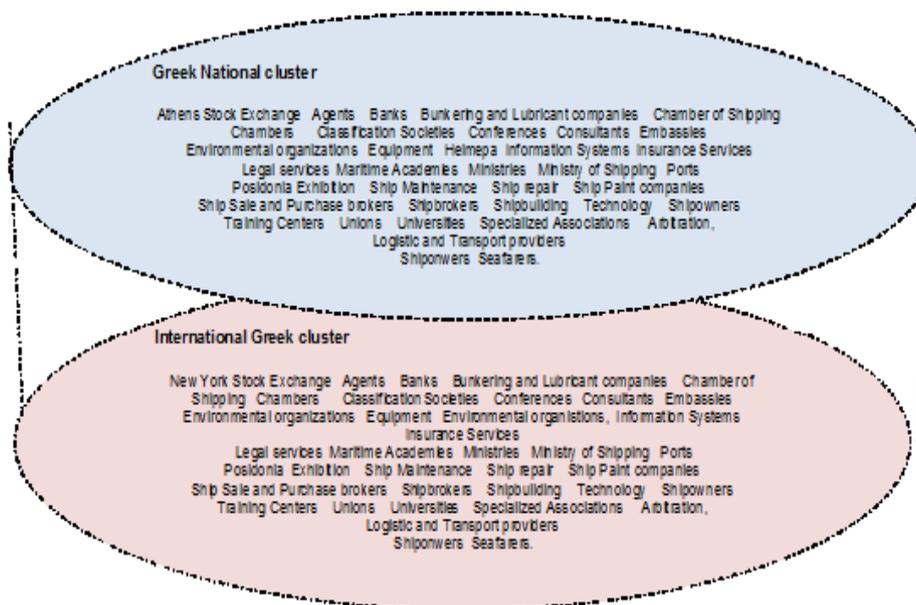


FIGURE 39. THE GREEK OCEAN CLUSTER

Source: Developed by the author (2016).

The Greek labour ashore, and mostly onboard highly determined the success of Greek-flagged shipping. Highly skilled seafarers, in all ranks operated the ship as a stage of art. Greek shipowners mostly invested in second hand ships so the maintenance of the ship, thus an asset was very important. It was equally important that in the early decades the majority of the crew was Greek and they shared the same culture and language which allowed for better ship operation. The crew having originated from the same island or being family related meant the quality of life of the seafarers' onboard and they would be motivated to better operate and maintain the ship. Loyalty was a very important element and there were seafarers that stayed with the same company for their whole working life.

The literature vaguely highlights what the author has personally evidenced being on board of Greek flagged ships since the 70S. The author observed that the representative ship of the 1975 was a second hand ship, usually a bulk carrier purchased on equity, with exceptionally skilled seafarers. The owner was a former Captain while the crew onboard and the employees ashore originated from the same island or were family related. The ship was well maintained extending her life expectancy while being seaworthy due to the knowledge, professionalism and passion of the crew. In the mid-1980's the ship was a newbuilding bulk carrier or tanker purchased on loan, with Greeks and foreigners on board. The owner was still a former Captain while the lower crew were mostly foreigners, for example from Philippines and the rest of the crew were Greeks. Always the ashore personnel was Greek with minor exceptions. The homeland selection recruitment factor is slowly fading out.

On the same principles and mode were those working ashore. The employees ashore and the crew onboard were connected with either family connections or originating from the same place. The labour ashore was in the majority Greek who shared the same culture, language and values. The company onboard and on shore was like a big extended family with close relationships. The shipping industry was a closed industry that family connections allowed entry. It was after the 2000s when the market started opening up.

Although traditional shipping families originated from islands such as Chios and Andros and dominated the industry, newcomers entered realising the opportunity and benefits.

The domestic rivalry was intense and the priorities being the success in the international market and the increase of fleets. Rivalry, personal ambition, and tenacity are key characteristics of the Greek culture which boosted Greek shipping. The shipowners knew each other, originated from the same place or usually from another island, they were family related, and they were leading citizens in their home towns. As a consequence they competed on a personal level in the world arena. There are many stories of shipping magnets who when the one ordered a ship the other was placing an order for a bigger ship.

The Greek fleet in 1975 was mostly bulk carriers and though the huge investments were placed in tankers. The reasons were foreseen business opportunities and fleet diversification. The rivalry was not only among shipowners but extended to their Captains and Chief Engineers. Captains and crew were proud getting an unseaworthy ships and transforming them to seaworthy. In order for that to be achieved, patents were developed by the crew.

Greece is an IMO and that influences its fleet. For example the mandated phase out schedules for older tonnage, which might be considered as one factor behind the massive ordering Greek ordering boom of 1999 – 2001.

Attracting young Greeks to the nautical profession was not always successful. Shipping was a closed industry and those who were already working in it such as for example the Captains and Chief engineers did not want their children to go off shore. Life was never easy onboard. At the same time the quality of life in Greece increased and the gap between wages and opportunities ashore and on onboard closed up.

The revitalisation of Greek shipping is evidenced before 1975. The important times in history are (a) after the Second World War, with the 100 Liberties, while there was an increased demand for shipping capacity, and (b) before 1975 with the introduction of tonnage tax and company establishment laws and regulations. Since the acquisition of Liberties, the Greek-flagged shipping has never enjoyed any financial support or any sizeable trade stimulus. That explains why Greeks have been supporting free and unprotected trade and why they are more into the tramp than the liner sector.

The pressure from shipowners was always intense always warning the Greek government that they will flag out and most of the time paid off. The Greek government stumbled from implementing the wishes of the shipowners to ignoring the sector. Beside the debate of not supporting the flag and supporting it, the Greek state has supported the flag to the extent possible as a traditional flag or to the extent they could understand shipping.

Greeks could have operated the ships from any place in the world. All governments have supported in one way or the other Greek flagged

shipping. The reasons shipowners choose the Greek flag are taxation, status, quality, crews and customers' requirements for a quality flag.

The Greek shipping industry through all decades has been highly adaptive and proactive to all market changes. Greeks have proved to innovate and move faster than the competition. The 90's were a decade that shipping was getting in the era of quality. The OPA, amendments to MARPOL and the ISM characterise this decade. Stricter regulations which affect the design and management of ships onboard and on shore consequently affected them financially. Although in the mid-2000s the regulations increased, e.g. MARPOL 13H, this decade is characterised by the big boom. The boom era increased Greek controlled and not flagged shipping to its highest levels.

The findings of all the Analysis chapter (Timeline analysis, the secondary data analysis, the Delphi method and the Porter's application analysis. is contributing to the theory development of the success of the Greek-flagged ocean-going shipping in the next section) are presented and further discussed in Chapter 5.

Chapter 5. Findings, Theory Development, and Recommendations

The aim of this chapter is to present the findings of this study, to discuss the implications from theory to practice emanating from the findings, to exemplify the concluding outcome, to present the theory derived from this study, the original contribution to knowledge, the adequacy of the conceptual model, the limitations and further research prospects.

The findings, conclusion, and the original contribution to theory are presented against the aim and the objectives of the study. The conceptual model of this study is discussed and whether it has succeeded in capturing the complexities that characterise the success of a nation's industry and shipping policy. The limitations of the study are presented and recommendations for further research are made.

5.1 Research Outcome

Shipping is a complex and enormously globalised industry. Ships trade worldwide moving products from one part of the world to the other, making those products available anywhere in the globe. Access to the sea is crucial to all countries, and such an ability can be considered as a competitive advantage for traders, and nations. In turn, ships are developed in order to facilitate the needs of trade, and it is the nature of the product and the trade that determine the ship type. In this industry Greece, a small nation, throughout time has successfully retained the top position in terms of national flag capacity.

The outcome of this study demonstrates that the success of Greek ocean-going flagged shipping is a blend of a tendency for governments to experiment with various policies intended to promote national competitiveness, individual entrepreneurship, the cluster, as well as culture, knowledge and skill.

According to the literature flags are dying out, this might be the case but what is certain is that they are not dead yet.

The Greek-flagged ocean-going shipping industry is a system of people, organisations, and processes and it is that system, and its workings that contribute to the success of the Greek-flagged ocean-going shipping industry.

The successful attributes of the Greek flagged ocean shipping industry as a system are discussed in this chapter. Emphasis is placed on the role of government policy within this system and contrary to the belief of some players the governmental role affects the size of the fleet.

5.2 Findings

The findings of the analysis are summarised in the following Tables (56-58) and then analysed.

- Table 56. Findings: Literature TimeLine Analysis
- Table 57. Findings: Delphi Rounds
- Table 58. Findings: Porter's Diamond Analysis

TABLE 56. FINDINGS: LITERATURE & TIMELINE ANALYSIS

Literature Analysis Finding 1: Shipping Policy and Practice Relationship
Literature Analysis Finding 2: 14 governments in 35 years
Literature Analysis Finding 3: The government's understanding of shipping
Literature Analysis Finding 4: Passive attitude of the state towards shipping
Literature Analysis Finding 5: Relations in shipping policy making for the Ship Registry
Literature Analysis Finding 6: Company's legal status and Authorizations Acts
Literature Analysis Finding 7: The 50% rule
Literature Analysis Finding 8: Tonnage Tax
Literature Analysis Finding 9: Greek Cluster
Literature Analysis Finding 10: Parallel Registry
Literature Analysis Finding 11: Shipowners' aims and objectives
Literature Analysis Finding 12: Shipowners' attributes
Literature Analysis Finding 13: Political Parties and the shipowners
Literature Analysis Finding 14: The Greek Registry and the EU
Literature Analysis Finding 15: Greek national crisis and Greek flagged shipping
Literature Analysis Finding 16: International regulations
Literature Analysis Finding 17: State aims and objectives for the Greek shipping
Literature Analysis Finding 18: Porter and Greek flagged shipping
Literature Analysis Finding 19: National Policy v. Globalization

Source: Developed by the author (2016).

TABLE 57. FINDINGS: DELPHI ROUNDS

Delphi Rounds Finding 1: The flag's potential, state protection, and individual initiative
Delphi Rounds Finding 2: Greek Registry Attributes
Delphi Rounds Finding 3: The individual initiative
Delphi Rounds Finding 4: No strategy, no clear objectives
Delphi Rounds Finding 5: National Crisis & the Greek Registry
Delphi Rounds Finding 6: Determinants for a strong shipping policy
Delphi Rounds Finding 7: Legislation before 1975
Delphi Rounds Finding 8: Policy making & Timing
Delphi Rounds Finding 9: The EU and the Greek Registry
Delphi Rounds Finding 10: Ship Taxation & Preferential Treatment
Delphi Rounds Finding 11: Greek crews in the future
Delphi Rounds Finding 12: Alternative policies
Delphi Rounds Finding 13: Why shipowners flag out the Greek Registry
Delphi Rounds Finding 14: Elements that differentiate Greek shipping
Delphi Rounds Finding 15: Attributes contributed to the success

Source: Developed by the author (2016).

TABLE 58. FINDINGS: PORTER'S DIAMOND ANALYSIS

Porter Diamond Analysis: Factor Conditions (11 elements)
Porter Diamond Analysis: Demand Conditions (8 elements)
Porter Diamond Analysis: Firm strategy, Structure and Rivalry (24 elements)
Porter Diamond Analysis: Related and supported industries, on international and national level (the companies in the international and national cluster)

Source: Developed by the author (2016).

5.2.1 Literature Analysis Finding 1: Shipping Policy and Practice Relationship

The relationship between shipping policy and practice for the Greek flag is complex, multi-faceted, non-linear, and highly context specific. The literature and timeline findings (Table 56. Findings: Literature Timeline Analysis) are presented hereafter.

5.2.2 Literature Analysis Finding 2: 14 governments in 35 years

From 1975 to 2010, nine elections took place and five non-elected governments of necessity resulted in a total of fourteen governments leading the country. 13 governments, with the conservatives and the socialists taking power interchangeably, imply that there was no continuity in the shipping policy. There are cases where the elected governments remained in power for much less than four years which contributes further to the discontinuity of the shipping policy. It is also noted that although parties stayed in government for more than four years the policies and attitude towards shipping were not consistent.

5.2.3 Literature Analysis Finding 3: The government's understanding of shipping

The Greek governments appear to not fully understand the nature of shipping, cyclicity, and the dynamics of the derived demand. This was admitted several times by the state directly by the Prime Ministers.

Although the various governments did not understand shipping, they all offered initiatives to the shipowners mostly because they did not want them to flag out, with the minor expectation that they would attract more ships. The initiatives after 1975 emphasised the cost element with large reductions in the composition of crews in terms of both nationality and numbers, and tax reductions. Another element is that although initiatives were implemented the timing was wrong thus, having no effect.

The literature does not identify what marketing channels or procedures the registry employed to approach potential shipowners or if the policy was that the registry expected to be approached by the potential customers.

Compared to other Greek shipping sectors the Greek-flagged ocean-going sector was unequally treated taking into consideration that (a) in the post 1975 period shipping was not a priority since the aims of this government was restoring democracy and the rebuilding of the state and other industries. Agriculture and tourism were regarded as the promising contributors to rebuilding the state by involving more of the population and more obviously in need of support, (b) in the period after 1981 with the accession of Greece to the EU other industries like agriculture and tourism were subsidised whereas shipping was not, and (c) the state income from shipping was stable since the ships are taxed on tonnage tax whereas tourism is seasonal and periodic.

5.2.4 Literature Analysis Finding 4: Passive attitude of the state towards shipping

The passive attitude of the state can be explained by all of the governments accepting that they could not impact nor control the Greek-flagged ocean-going fleet due to:

- (a) the country nothaving sufficient cargoes to carry by the national fleet,
- (b) the country could not directly subsidise its fleet due to the under developed and non competitive shipbuilding industry and the non discriminatory provisions of EU legislation,

(c) the international nature of shipping that is subject to international economics, laws and regulations,

(d) the Greek flag could not compete with what the flags of convenience offered,

(e) the easiness of shipping companies relocating their business activities to other countries, and

(f) the mobility and adaptability of the Greek shipowners to new and international environments.

5.2.5 Literature Analysis Finding 5: Relations in shipping policy making for the Ship Registry

The strongest relationship identified in the Greek shipping policy is the 'shipowner – state' relationship.

The shipowners do not want the government to intervene, and in order to affect policy making in their favor they either developed close relationships with the government or they threatened the government with flagging out.

On the other hand the Greek seafarers while being important pillars of the Greek-flagged shipping industry did not have the power to lobby for more benefits since such action goes against the shipowners and not the state.

In addition their remuneration is higher than the average jobs in other Greek industries, thus they feel privileged. The measures taken by the governments such as initiatives for the shipowners directly affect the seafarers. The increase of foreign crews on board affect the Greek seafarers because a) the foreign crews do not pay contributions to the

Seaman's Social Security and Pension Fund (NAT), b) higher unemployment rates result among Greek seafarers, and c) the unemployed young people will not find a job onboard contributing to the Greek seafarers' shortage.

5.2.6 Literature Analysis Finding 6: Company's legal status and Authorizations Acts

The cornerstones of the Greek maritime policy lay in Law 2678/53 and were undertaken before 1975. The Law 2678/53 allowed for Company establishment and registration under the Greek Registry, and refers to the Greek-controlled shipping companies and Greek-flagged ships. Article 13 provides for foreign legal entities registering their ships in the Greek registry provided their capital belongs to local interests or EU interests over 50%. Further, the Greek legislation does not provide for any expense and or any fees for registration.

The critical point of this policy explains the use of Authorising Acts. Law 2678/53, article 13, states that the introduction of foreign capital must be under the authorisation of the Greek state. This article allowed a legislative resolution capability outside the parliament and agreements made between the Minister and the shipowners. Further to that article 10 provides non-discrimination among ships once a ship agrees same kind of special treatment this also extends to all other ships as long as there is a request from other shipowner(s). The agreement only changes with shipowner consent, can incorporate any terms and there is no time limit on the investment. However, the Authorising Acts do not affect or provide any discounts on taxation.

5.2.7 Literature Analysis Finding 7: The 50% rule

As discussed in the literature the criterion for implementing the national maritime policy occurred when Greek-flagged shipping amounted to around 50% of the total owned fleet. That 50% became a border line and an arbitrary criterion. It is evidenced that the state did not adopt differentiated policies when the percentage of the Greek fleet was either above or below the 50% line. Though 35 years of cost cutting measures were taken as a result of pressure from the shipowners or with the tax reduction initiative in order to bring in newer ships. The parties in government took decisions on the spot and did not develop a constant and continuing shipping policy. Depending on the pressures imposed, they provided the shipowners with further initiatives mostly related to cutting costs not foreseeing the cyclicity of the market and potential crisis. They undertook measures or delayed in taking measures that anticipated crisis. Further the literature indicates that the Greek shipping policies are mostly dictated by a series of personal choices and subjective measures.

5.2.8 Literature Analysis Finding 8: Tonnage Tax

Taxation was one of the most influential factors since the taxation of ships under the Greek flag was calculated on the tonnage and the age of the ship. This system proved to be advantageous due to simplification, certainty, efficiency, transparency, and cost cutting.

Taxation was an important factor which could influence the repatriation of ships into the Greek flag. At the same time the system of taxation remained

the same but the level of taxation changed following market fluctuations with the aim of maintaining the competitiveness of shipping.

5.2.9 Literature Analysis Finding 9: Greek Cluster

There were numerous Greek companies that provided services to the Greek flagged ships. The Greek cluster was further boosted by the governmental initiative which permits the establishment of the offices or branch offices of foreign shipping companies of any type or form in Greece. These companies enjoy full tax exemption. Additionally the initiatives given for the repatriation of Greek companies with ships registered in other flags increased the demand for services provided, and the Greek registered benefited from that.

5.2.10 Literature Analysis Finding 10: Parallel Registry

Greek-owned shipping grew alongside the Greek-flagged shipping. Competition for the Greek flag should not be considered just in terms of flagging out to the flags of convenience, but to the overall concept that Greek flagged shipping becomes Greek-owned shipping which operates from Greece.

Most of the EU countries have second registers but Greece never had a second register. According to the literature since ships with Greek interests not flying the Greek flag can still be located in Greece and further affiliate with the national seaman's social security fund (NAT). This is considered by an author to be the second registry for Greece, but this is not justifiable.

5.2.11 Literature Analysis Finding 11: Shipowners' aims and objectives

The Greek shipowners always had clear and constant aims and objectives and they have strongly lobbied for them. Their main concern was the taxations cuts, the reduction of costs mostly by the employment of foreigners on board, the reduction of ranks on board of ships, and their contributions to the seaman national fund (NAT).

5.2.12 Literature Analysis Finding 12: Shipowners' attributes

The Greek shipowners are characterised by certain attributes as also discussed in the Firm Strategy, Structure and Rivalry attributes, which are further developed, and affected by culture, and tradition.

5.2.13 Literature Analysis Finding 13: Political Parties and the shipowners

The perception is that shipowners always had close relationships with the government, being closely related to the conservative party and there were some consternations with the socialists. The literature indicates that shipowners benefited from all parties in power. The extent of the benefit and timing, differs. The closest relationships with the conservatives resulted in effective policy making. On the contrary the difficulties with the socialists and timing problems with the decisions taken by the socialists combined with the downturn in the market resulted in ineffective policy making.

5.2.14 Literature Analysis Finding 14: The Greek Registry and the EU

The Greek flagged shipping industry contributed (a) to the EU fleet, (b) the development in the enacting of shipping policies within the EU, and (c) representation in the IMO of the largestest fleet in the EU.

The EU policy concentrated on the quality and safety of the fleet, focusing more on liner and passenger shipping, and overall the measures undertaken increased the flag costs in the short run but in the medium and long run they increased the flags quality.

The accession of more and strong shipping members into the EU resulted in the Greek flag taking the lead role. On the other hand the newer shipping members attracted more attention to shipping and enhanced healthy competition.

For many years Greece was trying to persuade the other EU shipping member states to adopt the tonnage tax. Many EU members adopted the tonnage tax policy, and by doing so they become more competitive in the world shipping arena which enhanced the EU fleet power. This also resulted in competition for the Greek flag.

5.2.15 Literature Analysis Finding 15: Greek national crisis and Greek flagged shipping

The literature evidences a correlation between the national economic crises but only when it affected national stability. When national stability is affected then flagging out is eviedenced, for example the short crisis of 1993.

5.2.16 Literature Analysis Finding 16: International regulations

The Greek flag's costs increased with the adoption of international regulation and the compliance of other countries' national legislation but at the same time the quality of the flag increased. For example the effect of ISM to small and medium sized shipping companies as well as the Oil Pollution Act 1990 with the provision of financial certificates. Compliance with the international regulations resulted in the White List remaining in the MOU's. This is a factor attracting vessels to the fleet. For example in the tanker market all large chartering houses are chartering ships that fly white listed flags.

5.2.17 Literature Analysis Finding 17: State aims and objectives for the Greek shipping

The state policy making towards shipping was made taking into consideration the effect of shipping towards the balance of payments.

Since 1975 the state had the same aims: to make the Registry more competitive and attractive and make Piraeus a shipping centre. While the setting is important it is equally important that a) those aims were achieved, and b) to measure the extent of achievement. This was never the case for Greek flagged shipping.

5.2.18 Literature Analysis Finding 18: Porter and Greek flagged shipping

Porter's 1990 theory applies to the Greek-flagged ocean-shipping. The success depends on the Greek political, economic, social and legal environment as well as the application of government policies to promote national competitiveness.

5.2.19 Literature Analysis Finding 19: National Policy v. Globalisation

Ships always flag in and out of registries. According to the literature (Sletmo 2001) globalisation being the triumph of makers over governments places severe limits on a country's ability to pursue national policies in global markets. If that is the case then the limits frame the local environments national policies and can work within or not. In the same sense a basketball game has rules. Could a player 1.50 cm tall play at the NBA? As long as nations are able to be in the flag business, limits can be considered as opportunities and threats depending on the attitude a state has over its industry.

5.2.20 Delphi Round Analysis Findings

The findings from the Delphi rounds (Table 57. Findings: Delphi Rounds) are presented here after.

The reader can identify the finding derived from the statements, and the actual finding is referred to as "(Statement/R)", (see Table 59). The information in the parenthesis denotes the statement and the Delphi round. For example Statement 2/R1 means that the specific finding derives from Statement 2 in Round1. This allows the reader to easily trace and go back to the original Delphi statement.

TABLE 59. SYMBOLISM & PARADIGM RELATING ROUND'S STATEMENT TO FINDINGS

<i>What it means?</i>	<i>Symbolism</i>
<i>Finding derived from Statement</i>	<i>("Statement/R")</i>
<i>For example</i>	
<i>The Greek flagged shipping has potentials (Statement 2/R1)</i>	<i>The Finding (The Greek flagged shipping has potentials) derives from Statement 2 in Round 1.</i>

Source: Developed by the author (2017)

5.2.21 Delphi Rounds Finding 1: The flag's potential, state protection and individual initiative

Greek flagged shipping had potential (Statement 2/R1) this contributed to its success. The Greek government did not protect Greek-flagged shipping (Statement 1/R1) to the extent the state was able to. Greek-flagged shipping was always competitive (Statement 4/R1), and developed mostly due the individual initiative of the shipowners (Statement 3/R1).

Taking into consideration the potentials of the flag, and the individual's initiative, if the state had further protected and promoted Greek-flagged shipping then the Greek flag would have been more competitive over the last 40 years (Statement 5/R1). It is also a fact that the state could protect Greek flagged shipping (Statement 9/R1)(Statement 2/ R2). For example, without the support of the state after World War II Greek-owned shipping would never have increased as much as it did (Statement 18/R1).

5.2.22 Delphi Rounds Finding 2: Greek Registry Attributes

The literature outlines the role of the government (Statement 18/R1) and although positive policies are offered by the government (Statement 12/R2) there exists the belief that the choice of flying the Greek flag on board ships is simply due to patriotism (Statement 10/R1). When consideration is given to the capacity flagged in with other flags this is overridden. Still there are certain advantages to the Greek registry presented in Table 60 (Statement 3/R3 Statement 19/R2).

TABLE 60. GREEK REGISTRY: ADVANTAGES, (STATEMENT 3/R3 STATEMENT 19/R2)

Rank	Advantages
1	Taxation
2	Status & Quality
3	Stability
4	Cost of operating ships
5	Legal framework
6	Cost for registering
7	Authorizing Acts
8	Service

Source: Developed by the Author (2016).

5.2.23 Delphi Rounds Finding 3: The individual initiative

The governments who did not strongly support the Greek-flagged shipping industry (Statement 6/R1) allowed for individual initiative to grow.

Greece not being an exporting country is not able to assist the Greek-flagged ships (Statement 21/R1) in a palpable way.

5.2.24 Delphi Rounds Finding 4: No strategy, no clear objectives

According to the literature, policies in order to be effective must be appropriate, directed, and transparent (Roe 2009a). The Greek government did not have clear policy objectives or strategies for the Greek flag (Statement 10/R2), nor continuity in decision and strategy (Statement 11/R2). The political parties in opposition did not strongly support shipping or propose any shipping policies (Statement 3/R2). Conversely, the shipowners always had clear strategies and objectives. The main issue is that the governments did not provide initiatives to attract ships to the Greek registry (Statement 20/R1) in a systematic way undertaking a systematic plan for the development of the national registry (Statement 23/R1).

5.2.25 Delphi Rounds Finding 5: National Crisis & the Greek Registry

Although the literature identifies that Greek shipping was servicing the world shippers it can be argued that national circumstances did not affect the sector. Indeed the short economic recessions do not directly affect the Greek flag but short crisis when they affect national stability the flag is then affected (Statement 4/R2).

5.2.26 Delphi Rounds Finding 6: Determinants for a strong shipping policy

Primary research reveals that a strong shipping policy for the Registry should incorporate the elements in Table 61 (Statement1/R3, Statement 18/R2).

TABLE 61. IMPORTANT DETERMINANTS OF A STRONG SHIPPING POLICY FOR THE GREEK FLAG - (STATEMENT1/R3, STATEMENT 18/R2)

Importance Rank	Successful element for the Greek Registry
1	Taxation
2	Quality of flag
3	Composition of crews
	National Stability
4	Cluster in Greece
5	Authorizing acts
6	Legal status of company
	Provision of quality education and training
7	Other flag systems and stability
8	Service offered by the flag

Source: Developed by the Author (2016).

5.2.27 Delphi Rounds Finding 7: Legislation before 1975

Legislation passed during 1975 to 2010 did not positively affect the growth of Greek-flagged ocean-shipping (Statement 7/R1) since the benefits were already provided with legislation passed before 1975, and gains were enjoyed through the thirty-five years. The laws enacted before 1975 attracted Greeks to register their ships under the Greek flag, but direct support in the form of direct subsidisation never occurred either.

5.2.28 Delphi Rounds Finding 8: Policy making & Timing

There was legislation that negatively affected the growth of Greek-flagged shipping (Statement 8 /R1) mostly due to the inadequate timing or political games. Although there were policies or rather tactics that contributed to the competitiveness of the Greek flag (Statement 12/R2) with the exceptions of the merging of the Ministry of Shipping with other Ministries (Statement 5/R2). Thus, the Greek state did not ignore Greek-flagged shipping (Statement 22/R1) although shipowners wanted to be left alone.

5.2.29 Delphi Rounds Finding 9: The EU and the Greek Registry

Overall EU membership and shipping policies positively affected the Greek flag (Statement 11 /R1) with respect to the tramp market in terms of quality and safety (Statement 6/R2). But there was no such successful policy for Greek-flagged ships in the tramp sector cabotage was implemented for the Greek ferry industry in the Aegean Sea (Statement 13/R2). Since the EU focused in liner and passenger shipping more than tramp, and the state did not protect and promote the tramp shipping as they did passenger shipping.

On the other hand it can be claimed that Greek-flagged shipping was treated with lower overall taxation than other industries such as tourism and agriculture (Statement 9/R2) however, Greek flagged shipping never received any EU subsidies or any other form of direct subsidy.

Also, the Greek flag does not overly benefit from lower taxation in comparison with other EU states (Statement 8/R2) since the tonnage tax method is used in almost all EU countries.

Other EU flags such as Malta and Cyprus have affected the competitiveness of the Greek flag (Statement 7/R2) and later the EURO currency (Statement 12/R1) affected the Greek-flagged shipping industry.

5.2.30 Delphi Rounds Finding 10: Ship Taxation & Preferential Treatment

Shipowners that fly the Greek flag were not preferentially treated (Statement 14/R1), nor was the tonnage tax in their favor (Statement 13/R1).

5.2.31 Delphi Rounds Finding 11: Greek crews in the future

The composition of crews under the Greek flag in terms of numbers, ranks, and ethnicities were altered several times. Still those changes do not demotivate young Greeks to get into shipping (Statement 15/R1, Statement 16/R1).

5.2.32 Delphi Rounds Finding 12: Alternative policies

Greece should consider developing a second, parallel ship register (Statement 16/R2).

5.2.33 Delphi Rounds Finding 13: Why shipowners flag out the Greek Registry

Greek-owned shipping grew alongside Greek-flagged shipping. If Greek owned shipping was not located in Greece then it is questionable if the strong shipping cluster Piraeus (Statement 15/R2) would have developed to such an extent.

The reasons for flagging out are operational (Statement 25/R1), and economic (Statement 26/R1) but not political (Statement 24/R1) or any other reasons (Statement 27/R1). That is proven since the flagging advantages of the flags of convenience make shipowners flag out (Statement 19/R1).

There is no evidence of any government initiatives that retain capacity for the Greek flag (Statement 1/ R2).

The factors which make shipowners flag out are presented in Table 62 (Statement 20/R2).

TABLE 62. WHY GREEK SHIPOWNERS FLAG OUT? (STATEMENT 20/R2)

Importance	Factor
1	lower taxation
2	lower crew costs
3	resilient and stable tax system
4	flexible crew composition
5	reduction of contribution towards NAT
6	lower operational costs
7	bureaucracy
8	anonymity
9	highly qualified foreign crew

Source: Developed by the Author (2016).

5.2.34 Delphi Rounds Finding 14: Elements that differentiate Greek shipping

There was always a strong shipping know-how in the Greece (Statement 14/R2), and domestic rivalry between shipowners which enhanced the development of the Registry (Statement 17/R2)

There are more factors that contributed to Greece as a shipping nation and it is difficult for competitors to commence or expensive to obtain (Table 63) (Statement 21/R2).

TABLE 63. FACTORS WHICH CONTRIBUTE TO GREECE AS A SHIPPING NATION AND THE COMPETITORS DOES NOT COMMENCE AND IT IS DIFFICULT OR EXPENSIVE TO OBTAIN (STATEMENT 21/R2)

Importance	Factor
1	Know-how
2	Experience
3	Willingness to take the risk
4	Different management practices
5	Skill
6	Human resources
	Rivalry
7	Loyalty
8	Regulatory framework
9	Education and training
10	Related and supporting industries
11	Funds
12	Technology
13	Long term involvement in shipping
14	Tradition
16	Support from the state

Source: Developed by the Author (2016).

5.2.35 Delphi Rounds Finding 15: Attributes contributed to the success

Since shipowners, seafarers, the cluster, and the increase of the seaborne trade have contributed to the success of Greek-flagged ocean-going shipping, it is not just one element that contributed to its success (Statement 27/R1).

5.2.36 Porter's Diamond application on the Greek flagged ocean-going shipping (The Success Attributes)

The application of Porter's theory on Greek-flagged ocean-going shipping suggests that the success is due to the interrelations and dynamics of certain attributes these include; the factor conditions, the demand conditions, the firm strategy, structure, and rivalry, and the related and supported industries on national and international levels.

The findings of the application of Porter's Diamond (Table 58. Findings: Porter's Diamond Analysis) are presented hereafter. The actual composition of the four Diamond factors follow and are composed, visualised, refined, and presented in the following Tables (Factor Conditions elements are illustrated in Table 64, the Demand Conditions are illustrated in Table 65, the Firm Strategy, Structure and Rivalry illustrated in Table 66, and the Related and supported Industries on national and international level are illustrated in Table 67).

TABLE 64. GREEK DIAMOND: FACTOR CONDITIONS

The stable regulatory system.
There was no national demand for the Greek ships.
The national banks were providing lending.
The taxation was based on tonnage tax.
The quality of ships under the flag was high.
The governmental policies providing the shipowners with initiatives.
The crew composition in the Registry allowing foreigners.
Location and proximity to the market with the cluster being located in Pireaus and the suburbans of Athens.
The poor Greek economy (a) was valuing the contribution deriving from the Greek-flagged ocean- shipping and (b) forced Greeks to the sea.
The currency gains, were expenses were in drachmas and income in dollars.
The European Union as a supra national governing body.

Source: Developed by the Author (2016).

TABLE 65. GREEK DIAMOND: DEMAND CONDITIONS

The seaborne trade being cyclical and seasonal.
The shipping industry being characterized by derived demand.
The ships' values that fluctuate depending on the supply and demand of shipping services.
The global demand for shipping services, since the demand was global and not national or local availed opportunities for ship employment.
Constant growth of international trade.
The nature of seaborne trade, for example the seasonality availed the shipowners to trade on different parts of the world.
The tramp shipping was an open market in contradiction to the liner shipping.
The political and economical conditions affected the trade, for example the Asian crisis and the Chinese boom.

Source: Developed by the Author (2016).

TABLE 66. GREEK DIAMOND: FIRM STRATEGY, STRUCTURE, AND RIVALRY

Greeks had the ability to foresee market changes, for example the ability to foresee the surplus in supply and the decrease in demand for bulk carriers and being flexible they diversified their activities to the tanker market;
The asset play strategy, for example their strategy in investing in second hand ships when the market was at the lowest and sell them when the market was at the highest;
The development of close societies/cliques, for example the shipowners originating from Chios employed onboard seafarers and employees ashore from Chios island;
The family involvement in business and the development of a close society/industry;
Diversification of activities, for example owning both bulk carriers and tankers, or placed ships on traditional registers and flags of convenience;
Managing human resources efficiently and effectively, what is called today emotional and intelligence management;
Entrepreneurship culture, for example Captains becoming shipowners;
Ships were acquired on equity rather than borrowing from a bank. The equity was either personal or sourced from business partners usually family or friends. That provided shipowners with financial freedom. The employment of skilled Greek seafarers assured seaworthiness and increased the life expectancy of the ship. When the market increased ships were sold and what was made out of them were reinvested in acquiring new ships.
Ships were managed by the owners themselves hardly considering leasing or giving the operation to a ship management company;
The intense local rivalry boosted development. Rivalry is a characteristic of the Greek culture, for example the rivalry between Onassis and Niarchos and the rivalry among other shipowners but also Captains, seafarers, and managers;
Shipowners commenced in-depth know-how of the ship operation, most of them being former Captains;
Greek controlled shipping overall developed large capacity, for example they developed large fleets that could affect demand and supply;
Lean management was applied on board of ships and ashore with no unneeded expenses and procedures, for example the offices ashore were never over staffed
Greek owners had a natural talent for shipping, for example in choosing the ship type and size or the negotiating charters and freights;
Greek owners adopted a 'nothing is impossible' attitude towards shipping;
Greek shipowners were characterised by passion and dynamism;
Greek owners developed personal connections with governments and traders;
Greek shipowners adopted proactive and adaptive management, for example in investing in different markets and for flagging out;

Please note: The Table continues on the next page

Please note: The Table continues from the next page

Greek shipowners had a constant strategy , for example in the negotiations with the governments;
Greek shipowners had shipping traditional background, for example they mostly originated from islands or from shipowning or seafaring families;
Greek shipowners adopted traditional conservative management, for example they were conservative the investment of new ship types;
Greek shipowners had a vision, for example asset playing was not fluffing the aim of just acquiring a ship but was the mean to build up to a fleet;
They were willing to risk, for example they acquired ships when the market was low without having the assure if and when the market will increase;
The satisfaction out of the success boosted the Greek shipowners self-esteem.

Source: Developed by the Author (2016).

TABLE 67. GREEK DIAMOND: RELATED AND SUPPORTED INDUSTRIES ON NATIONAL AND INTERNATIONAL LEVEL

Athens Stock Exchange	Maritime Academies
Agents	Ministries
Banks	Ministry of Shipping
Bunkering and Lubricant companies	Ports
Chamber of Shipping	Posidonia Exhibition
Chambers	Ship Maintenance
Classification Societies	Ship repair
Conferences organizers	Ship Sale and Purchase brokers
Consultants	Shipbrokers
Diplomacy associations	Shipbuilding
Embassies	Shipowners
Environmental organizations	Technology
Equipment	Training Centers
Greek controlled shipping	Unions
Helmepa	Universities
Information Systems	Women Association
Insurance Services	Arbitration Associations
Legal services	

Source: Developed by the Author (2016).

5.3 Model Development : The GREKON MODEL

Porter 1990 developed the Diamond of National Competitive Advantage on the basis that the nation's attributes constitute, and determine the diamond of national advantage.

As illustrated in Table 68, each attribute to success, is considered as an essential element in the achieving of international competitive success. The attributes, are interrelated as sole elements or a system.

TABLE 68. INDIVIDUAL AND/OR INTERRELATED PERFORMANCE OF THE DIAMONDS ATTRIBUTES

Attribute	Example
Are Interrelated	For example the fluctuations in demand of shipping services (demand factor) affect the demand of the shipowners capacity (firm strategy, structure and rivalry) the demand for seafarers (related and supported industries) and puts pressure on governments to adopt policies (demand condition), the shipowner (firm strategy, structure and rivalry) with his capacity and his investment decisions affect the supply of services (demand factor) the demand for seafarer (related and supported industries) and puts pressure on government for the provision of training (demand condition), the availability of the seafarer's (related and supported industries) affect the shipowner in operating his ships (firm strategy, structure and rivalry), puts pressure on governments for crew reductions (demand condition), and the government (factor condition) affects the demand of shipping services (demand factor) by seizure of the the ship in war time and so on.
Operate as a sole element	for example the government undertakes policies with not considering the other attributes, as a system, for example all attributes are synchronized to produce outputs, or sub-systems within the system, for example the government and the shipowners develop a channel and all decision are taken by them.
Operate as a system	For example the market changes or the market is predicted to chance, in response and beforehand the parties are getting into discussions focusing on how as a system will anticipate the market changes, There of the attributes are working in a web system, most probably chaotic but still a system.

Source: Developed by the author (2016).

Figure 40 models the Porter's Diamond application on Greek-flagged ocean shipping (hereafter the Greek-flagged ocean-going shipping Diamond or the GREKON MODEL). The relationships of the attributes can be visualised as a three-dimensional model that displays a picture of millions of webs. This is how the Greek-flagged shipping should be visualised.

The workings of the industry are identified though the attributes and their interrelations analysed as the finding of the research. The role of the government in the development of the national fleet is not supportive but active.

Traditional Management	Lean structure	Know How	Personal Connections	Strategy	Asset Play	Intense Local rivalry
Equity	Willingness to Risk	Lean management	Large Capacity	Being Proactive and adaptive	Family involvement	
Vision	Passion and dynamism	Diversified Activities	Emotional and Intelligence Management	Nothing is impossible attitude		
Tradition	Entrepreneurship Culture	Job satisfaction	Natural Talent	Self esteem	Ability to foresee	Closed societies

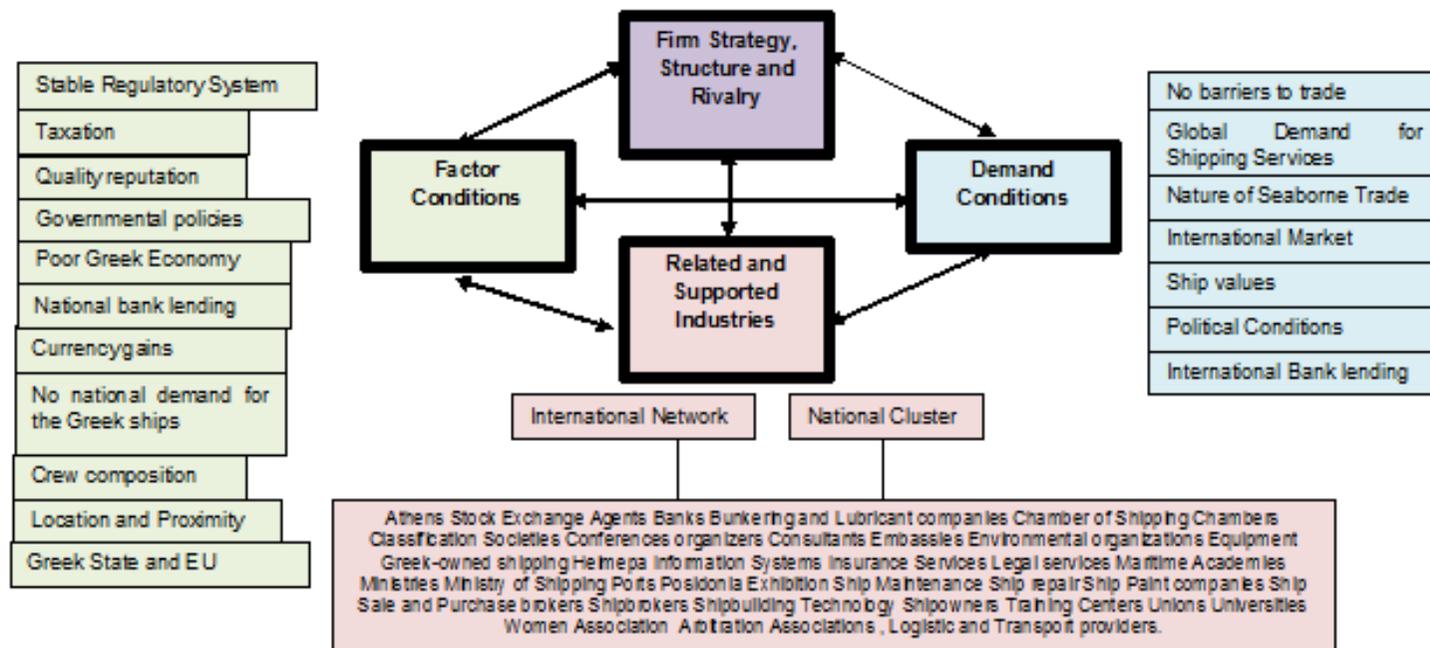


FIGURE 40. PORTER'S DIAMOND APPLICATION ON GREEK-FLAGGED OCEAN SHIPPING: THE GREEK FLAGGED OCEAN GOING DIAMOND OR THE GREKON MODEL

Source: Developed by the author (2016).

5.4 Contribution to knowledge: academia, ship registries competitiveness, and national maritime policies

5.4.1 Contribution to Academia

This study contributes to academic knowledge by:

- Filling a gap in knowledge and academia on a topic that was never considered in depth;
- Developing the foundations of research in maritime policy, decision making and competitiveness which will impact further research;
- Developing a theory on the application of Porter's diamond in Greek-flagged ocean-going shipping competitive advantage;
- Developing an innovative methodological approach for shipping policy issues;
- Developing further Porter's diamond by (a) altering the position of the state in the diamond, (b) incorporating the national and international cluster, and (c) discussing the connections and effects of the sub-systems within the system;

This study results the following theory (Table 69).

TABLE 69. THEORY: ADDITION ON PORTER'S THEORY

<p>The application of Porter's diamond on public owned organisations that function in international markets, requires that the 'government' element and its functions are represented in the 'Factor Conditions'. The 'change' element, is an external and internal factor. Internal change undertaken by the system or its elements (factor conditions, Firm Strategy, Structure and Rivalry, the Related & Supported industries) affects the system internally and has an external affect to the market. The 'external change' affects the whole system.</p>
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Source: Developed by the author (2017).

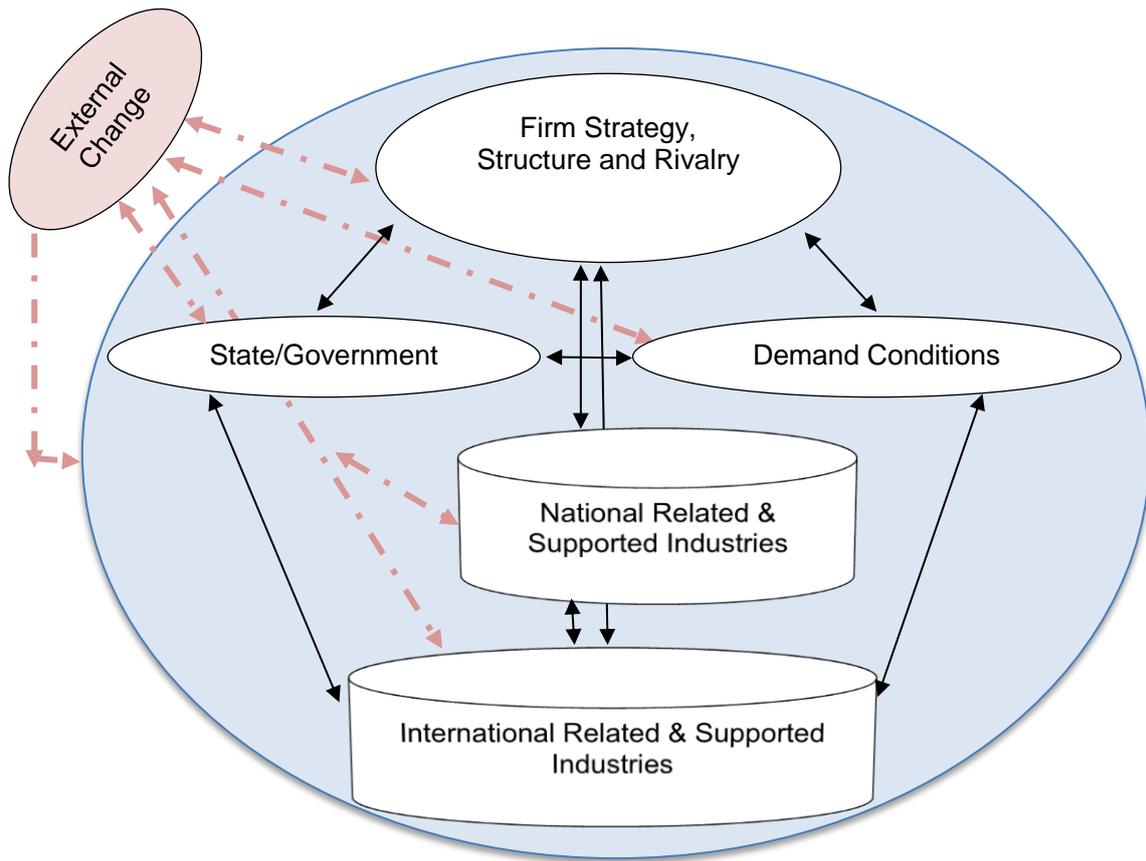


FIGURE 41. THE GREKON MODEL

Source: Developed by the author (2017).

- Opens up and connects the Greek shipping industry to academia; since the outcomes of the research have an impact on the public and private sector affecting individuals, shipping practitioners, countries, registries and governments.

5.4.2 Contribution to ship registries competitiveness, and national maritime policy development

The outcomes of this study contributes to the competitiveness of registries and the development of maritime policies.

The GREKON MODEL can be used as tool by governments and registries in order to:

5.4.2.1 The GREKON MODEL as a tool to evaluate the attributes that contribute to the Registry's competitiveness

Every registry has certain attributes. Those attributes must be identified and measured, in order to examine options and to adopt adequate policies, subject to the market dynamics and the international competition.

The potential use of the GREKON MODEL as a tool is illustrated in Figure 41. The government consulting the cluster will be able map the attributes, set targets, and policies.

The descending scheme (blue in colour, in the center of the figure, and in between the 2 models) denotes the procedure, and those actions to be taken in order to develop the Registry (Point A in Figure 41). First the existing attributes of the flag are mapped, measured, and compared against competition. In accordance with; the mapped attributes, the current market situation and forecasts, the targets for the Registry are set, the plan of action follows, and the policies to be adopted (Point B in Figure 41).

Figure 42 illustrates that the effective use of the GREKON MODEL requires constant evaluation, and feedback on the effectiveness of policies adopted against targets. Targets must also be evaluated as being realistic, suitable and achievable subject to the current market situation, and forecasts. The ascending scheme within Figure 42 (on the right side, red in colour) starting from POINT X, denotes the cyclical procedure to be followed in order to evaluate and monitor the performance of the flag against expectations and competition. Policies must be transparent and measurable using key performance indicators in order to be evaluated.

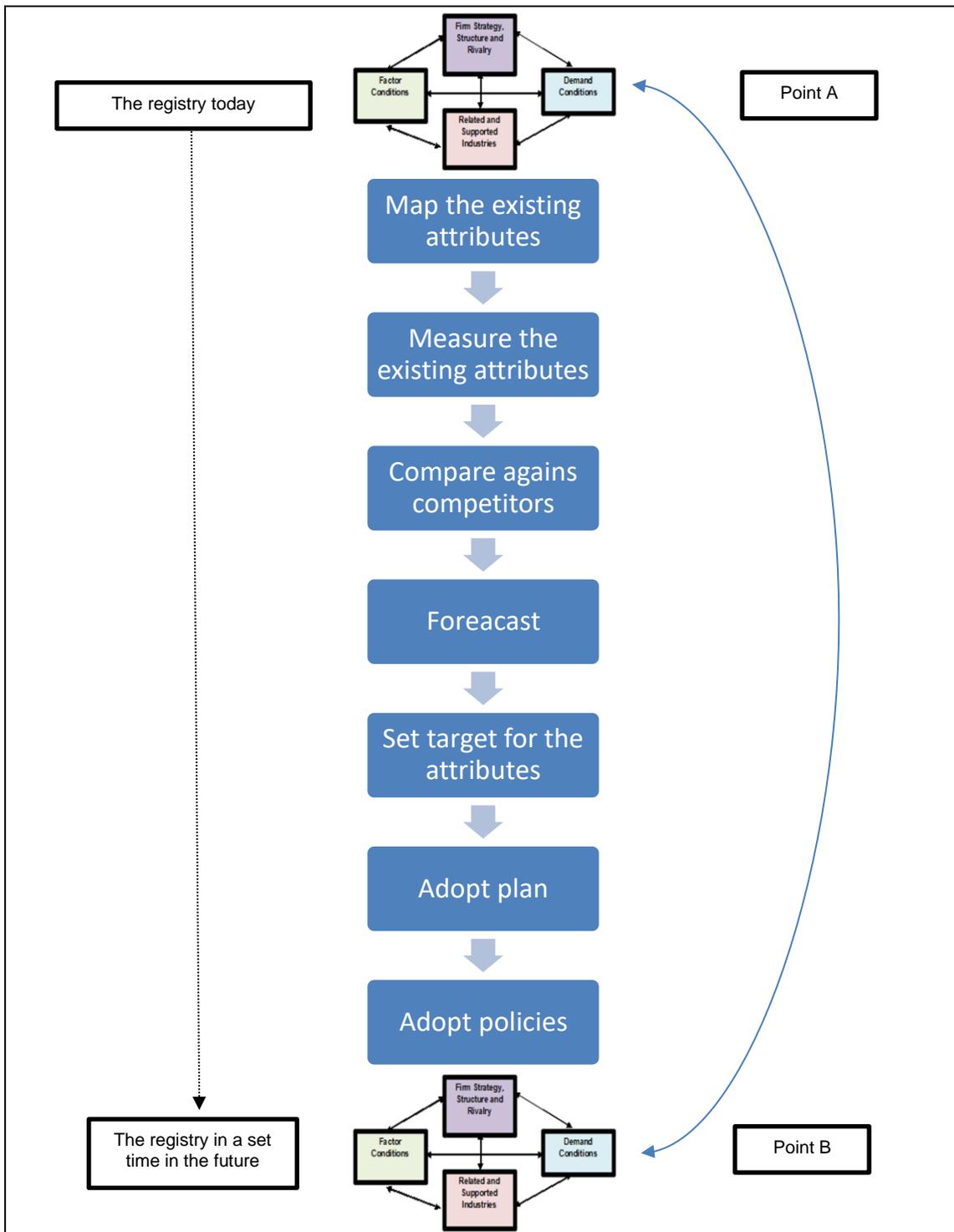


FIGURE 42. USING THE GREKON MODEL AS A TOOL FOR DEVELOPING THE REGISTRY: DEVELOPING

Source: Developed by the author (2017).

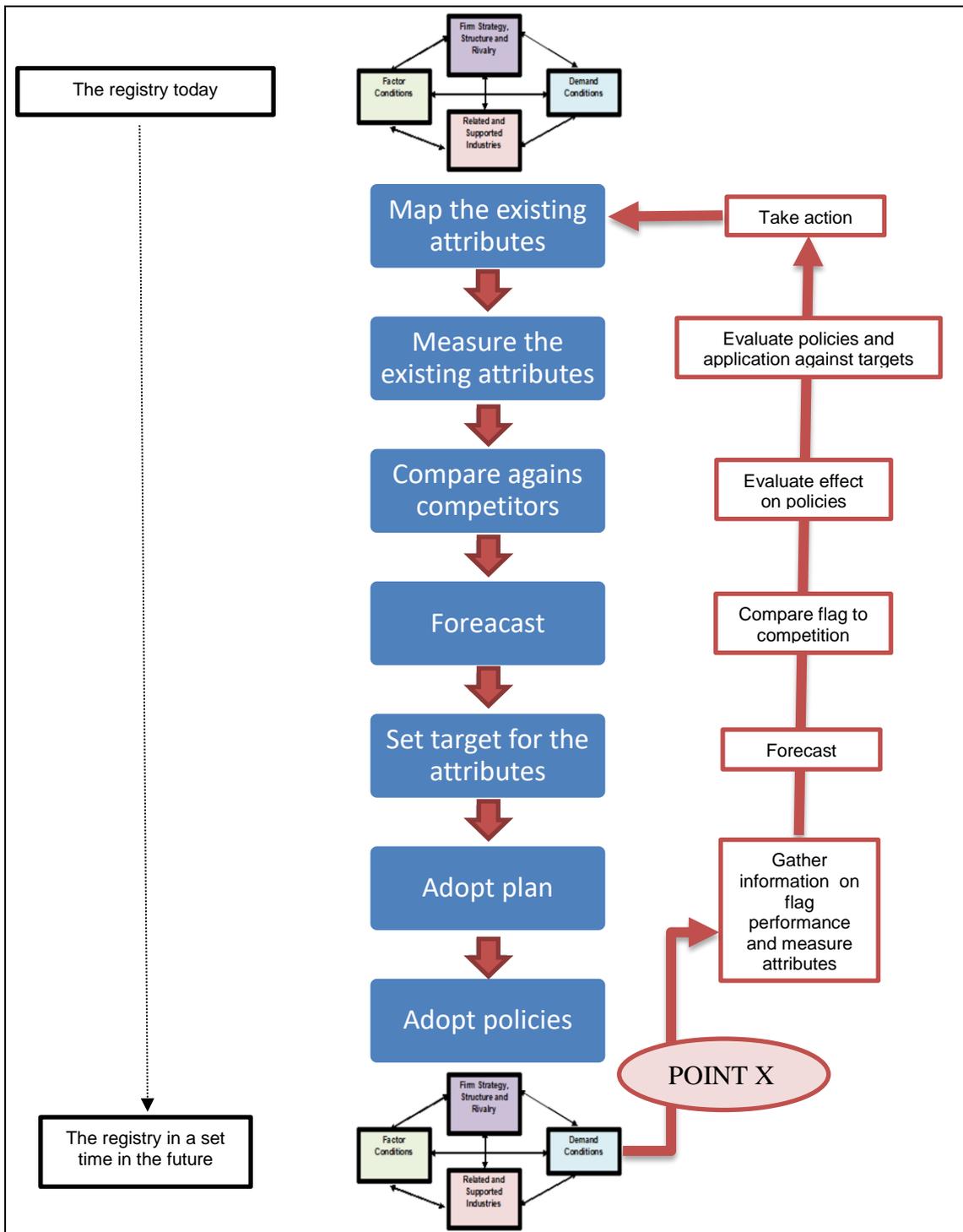


FIGURE 43. USING THE GREKON MODEL AS A TOOL FOR THE EVALUATION OF THE POLICES FOR DEVELOPING THE REGISTRY: EVALUATING

Source: Developed by the author (2017).

5.4.2.2 The GREKON MODEL as a tool to measure competitiveness against competing registries

Registries are compared and contrasted in terms of success, which is the carried capacity, their performance using the Port State control criteria, and their conformity to international regulations. The GREKON MODEL can be used as an overall approach in order to grasp the elements that can contribute to competitiveness.

5.4.2.3 The GREKON MODEL as a tool for retaining and enhancing attributes

This study justifies that the major advantages of the Greek flag is the tonnage tax, the image/reputation and quality, and the stability. The state should retain and enhance further the advantages of the flag. Taxation is one of the most important criterion but not the only one. Shipowners consider a number of factors. Thus, the Greek government should undertake policies that retain and increase quality, safety, and stability.

The Authorising Acts is an example of good practice. Thus it should remain as it stands as a policy.

5.4.2.4 The GREKON MODEL as a tool for stable, proactive, and flexible maritime policies

The Greek state must adopt a clear defined strategy for the Registry and the overall maritime sector. Learning from the mistakes made in the past, proactiveness is required as a general approach to maritime policy making. Flexibility refers to the policies adaptability to the shipping cycles' phases.

The 50% boarding line or rule of thumb, it was never applied in the decision making for the Greek flag. Overall as an approach is reactive and out of date since the decline must firstly be observed and then the policies adopted. It can be used though as a flexible tool if the rule is applied subject to the key performance indicators, and that denotes the flexibility in actions and proactiveness.

5.4.2.5 The GREKON MODEL and maritime policies for the Greek Registry

The GREKON MODEL reveals the policies that should be undertaken for the Greek maritime industry. For example the Greek government may develop the Registry by:

- Retaining and developing further maritime policies for foreign investments as well as by developing policies that support the cluster located in Greece;
 - Develop a free trade area for shipping companies in Piraeus;
 - Support start up shipping related companies.
- Develop policies that encourage shipping technology and innovation;
 - Locating information technology companies in a spatial maritime area and supporting start ups.
 - Upgrade the e-governance systems
- Develop policies for maritime training and education.
 - Develop the Maritime Academies in collaboration with shipowning companies;
 - Offer courses delivered in English at Universities and Maritime Academies, for both Greeks and foreigners;
 - Incorporate maritime modules in the high school curriculum;
 - Connect academics and Universities with the maritime industry.

- Develop Piraeus as a shipping training center for shipping professionals and seafarers;
- Assure application of equal treatment in labour laws and motivate companies to employ women.

5.4.2.6 The Greek Ministry of Shipping

The national and international role and prospects of Greek shipping and the Greek flag justify the need for the Ministry of Shipping as a sole entity.

The Hellenic Coast Guard has always dominated the Ministry. The international commercial know-how of Captains and Chief engineers, and other market practitioners would be an asset for the Ministry. Thus, the Ministry should recruit shipping pioneers, and with their valuable know-how they will be able to contribute to the national maritime policy.

It is of great importance that the Ministers, appointed as well as their consultants have shipping related experience or be shipping market oriented and thus they have a first hand appreciation of the workings of the market.

5.4.2.7 Piraeus as a shipping, training, innovation, and technology centre

It is to the Greek benefit to retain and attract shipping establishments in Greece.

The Greek economic crisis imposed severe taxation on citizens and companies and it seems that the Greek shipowners have enjoyed preferential treatment. This is hardly the case. Firstly the Greek shipowners voluntarily increased their contributions to the state, and secondly the Greek government should understand that Greek ocean owned shipping should

not be treated the same way that other national industries are. The main reason for this is that Greece is competing in the international arena and the government should not let in the pressures of the EU. The argument that Greek shipping is preferentially treated is untrue since simply a) the majority of the EU states have adopted the tonnage tax system, and b) if the system in Greece allows that a better treatment than the other EU shipowners would register their ships under the Greek flag or relocate their companies in Greece, but they never did. If taxation is increased, Greek flagged ships will flag out to other European flags or flags of convenience, and Greek shipping establishments will massively relocate.

5.4.2.8 A second registry for Greece

The Greek government should consider the development of a second registry due to the poor Greek economy, the deficit in seaborne trade, and the flagging out of ships.

The flagging out threatens the Registry itself and the domestic economy to varying extents. History shows that the development of the second registry has taken place in periods of large economic boom or deficit. The research justifies that the shipowners flag out because other flags provide them with lower taxation and lower crew costs.

It would be of benefit to the shipowner and the state if ships would fly the Greek flag or the flag of a semi-sovereign offshore dependency, but with different taxation and manning rules. Greece, with the experience, networks, and heritage from the traditional flag will enforce adequate

standards insisting on safe and correctly maintained ships that conform to international conventions, and Port State Control requirements.

The development of a second registry in the long run might have a negative effect on the Greek Registry. This is questionable since nothing determines a potential decline in the Greek Registry capacity with the implementation of a second register or the ships would have flagged out anyway. On the other hand the Greek state will benefit by attracting the shipowners that want to flag out, the tonnage from Greeks that they will flag out from the flags of convenience, and tonnage from other nations. Just considering as a target market the 70% and more Greek owned ships that are registered under other flags is a huge target market by itself.

5.4.2.9 Customer reward system for flag loyalty.

Customer loyalty is important for every organization. Multinational companies employ techniques in order to retain customers and enhance loyalty. The Greek flag may also consider adopting customer service practices. To avoid internal EU competition among traditional flags this could be a policy applied at an EU level.

5.4.2.10 Greek flag in the world forums and markets

The Greek flag is one of the top flags in terms of quality. Strong marketing practices should be undertaken by the Greek government to promote the national flag and the shipowners in the international forums and markets. This should be in common approach with the market practitioners.

5.5 Validation of Conceptual Model after application

On the basis that objectives are achieved through acquired evidence it is implied that the conceptual model has successfully accommodated real world practices and phenomena.

Different approaches and techniques were embarked in order to realize this study, from exploratory, to inductive, deductive, abductive, mixed and overall pragmatic. Pragmatism being flexible, impulsive to research design and grounded research, realistic and challenging approach has been proved to work as the only best possible approach that supports the use of a mix of different research method, modes of analysis and a continuous cycle of abductive reasoning. Indeed the truth on the success of the Greek-flagged ocean shipping has been revealed supporting Drewey's "existential reality" and "truth' whether it is an objective truth or subjective produced knowledge that represents reality and most importantly supporting Rortly, this knowledge is available for use.

Its has been established that undertaking th cyclic methodological process allows for movement between theorizing and doing empirical research moving from one approach to the other and making the best out of each one in order to achieve the research objectives in the most efficient and effective way.

The success of the conceptual model is challenged based on Britt's (1997) criteria in order to evaluate the increase in the capacity of understanding. The criteria used are (a) the ability to increase the capacity to describe what

is going on and how it takes place and (b) the ability to increase the understanding of how theories apply to the phenomenon being analysed.

The synthesis of the literature, the analysis of the literature using the timeline Alpha to Omega, the critical analysis of the literature in combination with the Delphi method increases the capacity to describe what is going on and how it takes place as well as the understanding of how theories apply to the phenomenon being analysed. The relationship between shipping policy and practice for the Greek flag is complex, multi-faceted, non-linear, and highly context specific. In that respect many theoretical aspects were evidenced as legal, micro and macro economical and political. The scope of this project was not to identify and explain all the related theories but to understand these aspects and incorporate them into the overall policy making. The conceptual model being innovative was able to build up through the examination of information stages and levels in the policy making.

The application of Porter's theory and the development of theory for the Greek-flagged ocean-shipping industry increased the understanding of how theories apply to the phenomenon being analysed and explain its workings and dynamics.

The consideration and undertaking of data analysis although not adequate for this research was incorporated as a stage in the conceptual model in order to strengthen justification of the use of the Delphi method as the only core means to approach this topic.

Finally the author enjoyed working on a real world paradigm which will by definition make an impact on different layers of society.

5.6 Participants view of Delphi

Participants were overall satisfied with the gathering of responses on the topic. Although they have agreed that they could not consider any other viable way to gather information the author would have welcomed dialogue and discussion on this. They were also satisfied with the procedure and time to fill the survey and consider their answers in all three rounds. It was also mentioned that they were impressed with the accommodation of such a wide range of views.

5.7 Limitations and Further Research

The topic is by nature complex due to the complexity of real world politics. The author although this research was undertaken in such a manner because the author believes in the best possible solutions as well as is seen in Greek shipping that no mission is impossible.

Although at first glance it seems that the major limitation of this study is the sole focus on Greece, on the contrary this is the advantage of the study. Using the Greek case as a paradigm means the results obtained can be projected to any national shipping public policy, to any sector, to any region in the world or to any nation that has succeeded in any industry. Therefore, the conclusions apply to all shipping policies, and applicability for other world regions can be automatically assumed.

The purpose of this research was to be of use to academia, the shipping practitioner as well as every individual who has an interest in shipping.

In relation to academia the study provides for the researcher a base to enact research on an endless area. Firstly the study provides information for the registration of ships, national shipping policies, application of models to shipping policies, methodological approaches and issues within policies. The study also raised a number of questions that require further investigation for example the measurement of the attributes that constitute success in shipping, measuring another nation's success using the GREKON MODEL, measuring another sectors success using the model, the further development of Porter's diamond with the prospects of incorporating time or other elements, the comparison of national policies, the comparison of the Greek flag and policies of the EU members' flags and policies relating to the flags of conveniences, or comparison with the passenger and cargo carriers, taxation, crew reductions, the future of national and traditional flags and so on. Future the extent to which interactions between the attributes that affect the competitive structure can be analysed for example the apparel retail industry and which interaction needs to be facilitated to form and upgrade the Greek-flagged shipping diamond in order to provide more meaningful implications for companies, government, and policy makers.

The timeline can be further developed animated and uploaded to an internet site providing information for pupils and University students or whoever commences a true interest. After all knowledge should not be keep in libraries but be spread and made available to everyone.

The student of maritime studies can benefit the most since from one source they can gather shipping business and shipping policy information.

The practitioners involved in shipping policy formulation will also benefit. After all if you do not know where you stand how do you know where to go?

The impact this study is reflected in the judgment of Socrates around 400 BC: ***'The prophetess at Delphi (...) turned many good things towards the private and the public affairs of our country' .***

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World Steel Association, www.worldsteel.org

World Trade Organisation, www.wto.org

Panhellenic Seaman Federation, <http://www.pno.gr>

APPENDIX 1. APPLICATION ETHICAL APPROVAL OF RESEARCH

UNIVERSITY OF PLYMOUTH
FACULTY OF SOCIAL SCIENCE AND BUSINESS
FACULTY OF ARTS
FACULTY OF UNIVERSITY OF PLYMOUTH COLLEGES
Faculty Research Ethics Committee (FREC)
Application ETHICAL APPROVAL OF RESEARCH

(1) Title of Research: "Maritime Policy and The Success of Nations The case of Greek-flagged ocean shipping, 1975-2010"

(2) Investigators/Supervisors (Name, Contact Address & Telephone Number):

Professor Michael Roe, (Director of Studies), Plymouth Graduate School of Management & Plymouth Business School (Faculty of Business) , University of Plymouth , Room 405F, Cookworthy Building , Drake Circus , Plymouth, PL4 8AA , Tel: (01752) 585628 , Email: mroe@plymouth.ac.uk

Professor Jingjing Xu,(Second Supervisor), Associate Dean (Research), Faculty of Business, Room 301, Cookworthy Building, Drake Circus PL4 8AA, Email: jingjing.xu@plymouth.ac.uk

(3) Aims and Objectives of Research Project/Programme:

The hypothesis set in this study is:

The success of the Greek ocean-going flagged shipping is a blend of a tendency for governments to experiment with various policies intended to promote national competitiveness, the individual entrepreneurship, the cluster as well as culture, knowledge and skill.

The objectives:

- Develop a literature review on the Greek-flagged ocean-going shipping;
- Identify the attributes which have contributed to success of the Greek-flagged ocean-going shipping;
- Establish relationships that will contribute to the theory of the success of Greek-flagged ocean-going shipping;
- Develop a comprehensive structured model that could be used in the interpretation of the success of the Greek-flagged ocean-going shipping.

(4) Brief Description of Research Methods and Procedures:

A three-pronged approach is employed to determine which are the factors and the interrelations that contributed to the success of the Greek-flagged ocean-going shipping from 1975 to 2010. These three methods are adopted in order:

- to rationalize the significance of the problem (Dochartaigh 2007),
- to discover the important variables relevant to the study (Jesson and Matheson 2011),
- to relate ideas and theory to applications (Saini and Sholonsky 2012), and to determine suitability to answer the research questions.

The three-pronged approach is composed of the following methods:

- Method 1 – Literature Analysis and development of the Timeline Alpha to Omega
- Method 2 – Delphi Analysis
- Method 3 – Analysis based on Porter's Diamond factors

The Timeline Alpha to Omega (Method 1) includes information on a chronological order. Thus, the Timeline Alpha to Omega will allow the reader to easily realize the developments of the Greek flag policy issues throughout these years. The timeline illustration provides a visual presentation of the existing literature. By using this timeline it is easy to realize when and what happened and the interrelations. The application of research will be conducted through observations and descriptive analysis of data on the Greek flag from 1975-2010. Using the Timeline as a basis further analysis of the data will follow (Method 1).

Although secondary data is analyzed the results are not presented in this study because (a) results already derive from literature for example that Greek flag shipping depends on the development of seaborne trade, and (b) there are no correlations identified in data analysis that contribute to the identification of the elements/factors and interrelations. That justifies that analysis of secondary data does not provide adequate results on policy issues and further enhances the need of Delhi method.

The most important phase of the research is the Delphi methodology (Method 2). Delphi is multiple-attribute decision process that is normally made by a review committee with experts from academia, industry and the government which seems the most appropriate match for this case. The information from Method 1 will be used to develop the statements in the x Rounds of Delphi technique. The findings of the x Rounds Delphi Survey will be presented and analyzed.

Using Delphi has several advantages. Iteration mean that the participated experts will be consulted at least three times while the anonymity, the personality and status of the participating experts do not influence the response, social pressure can be avoided, and controlled feedback achieved.

The survey participants do not represent the companies or organisations they work for but they express their personal views as experts. It seems logical though assuming that the participant is working in a shipping company will not

express the same views as the seafarer or the civil servant, in other words their work experience would have affected their views. Still no prejudgments with 100% certainty can be made which verifies further the importance of the Delphi method.

The selection of the respondents will be based on the following criteria (Skulmoski *et al* 2007): Knowledge and experience; Capacity and willingness to participate; Sufficient time to participate in a multi-round Delphi; and Effective communication skills.

Further Porter's diamond will be applied to Greek flag shipping case. Porter's model refers to what industries and nations specialize in, and what the explanation behind their international competitive advantages is. All the information from Method 1 and Method 2 will be further analyzed using the Porter's Diamond factors. The aim is to explain what constitutes the success of the Greek-flagged and the relations will get into perspective. The actual model application is presented in the Findings section.

The combination of all these approaches is the most appropriate for a policy topic and explains why other methods and means are rejected. The cornerstone of this study is Delphi methodology and the other methodologies work supportively. Detailed discussion on this chapter for all methods and how they blend follows. The mixed method approach combines elements from quantitative and qualitative approaches to data collection and analysis, and attempts to minimize the differences in epistemological assumptions, research cultures and researcher biographies (Brannen 2005).

(5) Ethical Protocol:

Please indicate how you will ensure this research conforms with each clause of the University of Plymouth's *Principles for Research Involving Human Participants*. Please attach a statement which addresses each of the ethical principles set out below.

(a) Informed Consent:

The research that involves the participation of a panel of expert and the survey's is the second method, Delphi. All potential participants will be informed from the beginning:

- about the nature and purpose of the research, the expected duration, and the procedures of Delphi methodology;
- about the research benefits;
- about what their participation in the research entails and what risks, if any, are involved ;
- that the Delphi survey is entirely voluntary and that they have the right to withdrawal whenever and if they wish.
- that both their participation and the replies will be assured with confidentiality of sensitive personal data;

- that they will never be required to give details on their: gender, age, ethnicity, disability or sexual orientation, and will at all times have anonymity;
- the contact person of whom to contact for answers to questions about the research and research subjects rights;
- that the survey will held in English although the discussion face to face can be held in Greek
- in writing and orally;
- The epistemological views and attitude of the researcher reflects the seeking of truth and what happens in the real world.

(b) Openness and Honesty:

The grounded and pragmatic research approach and author's mentality about research aim to be open and honest with regard to the nature of the research.

The questions will tested before given out and after being approved by the Supervisor, Professor Michael Roe then they were sent to the participants.

(c) Right to Withdraw:

All potential participants will be informed that they have the right to refuse to participate or retain the right of withdrawing from the Delphi investigation whenever and for whatever reason they wish with no penalty and loss of benefits.

I would also be made clear to them that for reliable results it would have been stressed that in the case they decide to participate it would be better to participate to all Delphi rounds.

Reference on whom to contact for answers to questions about the research and the right to withdraw will also be included in writing before the Delphi survey commences .

(d) Protection From Harm:

Research is well thought and designed in order to minimizes potetnlial harm or risk to social groups or individuals.

Thus, the researcher undertakes this result with the aim not to harm in any way and form the participants, the shipping community, participants' organisations or businesses

The researcher will protect at all times the participant, by preserving the anonymity of the individual and any personal details which may lead to the identification of the participant.

(e) Debriefing:

The final debriefing of the research outcome will be undertaken by the author with the approval of her supervisor.

All participants will be fully informed about the outcome of the research and the research findings will be sent to them. In addition any papers or work related to the Phd will be send to them after publication as a token of appreciation.

(f) Confidentiality:

This research only seeks to use information that the participants are willing to disclose and no more that.

The researcher will protect and keep confidential not only the participant's identity but any other information which may lead to the identification of the participant.

The provisions of the Data Protection Act will be applied to the electronic method of communicating questions and gathering information.

Data that is provided by the participants but is considered sensitive to the identification of the participant will be destroyed and not used in any form.

In order to safeguard and ensure key principles of ethical research are addressed at all times the advice of the supervisor will be taken at all instances.

(g) Professional Bodies Whose Ethical Policies Apply to this Research:

There are no specific professional bodies whose ethical policies apply directly. Instead the following guidelines are followed:

- University of Plymouth, Ethical Principles for Research Involving Human Participants;
- Economic and Social Research Council (ESRC), Research Ethics Framework"(REF).

Please answer either YES or NO to ALL questions below:

Do You Plan To Do:

Research involving vulnerable groups – for example, children and young people, those with a learning disability or cognitive impairment, or individuals in a dependent or unequal relationship

Answer: No

Research involving sensitive topics – for example participants' sexual behaviour, their illegal or political behaviour, their experience of violence, their abuse or exploitation, their mental health, or their gender or ethnic status

Answer: No

Research involving groups where permission of a gatekeeper is normally required for initial access to members – for example, ethnic or cultural groups, native peoples or indigenous communities

Answer: No

Research involving deception or which is conducted without participants' full and informed consent at the time the study is carried out

Answer: No

Research involving access to records of personal or confidential information, including genetic or other biological information, concerning identifiable individuals

Answer: No

Research which would induce psychological stress, anxiety or humiliation or cause more than minimal pain

Answer: No

APPENDIX 2. LETTER AND STATEMENTS, ROUND 1 DELPHI

Wednesday, 10 September 2014

Dear Participants

You are invited to participate in a research study titled “Maritime Policy and the Success of Nations: The case of Greek flagged ocean-shipping, 1975-2010”. This study is being conducted by Mrs Katerina Konsta and her research supervisor Professor Michael Roe from the Faculty of Business, Plymouth Graduate School of Management, University of Plymouth, UK

The objective of the study is to obtain the most reliable consensus of opinion of a group of experts and you will be asked to participate in a number of rounds of questionnaires. The rounds will be determined by the consensus achieved in answers. You are at liberty to change your opinion completely, or stick to your original argument if you feel it is appropriate. Please indicate your opinion on each statement and comment were requested.

The survey should take no longer than 10 minutes to complete.

Your participation is voluntarily and you have to right to withdraw at any stage you wish. It is must also be noted that your participation and your responses are completely anonymous.

It would be much appreciated if your responses are sent by the Wednesday 8 October 2014.

If you have any questions regarding the survey or this research project in general, please contact Katerina Konsta at: 6977413659 or katerina.konsta@plymouth.ac.uk

Thank you for participating in our survey. Your feedback is important.

Mrs Katerina Konsta

Prof. Michael Roe

PhD Candidate

PhD Supervisor

University of Plymouth

University of Plymouth

Please click on the survey link below and provide us with your feedback.

Round 1

In what type of company do you work for?

- | | |
|--|-----------------------|
| <i>Academic Institution/University</i> | <input type="radio"/> |
| <i>Agents</i> | <input type="radio"/> |
| <i>Banks/Financial Institutes</i> | <input type="radio"/> |
| <i>Classification Society</i> | <input type="radio"/> |
| <i>Consultants</i> | <input type="radio"/> |
| <i>Government /Registry</i> | <input type="radio"/> |
| <i>Chamber of Shipping</i> | <input type="radio"/> |
| <i>Insurance/P&I Clubs</i> | <input type="radio"/> |
| <i>Legal</i> | <input type="radio"/> |
| <i>Maritime Academy</i> | <input type="radio"/> |
| <i>Media</i> | <input type="radio"/> |
| <i>S&P Broker</i> | <input type="radio"/> |
| <i>Salvage</i> | <input type="radio"/> |
| <i>Ship Brokers</i> | <input type="radio"/> |
| <i>Ship management</i> | <input type="radio"/> |
| <i>Ship Yards</i> | <input type="radio"/> |
| <i>Shipowner</i> | <input type="radio"/> |
| <i>Trader</i> | <input type="radio"/> |
| <i>Union</i> | <input type="radio"/> |
| <i>Other (please sepcify)</i> | <input type="radio"/> |

About how many years have you been involved in shipping?

- | | |
|------------|-----------------------|
| 10-20 | <input type="radio"/> |
| 21-30 | <input type="radio"/> |
| 31-40 | <input type="radio"/> |
| 41 or more | <input type="radio"/> |

(Round1) Statement 1: Do you believe that the Greek government protected the Greek-flagged shipping during 1975-2010?

Strongly
Disagree

Disagree

Neither
nor Agree

Disagree
Agree

Strongly
Agree

Feel free to comment on the question in the comment box.

(Round1) Statement 2: Do you believe that there was potential in the Greek flag?

Strongly
Disagree

Disagree

Neither
nor Agree

Disagree
Agree

Strongly
Agree

Feel free to comment on the question in the comment box.

(Round1) Statement 3: Do you believe that the individual initiative, and not the government assistance affected the development of the Greek-flagged shipping?

- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Strongly Disagree | Disagree | Neither nor Agree | Disagree Agree | Strongly Agree |
| <input type="radio"/> |

Feel free to comment on the question in the comment box.

(Round1) Statement 4: Do you believe that Greek-flagged shipping was competitive the last 40 years?

- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Strongly Disagree | Disagree | Neither nor Agree | Disagree Agree | Strongly Agree |
| <input type="radio"/> |

Feel free to comment on the question in the comment box.

(Round1) Statement 5: Do you believe that the Greek-flagged shipping could have become more competitive the last 40 years?

Strongly
Disagree

Disagree

Neither
nor Agree

Disagree
Agree

Strongly
Agree

Feel free to comment on the question in the comment box.

(Round1) Statement 6: Do you believe that the Government played an important role in the development of the Greek-flagged shipping?

Strongly
Disagree

Disagree

Neither
nor Agree

Disagree
Agree

Strongly
Agree

Feel free to comment on the question in the comment box.

(Round1) Statement 7: Do you believe that there was any legislation passed that affected positively the growth of Greek-flagged shipping?

Strongly
Disagree

Disagree

Neither
nor Agree

Disagree

Agree

Strongly
Agree

Feel free to comment on the question in the comment box.

(Round1) Statement 8: Do you believe that there was any legislation passed that affected negatively the growth of Greek-flagged shipping?

Strongly
Disagree

Disagree

Neither
nor Agree

Disagree

Agree

Strongly
Agree

Feel free to comment on the question in the comment box.

(Round1) Statement 9: Do you believe that the Greek government could have protected, and promoted the Greek-flagged shipping?

Strongly
Disagree

Disagree

Neither
nor Agree

Disagree

Agree

Strongly
Agree

Feel free to comment on the question in the comment box.

(Round1) Statement 10: Do you believe that the choice of flying the Greek flag on board of ships is just due to patriotism, during 1975-2010?

Strongly
Disagree

Disagree

Neither
nor Agree

Disagree

Agree

Strongly
Agree

Feel free to comment on the question in the comment box.

(Round1) Statement 11: Do you believe that the EU membership affected the Greek-flagged shipping?

Strongly Disagree Disagree Neither nor Agree Disagree Agree Strongly Agree

Feel free to comment on the question in the comment box.

(Round1) Statement 12: Do you believe that the EURO currency affected the Greek-flagged shipping?

Strongly Disagree Disagree Neither nor Agree Disagree Agree Strongly Agree

Feel free to comment on the question in the comment box.

(Round1) Statement 13: Do you believe that the taxation was in favor of the shipowner who flies the Greek flag on board of ships for the last 40 years?

Strongly Disagree Disagree Neither nor Agree Disagree Agree Strongly Agree

Feel free to comment on the question in the comment box.

(Round1) Statement 14: Do you believe that the shipowners that fly the Greek flag are preferentially treated?

Strongly Disagree Disagree Neither nor Agree Disagree Agree Strongly Agree

Feel free to comment on the question in the comment box.

(Round1) Statement 15: Do you believe that the development of the composition of crews in the Greek flag will motivate young people to get into shipping?

- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Strongly Disagree | Disagree | Neither nor Agree | Disagree Agree | Strongly Agree |
| <input type="radio"/> |

Feel free to comment on the question in the comment box.

(Round1) Statement 16: Do you believe that the composition of crews on board of the Greek-flagged ships will make young Greeks to get into shipping?

- | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Strongly Disagree | Disagree | Neither nor Agree | Disagree Agree | Strongly Agree |
| <input type="radio"/> |

Feel free to comment on the question in the comment box.

(Round1) Statement 17: Do you believe that was a limited active aid from the state for the Greek-owned shipping which reached its status of world supremacy with no palpable state support only a tacit one?

- | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Strongly Disagree | Disagree | Neither nor Agree | Disagree | Agree | Strongly Agree |
| <input type="radio"/> |

Feel free to comment on the question in the comment box.

(Round1) Statement 18: Do you believe that without the support of the state after the World War II, Greek-owned shipping would never have increased as much as it did?

- | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Strongly Disagree | Disagree | Neither nor Agree | Disagree | Agree | Strongly Agree |
| <input type="radio"/> |

Feel free to comment on the question in the comment box.

(Round1) Statement 19: Do you believe that is due to the advantages of the flags of convenience, that Greek shipowners' flag out the Greek flag?

Strongly
Disagree

Disagree

Neither
nor Agree

Disagree
Agree

Strongly
Agree

Feel free to comment on the question in the comment box.

(Round1) Statement 20: Do you believe that the governments have given initiatives to attract ships in the Greek registry since the 80's?

Strongly
Disagree

Disagree

Neither
nor Agree

Disagree
Agree

Strongly
Agree

Feel free to comment on the question in the comment box.

(Round1) Statement 21: Do you believe that Greece not being an exporting country is not able to assist Greek-flagged ships?

Strongly
Disagree

Disagree

Neither
nor Agree

Disagree
Agree

Strongly
Agree

Feel free to comment on the question in the comment box.

(Round1) Statement 22: Do you believe that the Greek state ignored Greek-flagged shipping?

Strongly
Disagree

Disagree

Neither
nor Agree

Disagree
Agree

Strongly
Agree

Feel free to comment on the question in the comment box.

(Round1) Statement 23: Do you believe that the Greek governments had a systematic plan for the development of the national registry?

Strongly Disagree Disagree Neither nor Agree Disagree Agree Strongly Agree

Feel free to comment on the question in the comment box.

(Round1) Statement 24: Do you believe that there are political issues which do not allow shipowners to register their ships under the Greek flag?

Strongly Disagree Disagree Neither nor Agree Disagree Agree Strongly Agree

Feel free to comment on the question in the comment box.

(Round1) Statement 25: Do you believe that there are operational issues which do not allow shipowners to register their ships under the Greek flag?

Strongly
Disagree

Disagree

Neither
nor Agree

Disagree
Agree

Strongly
Agree

Feel free to comment on the question in the comment box.

(Round1) Statement 26: Do you believe that there are cost issues which do not allow shipowners to register their ships under the Greek flag?

Strongly
Disagree

Disagree

Neither
nor Agree

Disagree
Agree

Strongly
Agree

Feel free to comment on the question in the comment box.

(Round1) Statement 27: Do you believe that there are any other issues which do not allow shipowners to register their ships under the Greek flag?

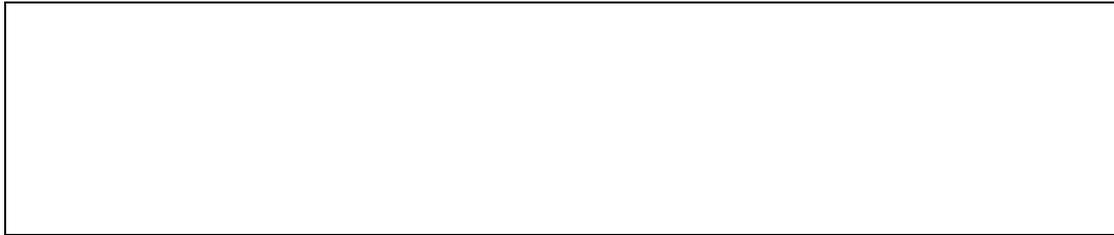
Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Feel free to comment on the question in the comment box.

(Round1) Statement 28: Which are the attributes which have contributed to the success of the Greek-flagged ocean-going shipping?

	Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
Shipowners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
State	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Skilled Seafarer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seaborne Trade	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cluster	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
All Together	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Feel free to comment on the question in the comment box.



Thank you

APPENDIX 3. LETTER AND STATEMENTS, ROUND 2 DELPHI

Tuesday 3 April 2015

Dear Participant,

You are invited to participate in the 2rd round of the research study titled “Maritime Policy and the Success of Nations: The case of Greek flagged ocean-shipping, 1975-2010”. This study is being conducted by Mrs Katerina Konsta and her research supervisor Professor Michael Roe from the Faculty of Business, Plymouth Graduate School of Management, University of Plymouth, UK.

The objective of the study is to obtain the most reliable consensus of opinion of a group of experts. You will be asked to participate in several rounds of questionnaires. Each survey should take only 10 minutes to complete.

It would be much appreciated if your responses are sent by the Thursday 2 May 2015.

If you have any questions regarding the survey or this research project in general, please contact Katerina Konsta at: 6977413659 or katerina.konsta@plymouth.ac.uk

Thank you for participating in our survey. Your feedback is important.

Mrs Katerina Konsta

Prof. Michael Roe

PhD Candidate

PhD Supervisor

University of
Plymouth

of

University of Plymouth

Please click on the survey link below and provide us with your feedback.

Round 2

In what type of company do you work for?

- | | |
|--|-----------------------|
| <i>Academic Institution/University</i> | <input type="radio"/> |
| <i>Agents</i> | <input type="radio"/> |
| <i>Banks/Financial Institutes</i> | <input type="radio"/> |
| <i>Classification Society</i> | <input type="radio"/> |
| <i>Consultants</i> | <input type="radio"/> |
| <i>Government /Registry</i> | <input type="radio"/> |
| <i>Chamber of Shipping</i> | <input type="radio"/> |
| <i>Insurance/P&I Clubs</i> | <input type="radio"/> |
| <i>Legal</i> | <input type="radio"/> |
| <i>Maritime Academy</i> | <input type="radio"/> |
| <i>Media</i> | <input type="radio"/> |
| <i>S&P Broker</i> | <input type="radio"/> |
| <i>Salvage</i> | <input type="radio"/> |
| <i>Ship Brokers</i> | <input type="radio"/> |
| <i>Ship management</i> | <input type="radio"/> |
| <i>Ship Yards</i> | <input type="radio"/> |
| <i>Shipowner</i> | <input type="radio"/> |
| <i>Trader</i> | <input type="radio"/> |
| <i>Union</i> | <input type="radio"/> |
| <i>Other (please sepcify)</i> | <input type="radio"/> |

About how many years have you been involved in shipping?

- | | |
|------------|-----------------------|
| 10-20 | <input type="radio"/> |
| 21-30 | <input type="radio"/> |
| 31-40 | <input type="radio"/> |
| 41 or more | <input type="radio"/> |

(Round 2) Statement 1: Every Greek government provided initiatives to retain capacity to the Greek flag. Please answer YES or NO.

YES

NO

Feel free to comment on the statement in the comment box.

(Round 2) Statement 2: During which years did the governments supported shipping more? Please rank/tick as appropriate.

	Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
1975-1980	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1981-1989	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1990-1993	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1994-2004	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2005-2009	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2009-2010	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Feel free to comment on the statement in the comment box.

(Round 2) Statement 3: Did the other parties in the parliament (other than PASOK and New Democracy) strongly supported, and proposed policies that could support the Greek-flagged shipping? Please answer YES or NO.

YES

NO

Feel free to comment on the statement in the comment box.

(Round 2) Statement 4: The short Greek national/local recessions of 1981-1983, in 1987, and 1993 affected the Greek flag. Please rank/tick as appropriate.

	Strongly Disagree	Disagree	Neither Disagree nor Agree	Agree	Strongly Agree
1981-1983	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1987	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
1993	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

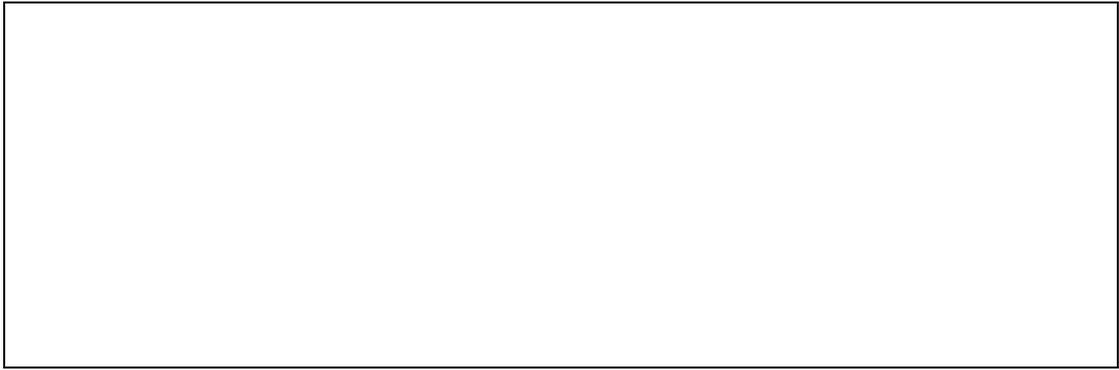
Feel free to comment on the statement in the comment box.

(Round 2) Statement 5: The merge of the Ministry of Shipping with other Ministries was a positive policy. Please answer YES or NO.

YES

NO

Feel free to comment on the statement in the comment box.



(Round 2) Statement 6: The EU shipping polices affected positively the Greek flag with respect to the tramp market. Please answer YES or NO.

YES

NO

Feel free to comment on the statement in the comment box.

(Round 2) Statement 7: Other EU flags have affected the competitiveness of the Greek flag. Please answer YES or NO.

YES

NO

Feel free to comment on the statement in the comment box.

(Round 2) Statement 8: Is the Greek flag assigned with lower taxation than the other EU states? Please answer YES or NO.

YES

NO

Feel free to comment on the statement in the comment box.

(Round 2) Statement 9: Is the Greek-flagged shipping treated with lower taxation than other industries (tourism, agriculture, etc). Please answer YES or NO.

YES

NO

Feel free to comment on the statement in the comment box.

(Round 2) Statement 10: All governments in Greece had clear policy objectives or strategy for the Greek flag. Please answer YES or NO.

YES

NO

Feel free to comment on the statement in the comment box.

(Round 2) Statement 11: There was no continuity by the state on the Greek flag strategy. Please answer YES or NO.

YES

NO

Feel free to comment on the statement in the comment box.

(Round 2) Statement 12: There are the policies that contributed to the competitiveness of the Greek flag. Please answer YES or NO.

YES

NO

Feel free to comment on the statement in the comment box.

(Round 2) Statement 13: Was there any successful policy for the Greek-flagged ships in the tramp sector as cabotage was for the Greek Ferry Industry in the Aegean Sea? Please answer YES or NO.

YES

NO

Feel free to comment on the statement in the comment box.

(Round 2) Statement 14: There was always a strong shipping know-how in the Greece. Please answer YES or NO.

YES

NO

Feel free to comment on the statement in the comment box.

(Round 2) Statement 15: There is a strong shipping cluster in Piraeus. Please answer YES or NO.

YES

NO

Feel free to comment on the statement in the comment box.

(Round 2) Statement 16: Should Greece have developed a second, parallel ship register? Please answer YES or NO.

YES

NO

Feel free to comment on the statement in the comment box.

(Round 2) Statement 17: Is the local competition/domestic rivalry between Greek-flagged companies enhancing development? Please answer YES or NO.

YES

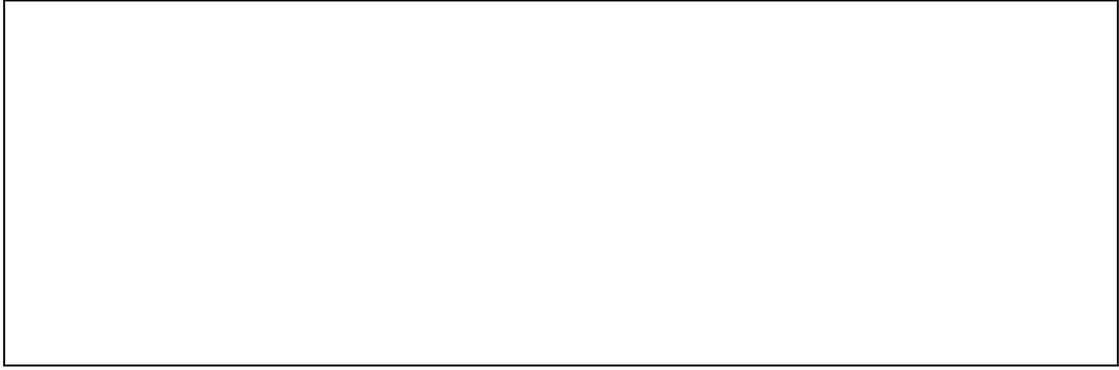
NO

Feel free to comment on the statement in the comment box.

(Round 2) Statement 18: Which of the following 11 elements are the most and less important determinants of a strong maritime policy for Greek registry? Please rank from 1-11, 1 being the most important and 11 the less important. The elements in question being: taxation, quality of flag, composition of crews, national stability, cluster in Greece, Authorising acts, legal status of company, provision of quality education and training, other flag systems and stability, service offered by the flag, and other. In case your answer ranks OTHER at 1-10 priority ranks, please state which is the OTHER factor which is not included in the above list.

	1	2	3	4	5	6	7	8	9	10	11
taxation	<input type="radio"/>										
quality of flag	<input type="radio"/>										
composition of crews	<input type="radio"/>										
national stability	<input type="radio"/>										
cluster in Greece	<input type="radio"/>										
Authorising acts	<input type="radio"/>										
legal status of company	<input type="radio"/>										
provision of quality education and training	<input type="radio"/>										
other flag systems and stability	<input type="radio"/>										
service offered by the flag	<input type="radio"/>										
other	<input type="radio"/>										

Feel free to comment on the statement in the comment box.



(Round 2) Statement 19: Which are the major advantages of the Greek flag? Please rank from 1-9, 1 being the most important and 9 the less important. The elements being: Authorising acts, cost for registering, cost of operating ships, legal framework, service, stability, status and quality, taxation, and other. In case your answer ranks OTHER at 1-8 priority ranks, please state which is the OTHER factor which is not included already in the above list.

	1	2	3	4	5	6	7	8	9
stability	<input type="radio"/>								
cost for registering	<input type="radio"/>								
cost of operating ships	<input type="radio"/>								
Authorising acts	<input type="radio"/>								
service	<input type="radio"/>								
legal framework	<input type="radio"/>								
status and quality	<input type="radio"/>								
taxation	<input type="radio"/>								
other	<input type="radio"/>								

Feel free to comment on the statement in the comment box.

(Round 2) Statement 20: Why shipowners flag out? Please rank from 1-10, 1 being the most important and 10 the less important. The reasons are: anonymity, bureaucracy, contributions towards NAT, flexible crew composition, highly qualified foreign crew, lower crew costs, lower operational costs, lower taxation, resilient and stable tax system, and other. In case your answer ranks OTHER at 1-9 priority ranks please state which is the OTHER factor which is not included already in the above list.

	1	2	3	4	5	6	7	8	9	10
Resilient & stable tax system	<input type="radio"/>									
Lower crew cost	<input type="radio"/>									
Flexible crew composition	<input type="radio"/>									
Lower taxation	<input type="radio"/>									
Anonymity	<input type="radio"/>									
Bureaucracy	<input type="radio"/>									
Lower operational costs	<input type="radio"/>									
Contributions towards NAT	<input type="radio"/>									
Highly qualified foreign crew	<input type="radio"/>									
Other	<input type="radio"/>									

Feel free to comment on the statement in the comment box.

(Round 2) Statement 21: Which of the following factors contribute to Greece as a shipping nation and the competitors does not commence and it is difficult or expensive to obtain? Please rank from 1-17, 1 being the most important and 17 the less important. The factors are: different management practices, education and training, experience, funds, human resources, know-how, long term involvement in shipping, loyalty, regulatory framework, related and supporting industries, rivalry, skill, support of the state, technology, tradition, willingness to take the risk, and other. In case your answer ranks OTHER at 1-16 priority ranks, please state which is the factor which is not included already in the above list. Feel free to comment on the statement in the comment box.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Loyalty	<input type="radio"/>																
Experience	<input type="radio"/>																
willingness to take the risk	<input type="radio"/>																
different management practices	<input type="radio"/>																
long term involvement in shipping	<input type="radio"/>																
human resources	<input type="radio"/>																
Rivalry	<input type="radio"/>																
Know-how	<input type="radio"/>																
regulatory framework	<input type="radio"/>																
education and training	<input type="radio"/>																
related and supporting industries	<input type="radio"/>																
Funds	<input type="radio"/>																
Technology	<input type="radio"/>																
Skill	<input type="radio"/>																
Tradition	<input type="radio"/>																
support from the state	<input type="radio"/>																
Other	<input type="radio"/>																

Feel free to comment on the statement in the comment box.

Thank you

APPENDIX 4. LETTER AND STATEMENTS, ROUND 3 DELPHI

Monday 16 September 2015

Dear Participant,

Thank you once more for agreeing to participate in the 3rd round of the research study research study titled as: "Maritime Policy and the Success of Nations: The case of Greek flagged ocean-shipping, 1975-2010". This study is being conducted by Katerina Konsta from the Faculty of Business, Plymouth Graduate School of Management, University of Plymouth, UK.

The Delphi panel of which you are a member has been carefully and rigorously put together based on their experience and knowledge of the Greek maritime policies and the Greek flag. As you already know, by design the Delphi study is an iterative process comprising of a series of consecutive questionnaires. The objective of the study is to obtain the most reliable consensus of opinion of a group of experts each survey should take only 10 minutes to complete.

It would be much appreciated if your responses are sent 1 November 2015.

If you have any questions regarding the survey or this research project in general, please contact Katerina Konsta at: 6977413659 or katerina.konsta@plymouth.ac.uk

Thank you for participating in our survey. Your feedback is important.

Mrs Katerina Konsta

Prof. Michael Roe

PhD Candidate

PhD Supervisor

University of Plymouth

University of Plymouth

Please click on the survey link below and provide us with your feedback.

Round 3

In what type of company do you work for?

- | | |
|---------------------------------|-----------------------|
| Academic Institution/University | <input type="radio"/> |
| Agents | <input type="radio"/> |
| Banks/Financial Institutes | <input type="radio"/> |
| Classification Society | <input type="radio"/> |
| Consultants | <input type="radio"/> |
| Government /Registry | <input type="radio"/> |
| Chamber of Shipping | <input type="radio"/> |
| Insurance/P&I Clubs | <input type="radio"/> |
| Legal | <input type="radio"/> |
| Maritime Academy | <input type="radio"/> |
| Media | <input type="radio"/> |
| S&P Broker | <input type="radio"/> |
| Salvage | <input type="radio"/> |
| Ship Brokers | <input type="radio"/> |
| Ship management | <input type="radio"/> |
| Ship Yards | <input type="radio"/> |
| Shipowner | <input type="radio"/> |
| Trader | <input type="radio"/> |
| Union | <input type="radio"/> |
| Other (please sepcify) | <input type="radio"/> |

About how many years have you been involved in shipping?

- | | |
|------------|-----------------------|
| 10-20 | <input type="radio"/> |
| 21-30 | <input type="radio"/> |
| 31-40 | <input type="radio"/> |
| 41 or more | <input type="radio"/> |

(Round 3) Statement 1: Do you agree with the following ranking of policy determinants for a strong Greek registry? “Taxation” being the most important determinant and the “Service of the flag” as the least important determinant. Please tick as appropriately.

	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
Taxation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Quality of flag	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Composition of crews	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
National Stability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cluster in Greece	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Authorising acts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Legal status of company	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Provision of quality education and training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other flag systems and stability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Service offered by the flag	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Feel free to comment on the question in the comment box.

(Round 3) Statement 2: Do you agree that the following are the major advantages of the Greek flag? “Taxation” being the most important determinant and the “Service” as the least important determinant. Please tick as appropriately.

	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
Taxation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Status & Quality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stability	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cost of operating ships	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Legal framework	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cost for registering	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Authorising Acts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Feel free to comment on the question in the comment box.

(Round 3) Statement 3: Do you agree with the following rank of flagging out factors? “Lower Taxation” being the most important determinant and the “highly qualified crew” as the least important determinant. Please tick as appropriate.

	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
lower taxation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
lower crew costs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
resilient and stable tax system	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
flexible crew composition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
reduction of contribution towards NAT	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
lower operational costs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
bureaucracy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Flexibility	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anonymity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
highly qualified foreign crew	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Feel free to comment on the question in the comment box.

(Round 3) Statement 4: Do you agree with the following ranking of factors that contribute to Greece as a shipping nation and the competitors does not commence and it is difficult or expensive to obtain? “Know-How” being the most important determinant and the “Support for the state” as the least important determinant. Please tick as appropriate.

	Strongly Disagree	Disagree	Neither Disagree Nor Agree	Agree	Strongly Agree
Know-how	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Experience	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
willingness to take the risk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
different management practices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Skill	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
human resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rivalry	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Loyalty	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
regulatory framework	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
education and training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
related and supporting industries	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Funds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technology	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
long term involvement in shipping	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tradition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
support from the state	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Feel free to comment on the question in the comment box.

(Round 3) Statement 5: Do you consider Delphi as an adequate method to apply to this study or in general shipping policy issues? Please answer YES or NO. If you choose “no” please suggest which you consider to be more appropriate methods.

Yes

No

If you choose “no” please suggest which you consider to be more appropriate methods.

(Round 3) Statement 6: Are you satisfied with the procedure, methods, and questions followed in all 3 rounds. Please answer YES or NO. If you choose “no” please explain the reasons.

Yes

No

If you choose “no” please explain the reasons.



Thank you

**APPENDIX 5. PAPER: KONSTA, K., (2013), SEARCHING FOR LITERATURE ON
GREEK MARITIME POLICY, REFLECTIONS ON LEGAL ISSUES IN A DIVERSE MARITIME
WORLD, CAMBRIAN LAW REVIEW, ABERYSTWYTH UNIVERSITY, VOLUME 44, 50-
86**

Permission to use the paper granted by Cambrian Law Review

APPENDIX 6. PRESENTATION: KONSTA, K., (2016), MULTILEVEL AND HOLISTIC METHODOLOGY APPLICATION TO NATIONAL MARITIME POLICY: THE CASE OF GREEK SHIPPING POLICY, PLYMOUTH DOCTORAL COLLOQUIUM, (UKPDC) 2016,



**Multilevel & Holistic
Methodology Application to
Maritime Policy Issues:
*The Case of Greek Shipping
Policy***



Katerina Konsta
PhD cand.
University of Plymouth

UKPDC 2016
Plymouth, 17.6.2016

Research... The area... The topic...

- ▶ **Why Greek-flagged shipping is successful?**
- ▶ The aim of this research is to explain
 - ▶ what constitutes the success of the Greek-flagged shipping, and
 - ▶ get relations into perspective.

The facts...

► Fact 1

- **The world fleets constantly fluctuate** and this can be explained by the derived demand and the shipping economic cycles that characterize the shipping industry.

► Fact 2

- Although fleets fluctuate there is no dispute about **the success of the Greek flagged and controlled shipping.**

► Fact 3

- Greece is the only traditional maritime power **to have remained consistently at the top of world shipping** and at the same time **has strengthened its position** (Theotokas and Harlaftis 2009).



Country or territory of ownership ^a	Number of vessels			Deadweight tonnage				
	National flag ^a	Foreign flag	Total	National flag ^a	Foreign flag	Total	Foreign flag as a percentage of total	Total as a percentage of world total, 1 Jan. 2010
Greece	741	2 409	3 150	58 478 197	127 616 965	186 095 162	69	15.96
Japan	720	3 031	3 751	14 443 324	168 876 356	183 319 680	92	15.73
China	2 024	1 609	3 633	41 026 075	63 426 314	104 452 389	61	8.96
Germany	458	3 169	3 627	16 926 387	86 969 282	103 895 669	84	8.91
Republic of Korea	775	425	1 200	18 865 348	26 017 970	44 883 318	58	3.85
United States	920	945	1 865	21 529 559	19 761 196	41 290 755	48	3.54
Norway	820	1 148	1 968	14 102 299	26 416 491	40 518 790	65	3.48
China, Hong Kong	350	330	680	21 225 179	13 216 692	34 441 871	38	2.95
Denmark	360	580	940	12 937 381	20 261 040	33 198 421	61	2.85
Singapore	598	387	985	17 377 216	15 232 228	32 609 444	47	2.80
China, Taiwan Province of	92	545	637	3 769 436	25 721 242	29 490 678	87	2.53
United Kingdom	357	437	794	8 948 902	17 262 720	26 211 622	66	2.25

UNCTAD Review on Maritime Transport (2010)

The question is...

Why?



Reason of success.... Quite a few...

- ▶ Greece was a seafaring nation with a plethora of skilled seaman; stable requirements; and entrepreneurship culture (Clarksons 1995)
- ▶ The support of the Greek state after the Second World War (Harlaftis 1993)
 - ▶ Thanopoulou 2007 states that the state assistance was limited
- ▶ Seamanship, tradition and the peculiar structure of the Greek shipping company (Goulielmos 2001)



**Still *why* is it
ONE of the few elements
contributing to the success
of the Greek shipping?**



Research hypothesis:

- ▶ **The success** of the Greek ocean-going flagged shipping is **a blend of**
 - ▶ *a tendency for governments to experiment with various policies intended to promote national competitiveness,*
 - ▶ *the individual entrepreneurship,*
 - ▶ *the cluster*
 - ▶ *as well as culture, knowledge and skill.*



The objectives of the research

- ▶ Develop a literature review on the Greek-flagged ocean-going shipping from 1975-2010; (Obj.1)
 - ▶ Identify the attributes which have contributed to success of the Greek-flagged ocean-going shipping; (Obj.2)
 - ▶ Establish relationships that will contribute to the theory of the success of the Greek-flagged ocean-going shipping; (Obj.3)
 - ▶ Develop a comprehensive structured model that could be used in the interpretation of the success of the Greek-flagged ocean-going shipping. (Obj.4)
-

and the method....

- ▶ Methodology **is not** to provide solutions,
 - ▶ **but** underpin the understanding of which methods can be adopted into research. (Silverman 2001)
 - ▶ **Which is the utmost appropriate methodology to use?**
-

Three-pronged methodological approach

▶ **Methodology 1**

- ▶ Mapping literature (TIMELINE ALPHA to OMEGA)
- ▶ Analysis of secondary data and information

▶ **Methodology 2**

- ▶ Delphi Technique

▶ **Methodology 3**

- ▶ Model the success contributors of Greek flagged shipping using Porter's Diamond
-



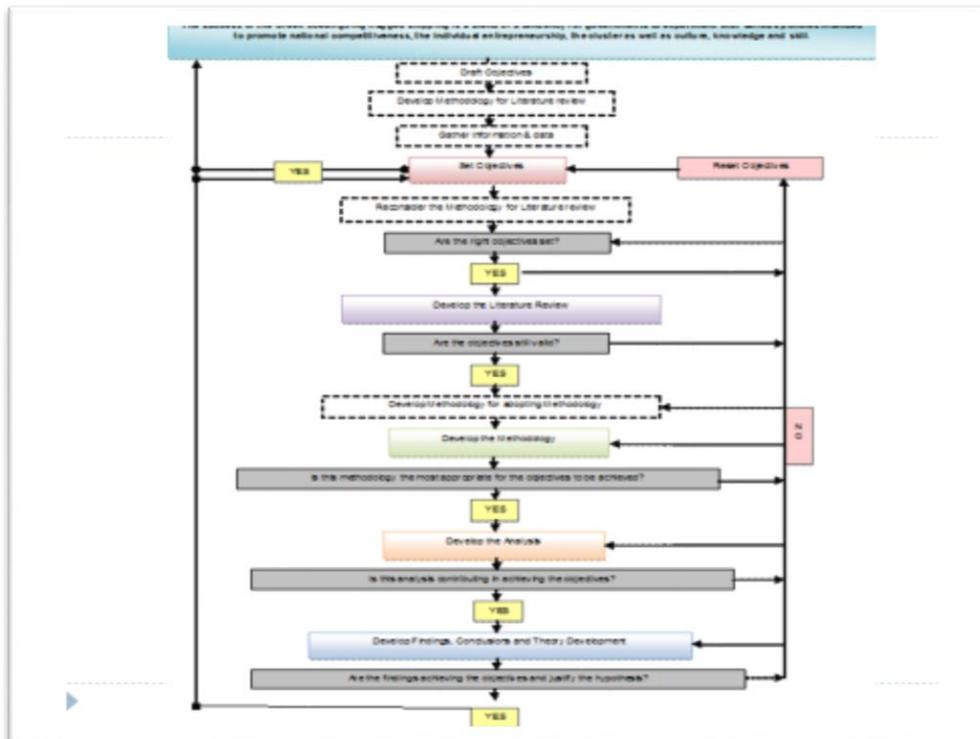
Quality of Methodology

▶ the quality of methodology adopted refers to

- ▶ how well a study *has been designed and implemented* to achieve its objectives (Lapan et al 2009)

▶ **How the methodology fits in the overall research (see Figure 2).**





Issues rising from literature review

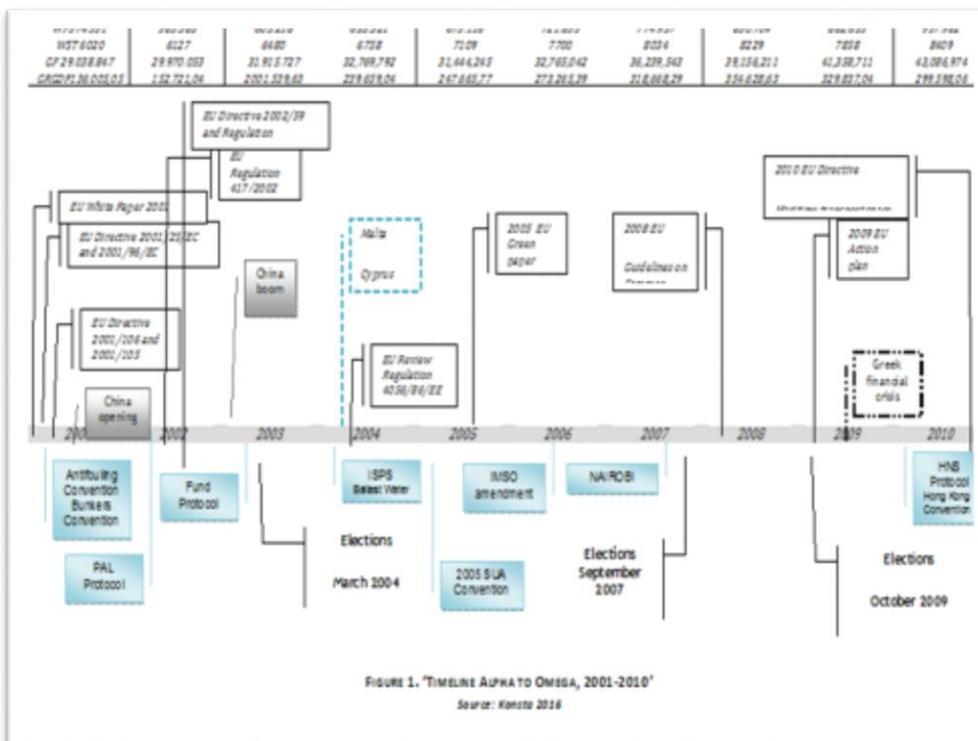
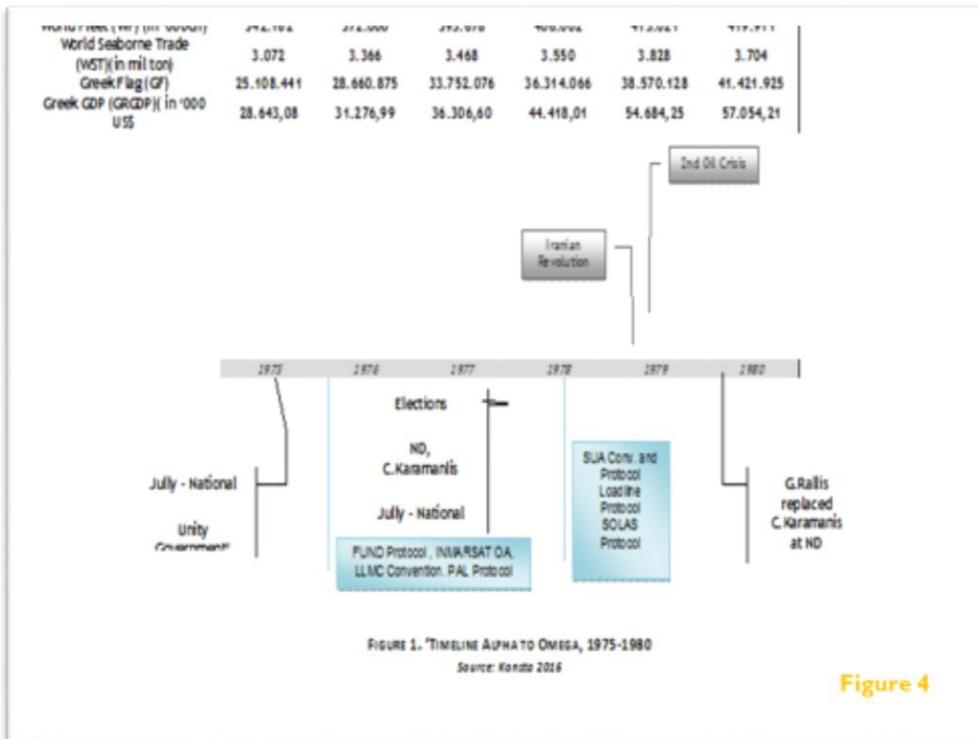
- ▶ Gaps in literature
- ▶ No similar existing research
- ▶ No data correlation between political development and the registry success
- ▶ The topic itself was complex & multifaceted
- ▶ No coherent development of the policy related to the registry
- ▶ Literature had to be developed from several broad recourses
- ▶ Gaps in literature – Gaps in methodology

The overall methodological approach

- ▶ **is innovative with the mixing of three methods,**
 - ▶ **qualitative and quantitative in nature**
 - ▶ **to serve particular theoretical, methodological and practical purposes (Branner 2005).**
-
- ▶

The Timeline Alpha to Omega (Method 1) (Obj.1 & 2)

- ▶ **The timeline**
 - ▶ provides a visual presentation of the existing literature.
 - ▶ allows the reader to easily realize the developments of the Greek flag policy issues throughout 1975-2010.
 - ▶ easy to realize when and what happened and the interrelations.
-
- ▶



Delphi methodology (Method 2)- (Obj.2 & 3)

Delphi is characterized as a method:

“for structuring a group communication process so that the process is effective in allowing a group of individuals as a whole to deal with a complex problem” (Linstone and Turoff 2002).



Appropriateness of Delphi method

- ▶ as tool building consensus for public policy (Rayens and Hahn 2000)
 - ▶ allows for fair representation of all parties involved in Greek shipping.
 - ▶ The heterogenic panel of participants is preserved in order to assure validity of the results.
 - ▶ Anonymity assured is eliminating bias.
 - ▶ Takes under consideration the culture and the sensitivity of the shipping sector
 - ▶ Allows for time and cost minimization
-



Appropriateness of Delphi method

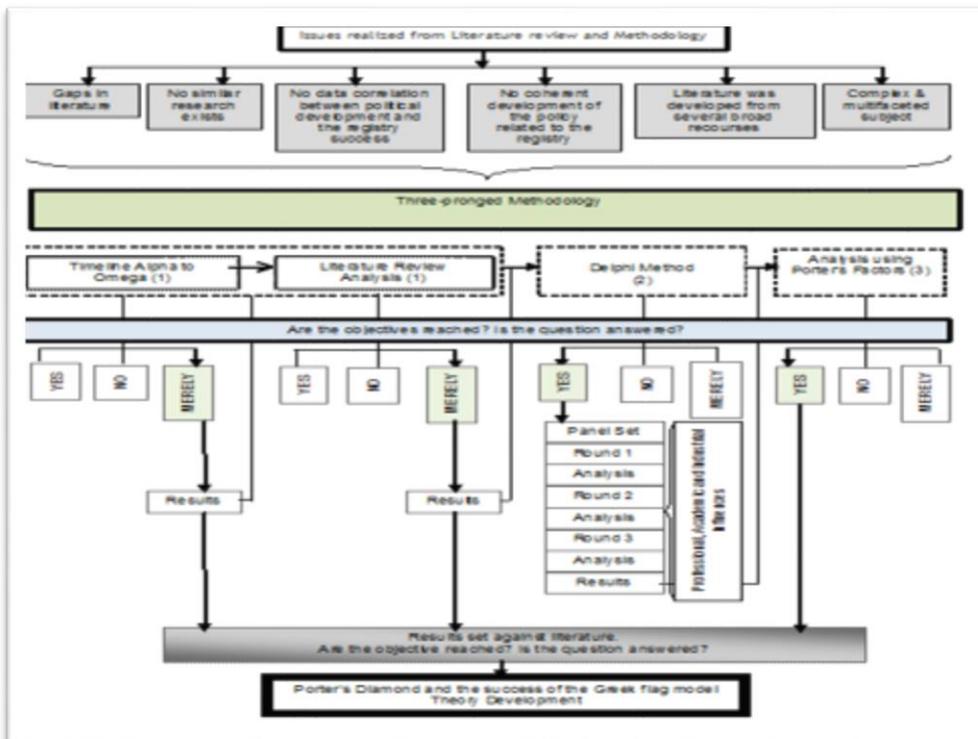
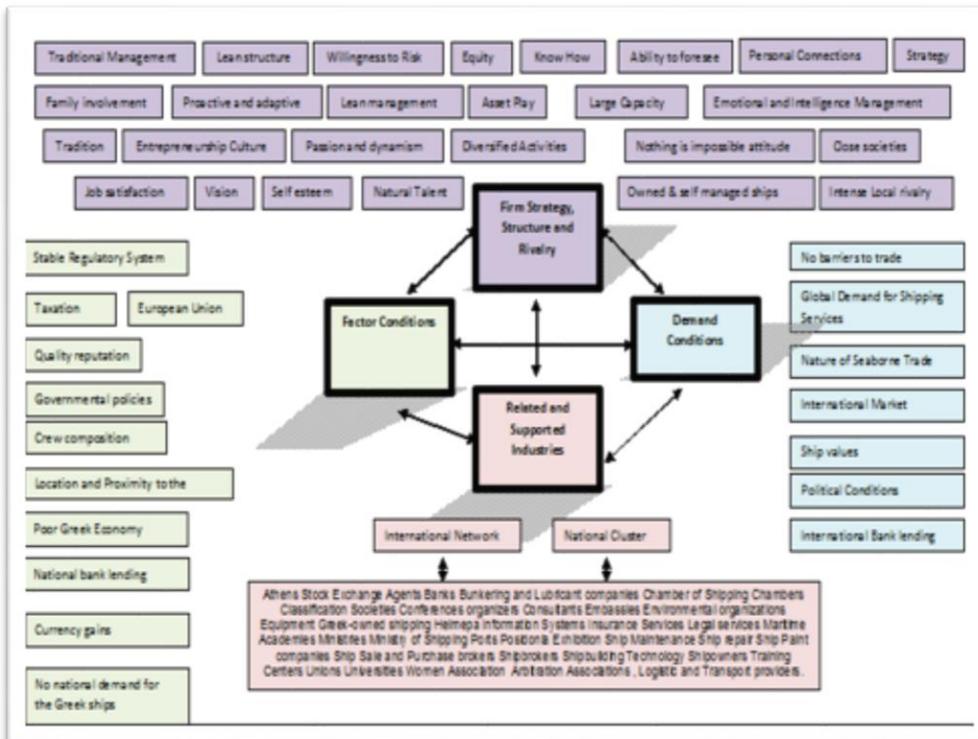
- ▶ When incomplete knowledge about a problem or phenomena and precise analytical techniques are not applicable (Adler and Ziglio 1996, Delbeq *et al* 1975)
- ▶ to investigate what does not yet exist (Czinkota and Ronkainen 1997, Skulmoski *et al* 2007) by contributing with collective human intelligence on the problem at hand (Linstone and Turoff 2002)
- ▶ for gathering historical data, putting together the structure of a model, delineating the pros and cons associated with potential policy options, developing casual relationships in complex economic or social phenomena, distinguishing and clarifying real and perceived human motivations, exposing priorities of personal values and social goals. (Linstone and Turoff 2002)



Porter's diamond (Method 3) - (Obj.4)

- ▶ Porter's model refers to what industries and nations specialize in, and what the explanation behind their international competitive advantages is.
- ▶ Application of the model to the Greek flag shipping case.





mixing of methodologies

▶ **Benefits**

- ▶ is an integral part of this study as to innovation and contribution to knowledge.
- ▶ no reliable results would have been achieved nor deep understanding of the study otherwise.
- ▶ eliminate any bias inherent in particular data sources and one single method.

▶ **As a result the methodology used in this study has**

- ▶ facets of triangulation (in seeking coverage of results),
 - ▶ is complementary (when different facets of events emerge),
 - ▶ developmentally (every method is used sequentially to help inform the next method),
 - ▶ initiation (to identify contradictions),
 - ▶ expansion (in order to add scope and breadth to study)
-



Britts' criteria

- ▶ **The conceptual model has successfully accommodated real world practices and phenomena.**
 - ▶ **The successfulness of conceptual model is challenged based on Britt's 1979 criteria.**
 - ▶ **The criteria used are:**
 - (a) the ability to increase the capacity to describe what is going on and how it takes place and
 - (b) the ability to increase the understanding of how theories apply to the phenomenon being analyzed.
-



The impact...

- › the academia,
- › the shipping market/cluster
- › Ship Registries
- › Governmental bodies
- › On nation and international level
- › *as well as every individual who has an interest in shipping.*

Indeed

Research must have an impact on and change Lives...

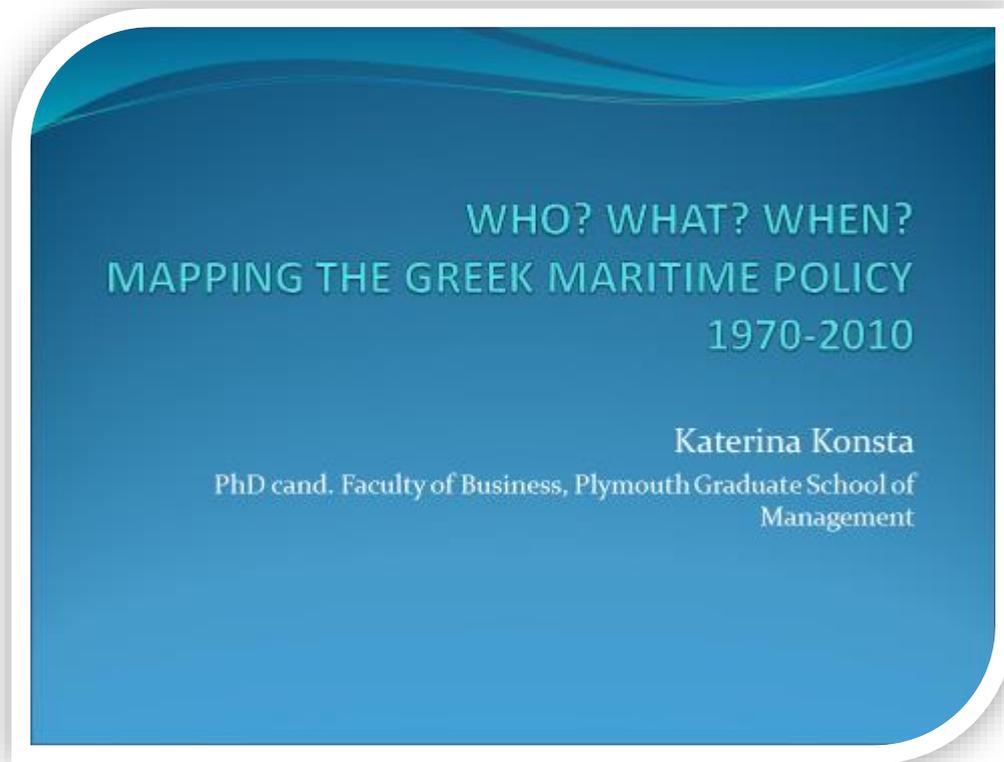
Socrates around 400 BC judged:

**'The prophetess at Delphi (...) turned many good things
towards the private and the public affairs of our country'**
(Cuhls 1993).



*Thank you
for listening*

APPENDIX 7. PRESENTATION: KONSTA, K., (2014), MAPPING THE GREEK MARITIME POLICY, 1970-2010: MAPPING THE ABYSS?, POSTGRADUATE SOCIETY CONFERENCE, PLYMOUTH, UK, 12 NOVEMBER 2014.



Why is it interesting to know?

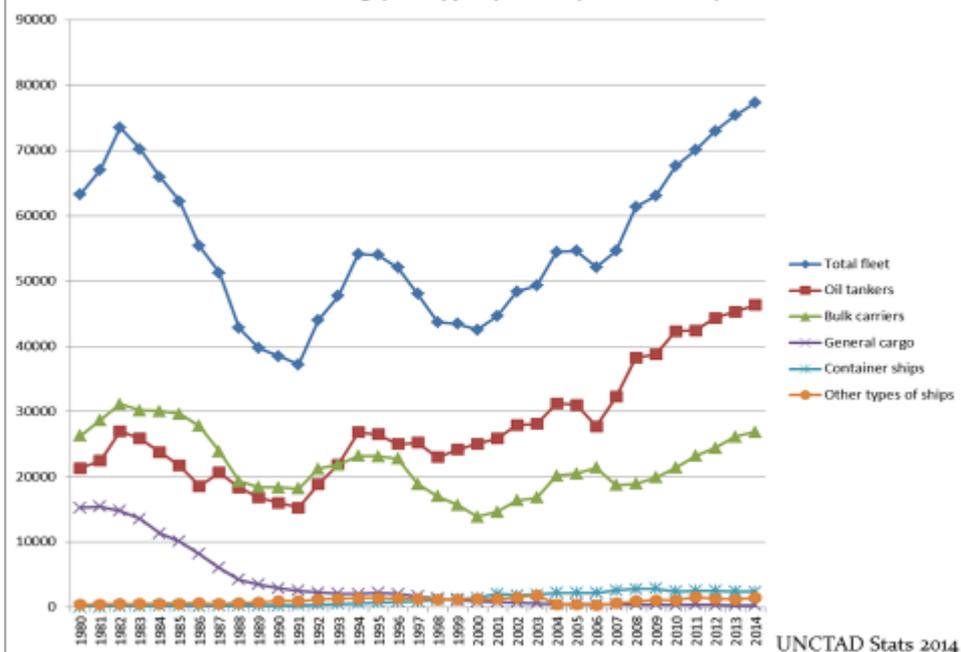
- There is no dispute
 - **of the success of the Greek shipping.**
- Greece is the **only** traditional maritime power
 - to have remained **consistently**
 - **at the top** of world shipping.

Shipowing nations

Country or territory of ownership ^a	Number of vessels			Deadweight tonnage				
	National flag	Foreign and internat. flag ^b	Total	National flag ^c	Foreign and international flag ^b	Total	Foreign and international flag as a percentage of total ^b	Total as a percentage of world
Greece	825	2 870	3 695	69 644 624	175 205 954	244 850 578	71.56	15.17
Japan	738	3 253	3 991	17 216 128	206 598 880	223 815 008	92.31	13.87
China	2 665	2 648	5 313	66 936 002	123 142 833	190 078 835	64.79	11.78
Germany	396	3 437	3 833	16 641 757	109 136 771	125 778 528	86.77	7.79
Republic of Korea	764	812	1 576	16 624 445	58 471 361	75 095 806	77.86	4.65
Singapore	1 090	798	1 888	32 711 136	31 441 668	64 152 804	49.01	3.98
United States	768	1 175	1 943	8 671 669	49 606 395	58 278 064	85.12	3.61
United Kingdom	415	822	1 237	10 447 630	39 857 066	50 304 696	79.23	3.12
Norway	414	1 494	1 908	2 190 036	43 802 209	45 992 245	95.24	2.85
Taiwan Province of China	102	712	814	3 311 133	40 948 712	44 259 845	92.52	2.74

Source: UNCTAD Report on Maritime Transport 2014

Greek flag (all types) DWT (1980-2014)



UNCTAD Stats 2014

Why tramp shipping is important?

- contributes to the economy
 - It transfers of 90% of the export trade of Greece;
 - It brings shipping maritime exchange;
 - It brings contributions to the Seaman's Fund and taxes to the State;
 - It creates jobs both on board and ashore;
 - It activates the development of other companies;
 - sovereignty of Greece in international shipping, each ship acting as ambassador of the state;
 - it is a negotiating power in international organizations and fora;
 - dynamic and autonomous.

Authors & Gap

- **A few times**
 - the question of to what the success of Greek shipping is owned is raised
 - but **no clear and evidenced answer** is given.

The Greek shipping policy

- **based on two main pillars :**
 - a. the creation of a stable legal environment and
 - b. the application of the principles of free competition in shipping.
- **aimed at determining :**
 - a. the sector's impact on the national economy
 - b. to influence the international markets and freights
- **affected by:**
 - personal friendship,
 - networking,
 - political affiliations,
 - lobbying of organized interest, and
 - ambition

Parties in Power & Leadership



- **Parties in power had temporary involvement in policy formation**

Mapping the flag....

The routes of the shipping policy

- In **1953 the Law Degree 2687** was issued on 'Reinvestment and Protection of Foreign Capital'
 - retains its validity till this day.
 - implies that Greek controlled shipping companies (50% or more) and Greek flagged ships of 1500 grt plus-
 - special tax exemptions regime and the protection of the state
 - composition of crew of Greek flagged ships
 - "authorizing acts" that allowed a legislative resolution capability outside the parliament

- **In 1951** Law 1894/51 which referred to maritime education and allowed for public Maritime Schools.
- **In 1958**, with the Law 3899 **the banks** could undertake the management of the ship when the shipowner could not repay the loan
- **In 1967** the Law 89/67
 - provided for those foreign companies wanted to **establish branches** in Greece, as long as their main activities were outside Greece - given tax and tariff privileges included.
 - **of equal opportunity laws** - Greek and foreign companies, shipping companies were treated in the same way

1970-1980

(1/4)

- 1970 Dictators in power of the Greek state
- During the dictatorship, 1967-1974, the shipping policy was based in three axes:
 - (a) to increase the capacity under the Greek flag;
 - (b) to provide a favorable and stable institutional framework and
 - (c) to develop Piraeus as a shipping center.
- 1973 - Oil crisis
- The Turkey's invention in northern Cyprus

1970-1980

(3/4)

- the taxation of ships was calculated with the net registered tonnage (NRT) and the age of the ship.
- **Law 27/1975**
 - allows foreign companies
 - With full tax exemption
- the level of taxation changed following the market fluctuations
- In 1977 the national currency, drachma was used for paying seafarers wages to Greek crews instead of the English pounds

1970-1980

(4/4)

- Reasons for registering
 - a. the political stability of Greece, and
 - b. the protection offered by the Greek flag against ITF.
- The state determined after negotiations
 - the contribution of shipowners and seaman to the Greek Pension Fund,
 - the course manning scales and
 - the percentage of foreign labor can occupy

1980-1990

(1/3)

- May 1980 - October 1981 , Conservatives, ND
- 1981 - EU membership
- 1983 - Iran – Iraq War
- devaluation of drachma against the US dollar
- Iran invades Kuwait
- October 1981 -June 1989, Socialists, PASOK
- 1989 - 1990, Coalition and Ecumenical Governments
- the decline period from 1981 to 1989

1980-1990

(2/2)

- Various regulations were passed
- Flagging out was significant
- Shipowners aiming at reducing running cost.
- Reductions in
 - the composition of crews in 1983 (30%), 1986 (40%), 1990
 - the remuneration of foreign crew in 1983
 - the taxation for the large ships 40,000 grt and over in 1990
- Introduction of
 - the Law of 'recycling of crew'
 - the bilateral agreements
 - controls in preventing illegal national currency exports by shipping companies.

1990-2000

(1/3)

- Inflation and the 1993 devaluation of drachma
- entry to European Monetary Union (EMU)
- 1997 Asia Crisis
- 1998 ISM Code
- United States of the Oil Pollution Act of 1990 (OPA 90)
- 8 April 1990 - September 1993 , ND, Constantinos Mitsotakis
- MARPOL in 1992, which set new specifications for tankers
- STCW with new requirements
- 9 October 1993 - January 1996 , Socialists, PASOK,
- 10 January 1996 -2000, Socialists, PASOK

1990-2000

(3/3)

- Modifications of Law 89 companies as to anonymity and simplicity
- Greek flagged vessels not paying higher insurance premiums, possessing good quality
- In 1997 a set of measures are covered
 - (a) the number of seafarers employed on board ships
 - (b) the regime applicable to shipowners for the national insurance Seaman's Fund
 - (c) the new employment policy
 - (d) the seafarer register .
 - (e) the unemployment benefit. and
 - (f) the upgrade of maritime education.

2000-2010

(1/3)

- 2000- 2004, Socialists, PASOK
- 2000 Greece joined the single currency
- 2001 Dot.com crisis
- Measures are undertaken for
 - Further reductions in composition of crews
 - Non payment of NAT insurance contributions to foreigners
- In 2001, tax reduction to shipowners and seafarers.
- The tonnage tax was cut by half.
- Low registrations in the Maritime Academies

2000-2010

(2/3)

- In January 2002 a mini-package of measures that reduced
 - the direct levy on Greek flagged vessels by 70%
 - the tax burden on the seafarers.
- 2003 China boom
- 2003 package was announce
 - to increase competitiveness on taxation reduction, education and pensions of seafarers

2000-2010

(3/3)

- a second package was promised on the areas of maritime education; aid the national security and seafarering employment.
- 2004-2007, Conservatives, ND
- 2004 further reductions on crew and investing amount of money in Piraeus
- 2007-2009, Socialists, PASOK
- 2009 Ministry name and forma changes
- 2010 Ministers name and form changes
- 2010 Greece was getting into a deeper economic and sovereign debt crisis

Mapping the maritime policy of Greece...

Mapping the ABYSS?



*Thank you
for listening*