



**UNIVERSITY OF PIRAEUS**  
**Post Graduate Shipping Studies Department**

**MSc Thesis Subject: Resilience of Greek Owned Commercial Fleet  
from 70s' to today as compared to other major Ship Owning  
Nations**

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*‘Whatever You give the Sea, She will return to You.  
For She is always Fair.’*

Unknown Greek Seaman (source: UGS 100 Years anniversary promo video)

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## Abstract

What does it take to Excel in a specific economic field or a specific industry?

The easy and stereotypical ‘picks’ for a quick answer could be that ‘money goes to money’ – so, if you have good financial backing you can achieve targets easier - or that ‘size matters’ – therefore, big industrial countries or group conglomerates have the means and the calibre to drive developments and implement strategies the way they wish. These answers, of course, are not wrong; political influence and financial robustness can play a very important role. However, history can provide interesting cases to study, where things do not seem to be so straight forward.

One such case, is the history of Greece in Shipping. A country which is more known for its struggles and internal turmoil rather than its wellbeing in recent years. Also a country of negligible size and global influence. Despite this, Greek Ship owners have demonstrated remarkable resilience through time and have managed to climb and stay at the top positions of global shipping by showing notable skills in negotiating ‘rough waters’ as well as exploiting opportunities. So, how did the Greeks have done it so far?

In this research, we attempt to look into the recent history of the main shipping cycles, focusing on the ‘Greek’ point of view. We also bring into the picture some characteristics from other traditional ship owner nations for comparison reasons. Findings are then analysed – given the limitations in the size of a Thesis research - and conclusions are drawn on the question raised above. Today’s status is then used to feed a S.W.O.T analysis. In the end, areas for further investigation are proposed as emerged during the research.

## Περίληψη

Τί χρειάζεται για να διακριθεί ή και να πρωτεύσει κάποιος σε ένα συγκεκριμένο τομέα δραστηριότητας;

Οι 'εύκολες' - και ίσως στερεοτυπικές - άμεσες απαντήσεις θα μπορούσαν να είναι ότι τα 'χρήματα πάνε στα χρήματα' – συνεπώς κάποιος που έχει γερά οικονομικά στηρίγματα έχει αυξημένες πιθανότητες να επιτύχει – ή ότι η 'κρίσιμη μάζα', το μέγεθος, μετράει – άρα οι μεγάλοι όμιλοι ή ακόμα και ολόκληρες χώρες έχουν την επιρροή και τα μέσα να επιτύχουν τους στόχους και τις στρατηγικές τους. Αυτές οι απαντήσεις δεν είναι λάθος, η επιρροή και η οικονομική ευρωστία μπορούν να παίξουν καθοριστικό ρόλο σε οποιαδήποτε επιχειρηματική στρατηγική. Παρολα αυτά, η ίδια η ιστορία είναι πηγή πλούσια σε ενδιαφέροντα παραδείγματα προς μελέτη, όπου οι απάντηση στο παραπάνω ερώτημα δεν είναι τόσο προφανής.

Ένα τέτοιο παράδειγμα προς μελέτη, είναι η περίπτωση της Ελλάδας ως ναυτιλιακή δύναμη. Μια χώρα περισσότερο γνωστή στη σύγχρονη ιστορία για τα εσωτερικά της προβλήματα και την αβεβαιότητα παρά για την ευρωστία της. Μια χώρα μικρή σε σχετικό μέγεθος και περιορισμένη παγκόσμια επιρροή. Η χώρα αυτή - μέσα από τους εκατοντάδες πλοιοκτήτες της - έχει παρουσία ήδη από τα μέσα του 20<sup>ου</sup> αιώνα στις πρώτες θέσεις παγκοσμίως, ως ναυτική δύναμη και έχει επιδείξει αξιοσημείωτη διαχρονική ανθεκτικότητα, αλλά και ικανότητα, στο να διαχειρίζεται κρίσεις και να εκμεταλλεύεται ευκαιρίες. Πώς τα κατάφεραν λοιπόν οι Έλληνες;

Η παρούσα μελέτη, είναι μια προσπάθεια ανάλυσης των κύκλων – απο το '70 εως σήμερα - της ναυτιλιακής αγοράς μέσα από το πρίσμα και την οπτική των Ελλήνων πλοιοκτητών. Κατόπιν, εισάγονται στο κάδρο ειδικά χαρακτηριστικά άλλων παραδοσιακών ναυτιλιακών δυνάμεων, για σκοπούς αντιπαραβολής και εξαγωγής συμπερασμάτων. Τα ευρήματα αναλύονται – σε λογική έκταση, δεδομένων των περιορισμών μεγέθους της εργασίας – και παρουσιάζονται τα συμπεράσματα. Επιπλέον, δεδομένα της σημερινής εικόνας χρησιμοποιούνται σε ανάλυση S.W.O.T. Τέλος, προτείνονται τομείς για περαιτέρω ανάλυση, όπως αυτοί προέκυψαν κατά τη διάρκεια της έρευνας.

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# 1. Introduction

## 1.1 General Introduction

Throughout Greek history, from antiquity to today, the single most important and dominant element one can identify, is the sea - as a starting point, as a means and as a destination. Herodotus, Greek Historian (484 b.c. – 425 b.c.), wrote, to point out the importance of shipping and naval power for Ancient Greeks: *'We have a home country and land when we have ships at sea'*. However, Odysseas Elytis, Greek poet and Nobel Prize winner, probably put the whole issue in a more romantic - yet simplistic - way:

*'If you disintegrate Greece, in the end, what you will be left with, is an olive tree, a vineyard and a ship. Which means: with just so much you make it up again'.*

These free translations of the words of these two great Greeks, best summarize and describe, the role sea has played, in the evolution of Greek history throughout the centuries and the importance the Greeks attributed in shipping as a means for survival and growth.

Today, Greece is a relatively small nation of 10,8 million people, at the South-easternmost end of Europe. It represents ~2,1% of the total EU28 population and a mere ~1.8% of the respective GDP (Eurostat & Wikipedia). However, these indicators - of negligible value - are in inverse proportion to the strategic value of Greece's geographical position, situated amongst Europe, Africa and the East and surrounded from the south, the east and the west by the Mediterranean Sea. It is this exact characteristic that has made Greece the protagonist in many historical periods and has also shaped the Maritime culture of the Greeks. Shipping (or sea related activities) has been one of the oldest forms of occupation of its inhabitants and a key element of Greek economic growth as well as cultural migration.

Irrespective of the long history of Greek Shipping throughout the centuries - something that can be attributed to the location of Greece and the commercial mindset of its people

which led to the use of ships to expand and reach further - the fact that it nowadays stands at the top of the world is something that requires deeper investigation. Considering that most Greek Owned ships will never come even close to Greece (graph 4.1), this shows the difference of what shipping is today compared to e.g. the ancient times. The recipe of what is needed to be successful - let alone a pioneer – is to be found in more dynamic elements and not only to tradition and history.

Thus, what is impressive with the case of Greece, is that a small – and seemingly introvert - country, amidst volatile times, reigns the battle of the global seaborne trade, operating the biggest fleet in the world surpassing giant economic players of the globe - like China and Japan. However, what is rather exceptional is the fact that the Greek shipping industry succeeded in coming out of all the challenges of the shipping markets during the second half of the twentieth century even more robust. Given these undisputed facts, some important questions arise that need to be answered, to understand the course of development and operation of Greek shipping. However, the key question is the following:

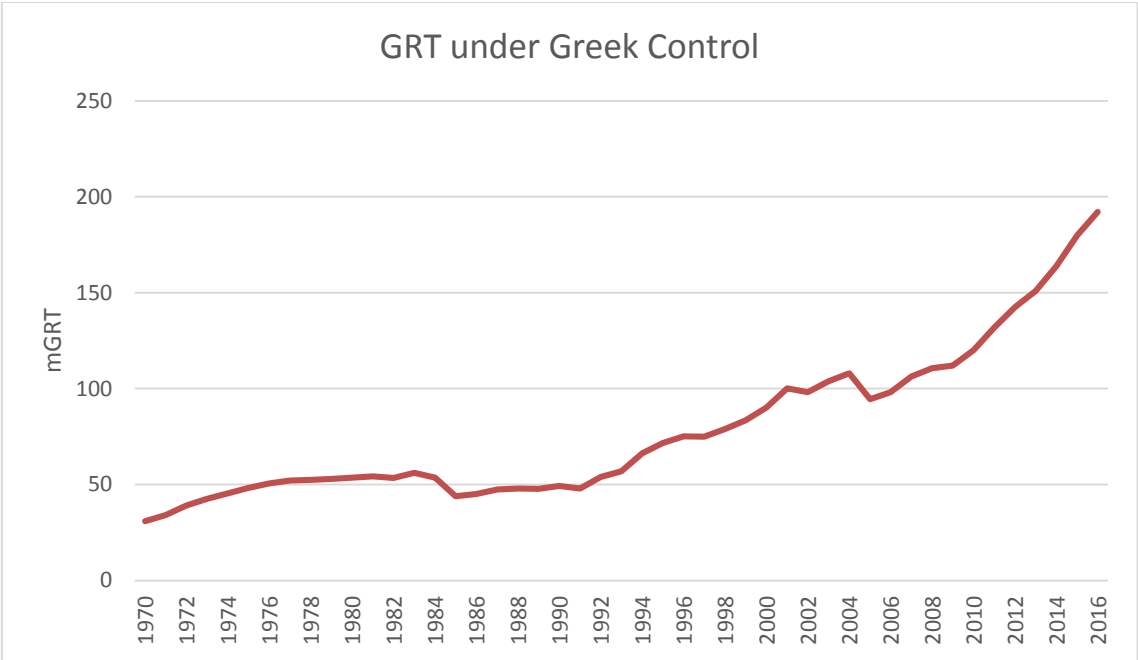
Why and how the Greek ship-owners succeeded in occupying the leading position in world shipping hierarchy?

## 1.2 Aim of the research

Nowadays, Greece controls the largest merchant fleet in the world forming the backbone of world shipping and despite the ongoing sovereign debt crisis that began in 2008, Greek shipping has emerged once again as the most robust and dynamic segment of the devastated Greek economy, representing almost 7% of GDP (about 15 billion Euros) and total workforce (290K heads), being the second largest contributor to the national economy after tourism. These are high-value creation and specialized jobs. For comparison, tourism in Greece contributes around 18% on GDP and ~20% on workforce (Wikipedia). Greek ship-owners and shipping companies hold today more than 16% (16,36% as per October 2016, Petrofin Research – Greek Shipping Companies) of world's tonnage which is by far the largest international merchant fleet the world has ever seen. In terms of ship categories,

Greece ranks first in both tankers and dry bulk carriers, fourth in the number of containers, and fourth in other ships. In **Graph 1.1** we can see the development of the Greek Controlled fleet throughout the past decades in terms of GRT. Despite some very short periods of contraction, it is a clear picture of consistent growth.

**1.1 Graph:** Development of GRT in million tons for Greek-controlled fleet from '70s till today. (Sources: Clarksons, 'Ναυτικά Χρονικά', Gelina Charlaftis, G.Vlachos)



In the following chapters of this research, facts and figures will be presented, market cycles since the '70s will be examined, basic information will be provided on the main ship owning nations of EU and the world and the drawing of conclusions will be attempted on what are the commonalities and differences amongst all the global key players in Shipping.

For now, it's safe to say that the expectation should be a combination of factors leading to the success of Greek Owned Shipping and not just the historical connection of the Greeks with the sea or their seaworthiness as seamen.

## 1.3 Thesis layout and organization

In this research, the focus is on the last ~5 decades. We try to identify the reasons why Greeks have managed to keep the leading position in the global shipping industry - let alone come out stronger after periods of crisis. Historical facts will be presented and a brief presentation will be made of the two biggest non-European Shipping Nations – Japan and China, as well as the 4 major European ones: Germany, Norway, Denmark and UK. Similarities and differentiating factors will be identified these nations and conclusions will be drawn on the strengths, weaknesses, opportunities and threats for Greek Ship-owners.

The research consists of 5 chapters:

- **1. Introduction.** In this Chapter the scene is set around Greece and Shipping. Some basic but interesting information and statistics are presented and the aim of the research is explained.
- **2. Literature Review.** In this chapter we have two parts. First, we go through the ups and downs of the global shipping markets and examine internal and external factors that affected the market cycles. In this frame, we examine how Greeks negotiated the uncertainties and the opportunities, to identify their strategies and how these evolved and were adopted to the different periods and the changing challenges of each cycle. In the second part, we focus on identifying key information on the other traditional shipping nations of this research. The information gathered in both parts of this chapter, will then be used to draw conclusions. The main bulk of historical facts and figures presented in this part of research are collected from relevant books and publications.
- **3. Methodology.** In the Methodology Chapter, the reasoning is provided for chosen period under examination, countries of interest, tools and sources used to draw and organize conclusions.
- **4. Findings Presentation and Analysis.** All the findings are presented in an organized way in this chapter. For quantitative info the focus is on today's picture. Conclusions

are presented and analysed through a SWOT analysis, on potential risks but also opportunities deriving from strengths and weaknesses – internal and external.

- **5. Concluding Remarks:** The final chapter of the Thesis provides a brief description of the findings rising from the analysis undertaken. Using experience from current research, further areas of investigation are proposed and research limitations are listed before the final closing session of the research.

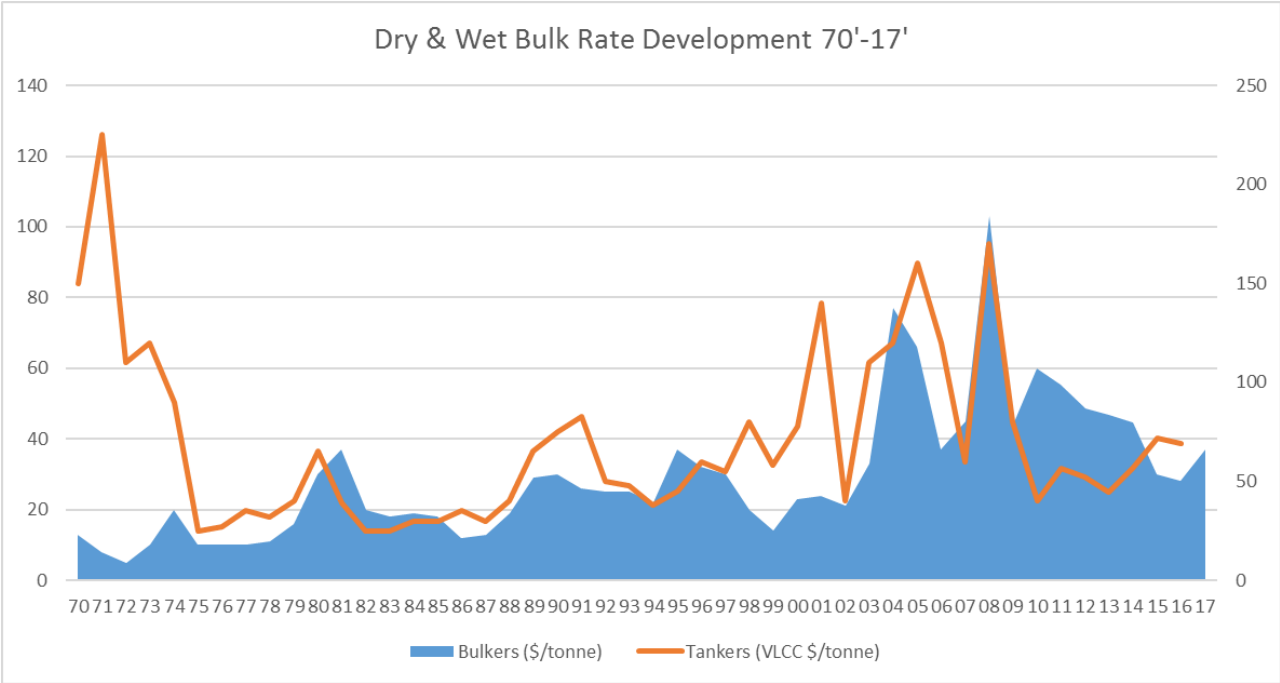
## 2. Literature Review

### 2.1 Introduction

Numerous publications and articles have been written about the phenomenon of shipping cycles, their root causes and how they affect and are affected by the decisions of ship-owners. Freight Fluctuations are a fact that ship-owners will always face and the successful prediction of such fluctuations is the basis of their business. The purpose of this research is not to go through shipping cycles as such but it would be interesting to investigate how the Greek-controlled fleet evolved during the peaks and the troughs of the shipping cycles throughout the last 45+ years. **Graph 2.1** below, shows the development during the period of examination this research (1970<). The values are coming from various sources and are not 100% weighted to reflect present values for absolute comparisons, however the goal here is not to compare the freights as such but to clearly show the points in time where the market boomed or suffered. The investigation and description of events that follows, is consistent with the market developments reflected on the graph.



**Graph 2.1** Shipping Cycles 70s - today. World Average rates for VLCC AG West and US Gulf – Japan Grain Panamax (source: Clarksons and other various other articles).



In this chapter, we will go through the historical facts, derived from relevant literature, to determine what the Greek Ship-owners did to negotiate the ups and downs of the markets from the '70s to today. This examination will reveal the demonstrated tactics and the response of the Greeks which in turn led to the continuous growth and dominance during said period. In the second part of the chapter we will also try to give an insight to the key characteristics of the other shipping nations under review in this document. This will help us identify commonalities and differences compared to the Greeks to reach some conclusions in the end.

## 2.2 Greeks – Cycles and Decisions that shaped the Greek Controlled Fleet Through Time

### 2.2.1 70'-80' period

We start our research from '70s but the Greeks have climbed to the top positions of global shipping already by that time. As Helen Thanopoulou mentions under Chapter 2 in the Book of A.Pallis 'Maritime Transport: The Greek Paradigm':

*'Although national statistics on tonnage ownership of other main maritime countries were either non-existent or practically impossible to reconcile until the 1970s, Greek-owned shipping seemed to have had conquered the first place just before 1970 (Hellenic Chamber of Shipping, 1996, p.13). A detailed analysis of the known ownership of open registries worldwide confirms also Greek owners in the world fleet in 1973.'* **Helen A. Thanopoulou p.34**

Period between 1960 and 1973, represents a period of rapidly growing demand and technological innovation. At the start of the 1970s, the Tanker market found itself positively affected by the '6-day war' between Egypt and Israel in 1967 and the subsequent closing of the Suez Canal. The closure lasted around seven years and during that period the market peaked several times as Oil was the main commodity transferred via this route at that time. On top of this, a few other events, like the growth in industrial commerce, the closure of the 'Tap Line' pipeline in 1970, the nationalization of the Oil fields in Libya in 1973, led to a freight rally that peaked in that same year which is - till today - considered as one of the best years of shipping. Dry Bulk market was indirectly affected as the use of Combined Carriers shifted into the transfer of Oil, therefore leaving a gap in the segment, especially in Iron Ore market. In general, during the '72-'75 period Dry Bulk market was also positively affected by the increased global economic activity and the tendency of big economies towards increasing their commodity reserves. However, as seen in the graph, Dry Bulk freights did not match the sharp increases experienced in Tanker market.

This 'rush period' for tankers came to an end abruptly with Yom Kippur and the subsequent events that led to the opening of canal by 1975. The long downturn that turned into a crisis

for Tankers, lasted - with only brief breaks - until '88. The opening of the Canal was, of course, not the only reason for the downturn. A series of events and of course market behaviours related to the recent 'market boom' pretty much led to a 'perfect storm' in shipping.

At the peak of the cycle, in '72-'73, the global tanker capacity was at around 225 million DWT. However, the new tonnage - in order - was so big that quickly led to the increase of this volume by more than 40% to 320 million DWT by the end of '75 while the demand for Tankers had already dropped substantially. Furthermore, the global Shipbuilding infrastructure had already adjusted to the growth of the past decade as well as the speculative ordering. That capacity was not a parameter that could re-adjust itself in short notice, therefore new - adding to the surplus - deliveries continued for approximately a decade before it matched the actual demand. Finally, oil price increases on years '73 and '79, dramatically globally reduced the need for oil imports. By 1985 the available seaborne trade capacity for crude oil had decreased by 30%. It took more than 10 years for this adjustment as despite the sharp VLCC tanker freight decrease in 1974 (>50%) there were some small recovery periods as well as marginal gains for smaller tanker operators. It was not before 1981 that market completely collapsed giving net losses to all spot market tanker operators irrespectively. (Giziakis et al. p. 265)

Dry bulk market faced a similar downturn in the years following the peak ('75-'78) but not as long in duration. Dry Bulk spot market remained depressed for a good three years' period until 1978 and already in 1977 many ship-owners were faced with cash flow problems as freights were barely covering running costs. Soon after, the market gradually started climbing to reach its peak again just before the turn of the decade reaching even higher than 1974 levels. The reasons for this much quicker upturn is not completely irrelevant from the ones that affected the Tanker market. The increase in Oil prices resulted in the shift of many economies to coal to cover their energy production needs. Furthermore, the increase in commerce and production led to bottlenecking phenomena (in some cases it could be more than a month of waiting time for loading/discharging) in dry bulk terminals which in turn artificially increased the need for available tonnage.

In a nutshell, the long recession in the shipping markets, which was a result of volatile demand and of tonnage over-ordering turned many, once strong, traditional fleets into a downward spiral or even extinction. The route between the Pacific and the West through

the Indian Ocean regained the place it once had and global shipping adjusted itself geographically. The new set up, with Greek-owned tonnage being at the top of bulk shipping, was characterized by the unforgiving consecutive imbalances of supply and demand, favouring lower-cost players to gain the head start in the race for market survivability.

### 2.2.2 '80s-'90s period

During period '81-'85 many vessels were scrapped and the laid-up tonnage reached the level of 50 million DWT. AT the end of 1983, second hand VLCC prices (5-10 YO) were at 3 million \$ when 10 years back it would cost close to 50. In 1986 the market showed the first recovery signs and freights went up by 70% and second hand vessel prices doubled and tripled soon after. At the end of the decade, the tanker market was quite hot again and NB activity resumed trying to accommodate demand, including new speculative orders. (Giziakis et al. 266).

The Dry Bulk upper cycle described in the previous part, was interrupted early in 1981 and was marked by a miners' strike in the United States. This shook the Atlantic trade market but in principle the main driver of the downturn was the global recession that had already begun hitting the global economy. The stagnation of coal trade, the low oil prices and of course the normalization of dry bulk terminals' activity resulted to a downward spiral like the one experienced in the Tanker segment. What is interesting and worth noting, is that despite the low freights, many ship-owners placed new orders. Companies (and banks) being rich in cash from previous years' activity, counted in an upturn of the market within 4-5 years and wanted to be well positioned to exploit this by having new vessels ready to trade. That could have been correct if not so many players where betting on same scenario. The market did pick up but due to the available capacity the freights didn't increase that much after all. Many cases of scrapping, foreclosures and distress sales where registered. 1986 was the rock-bottom of this cycle and the '86-'89 period is considered as the most profitable period for asset play strategists. Again, as H. Thanopoulou explicitly mentions in another part of Chapter 2 in the Book of A.Pallis 'Maritime Transport: The Greek Paradigm':

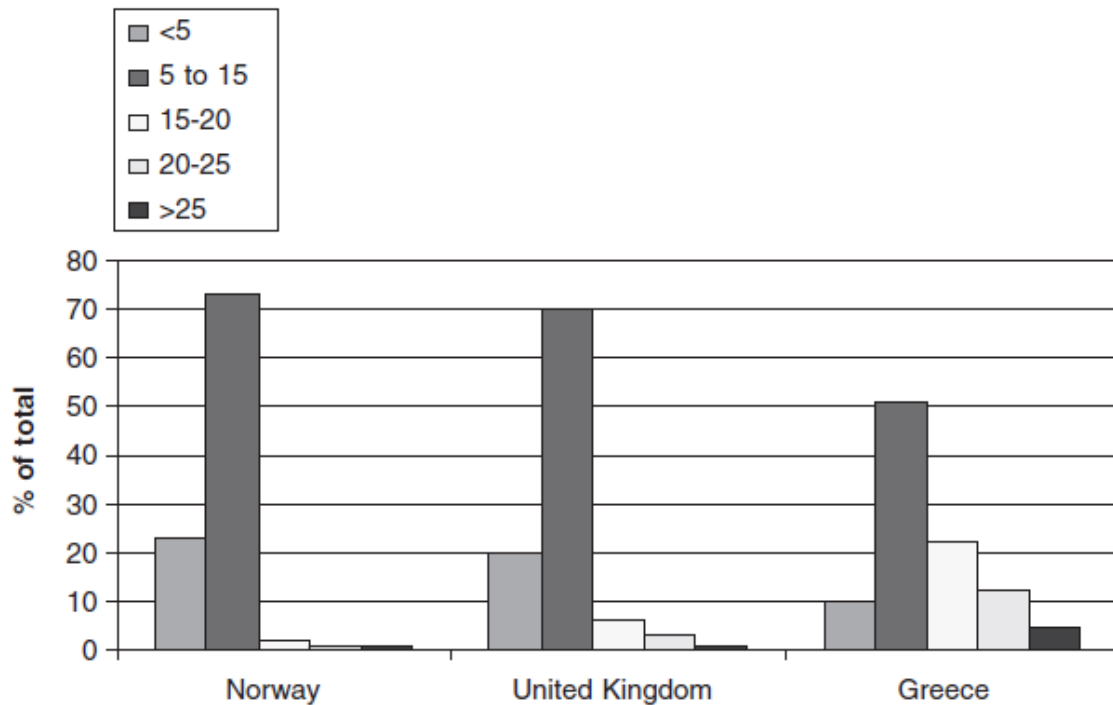
*'Although plagued by the highest laid-up rate among main fleets at the worst period of the crisis, in 1983, the Greek registry found itself one place up in the world hierarchy near the end*

*of the crisis, in 1986, and with larger tonnage than at its start. Neither Japan nor any of the other four European registries in the league of the first 10 fleets in 1973 could claim the same despite their younger age at the start of the crisis. Over the same period Greek-owned shipping had been confirmed as the undisputed leader of world shipping in the last quarter of the 20th century having suffered only minor setbacks in terms of either total tonnage or market shares.’ **Helen A. Thanopoulou p.34***

Although this high resilience might seem illogical at first, a simple review of the basic characteristics of the market at the time along with the decisions of the Greek owners make things fall into place. Traditional bulk markets were highly competitive and there were not many alternatives for companies than low cost strategies. Other fleets and registries had been focusing on specialisation and high technical levels of their fleets which meant higher variable and fixed costs. Furthermore, Greek owners had chosen to invest more aggressively towards bulk carriers than tankers in the pre oil crisis. Therefore, they found themselves with a more diversified fleet and suffered somewhat less from the effects of the tanker crisis that followed. This diversification made all the difference when things went ‘south’. Greeks were also prudent and preferred in principle older, less advanced and therefore much cheaper tonnage. That meant less or no capital exposure compared e.g. to the Norwegians at the time. What would normally be a weakness turned out to be the advantage of the Greeks. The elevated age of the fleet meant less capital cost and exposure obligations – if any. The Greeks had done it in the past and were doing it again successfully. This success was of course based on the charterers’ perception that bulk shipping transport services are homogeneous.

**Graph 2.2.** Age Structure of the Norwegian, British and Greek Fleets in 1981.

Source: Data in OCDE 1982 (source: Research in Transportation Economics, 2007 H. Thanopoulou).



**Graph 2.2** is self-explanatory. The fact that during the years of the crisis fleet age deteriorated further, kept the perception highlighted above valid for a relatively long period, to the benefit of the Greeks. Eventually this led to ‘slippery slope’ by having Greeks maintaining liquidity and buying newer vessels at very low prices maintaining competitiveness and cost strategy. That fed once more the anticyclical investment strategy of the Greeks and the successful asset play. During that period – 70s and 80s crisis - some interesting cases of such investments took place.

A good example was that of Norwegian owners. Faced with a lay-up rate of about a quarter of the tonnage in the national registry late 70s and beginning 80s, Norwegians became a main supplier of tonnage for Greeks. Extract below is self-explanatory:

*‘It is characteristic that in 1977 out of the 31 recorded transactions under 6 flags involving Greek purchases of second-hand tankers, 7 involved Norwegian owners who constituted thus the largest single group of transaction counterparts. As one by one relatively young vessel with a high fixed cost were proving in the prevailing market conditions not the asset they*

*were purported to be at the time of ordering but a liability it was hard to off-load, there was no shortage of tonnage for Greek-owners to select from.’ Helen A. Thanopoulou p.38*

The combination of all the strategies and circumstances described above constitute the well-established pattern of Greek shipping competitiveness. As also mentioned in the introduction, the origins of this pattern are not to be sought in the ‘genes’ nor the ‘historical bonds’ with the sea. What seemingly was a drawback for Greeks in the past, seem to be the origin here: the lack of capital (Harlaftis, 1996 p.141), which set a tradition and a mentality of looking for vessel opportunities mainly when acquisition prices were within reach. Of course, for family owned and ran shipping companies, the succession of generations played a pivotal role in this context through the transmission of financial know-how and has been counted among the strengths of the typical Greek shipping family firm. (Thanopoulou & Theotokas, 2006).

### 2.2.3 ‘90s-‘00s

Towards the end of the 80s, a challenging decade, freights gradually reached their new peak in 1989. In the years that followed, the two markets followed again different paths due to the different investor behaviours. In the tanker segment, this peak was followed by high ordering for new tonnage. This was driven by the expectation that all VLCC built in the ‘70s would soon have to be replaced as they reached the 20 YO mark as well as the fact that global NB Yard capacity was so much reduced that would require a longer period to deliver. Another important element was the gradual increase of Oil demand which was expected to give a push in the long-haul oil sources trade. Reality, turned out differently and while older VLCCs continued trading beyond 20 years the building capacity increased delivering new tonnage for which there was no sufficient demand after all. This led to a new ‘low’ from mid ‘92 till the end of ‘95 which also coincided with global economy recession. Dry bulk followed a different path. New tonnage orders remained low and were only a fraction of those placed in Tanker segment. Consequently, when these orders were delivered during the ‘92 recession, they were easily absorbed by the market keeping rates at good levels. ‘89-‘95 was, therefore, a period of profitability for dry bulk operators and this kick-started a new round of ordering for new tonnage towards the end of the first half of the decade. These

deliveries resulted in a new 'low' for the Dry segment in '97. Once more, expectations for an upturn after the millennium mark led to more ordering which then had again the same result – when market did go up, the freights just saw a modest increase contrary to the sharp increase of Tanker freight rates at the break of the new millennium.

The beginning of the 1990s marked the rise of a period in the industry focused on quality and safety after the passing of measures at international level introducing new design standards. An important 'milestone event' was the accident of the Exxon Valdez in 1989 that caused this change to be made almost in an abrupt way.

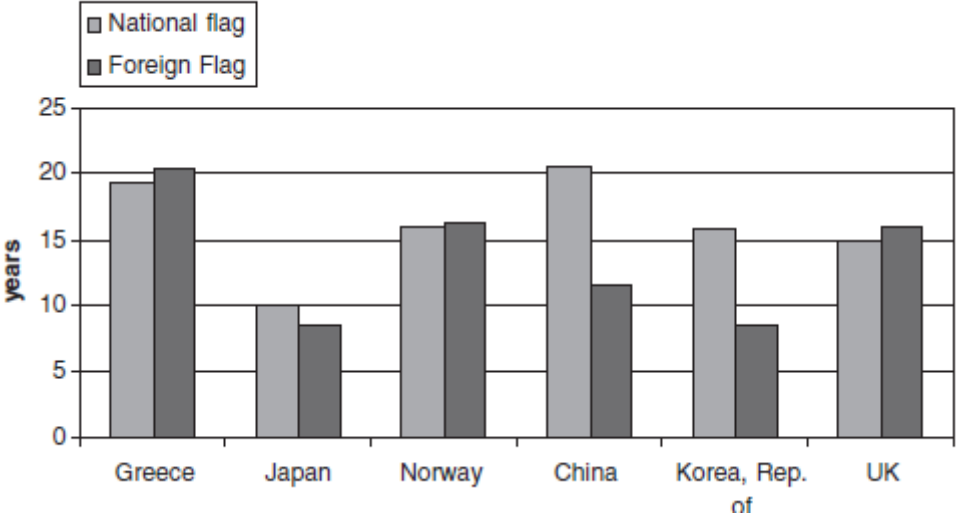
Adoption of amendments of MARPOL in 1992, set new specifications for tanker construction and the compulsory - progressive – withdrawal of existing tankers. This was a quite dramatic change for an industry that is, more or less, used to slower pace on technical evolution and long term planning for its assets. However, from then on, things would only get busier for owners as more dramatic interventions in all the basic aspects of both the hardware and the “software” of a globalised industry were on the way. International Safety Management code changed on board and ashore Management procedures, both on-board as well as ashore, through a massive wave of compulsory certification in 1998. Despite initial fears, Greek owned shipping - which had in the meantime reached beyond 15% of the cargo carrying capacity – continued to operate with no disruptions or delays going ahead to increase their tonnage further.

A vessel is essentially future cash flows for its operator. Therefore, its present value is very much affected by the time span of its life. This principle is at the very basis of shipping decision-making. The fact that some regulations implemented changed the calculations for this equation overnight meant trouble or business to the industry. The problem described above is traditionally more intense for tankers due to the nature of their cargoes. In such cases, the best virtue one should possess is quick adaptation, to maintain competitiveness and continue having access to cargoes and ports. That meant, the Greeks had to act immediately in order to mitigate the results of the very strategy that elevated them at the level they were, the top. The relatively high age meant 'big bucks' were at stake for them to be able to modernize their fleets. How easy would that be in such a volatile Market? **Graph 2.3** shows the gap the Greeks had compared to other major shipping powers.



**Graph 2.3.** Age of Fleets Controlled by Major Maritime Countries in 1999.

Source: Age figures in ISL (Research in Transportation Economics, 2007 H. Thanopoulou).



The demand for newer vessels that would adhere to new regulations started picking up therefore ‘quality of service’ started climbing up in importance amongst other issues in the industry’s agenda.

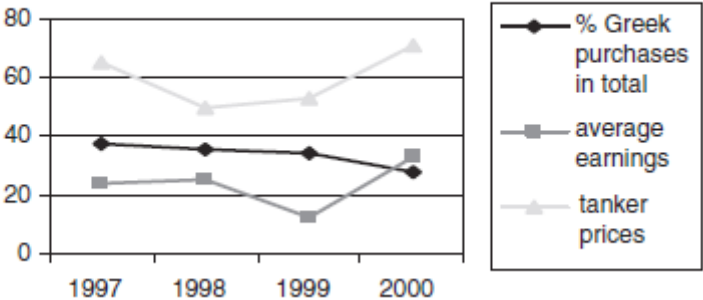
*‘The entire Greek competitiveness blueprint was being put in perspective as the weak to non-existent market signals for quality tonnage of the 1990s were becoming stronger - at least in tanker market - while fleet replacement was becoming imperative in view of the rapid and – after a certain point – unpredictably accelerating changes in international regulations. Helen*

**A. Thanopoulou p.41.**

As done consistently in the past, the 2<sup>nd</sup> hand market served the purpose for the necessary renewal of Greek-owned fleet. What helped this time around was the flexibility – main characteristic of non-listed companies - enjoyed by Greek shipping companies due to their concentrated or even family-oriented organisation management style. The restless investment behaviour as well as the increased independence from third party interests were a good match for what was going on in the market at the end of the century: buoyant markets with short high peaks followed by drops. That provided the Greeks the opportunity playground they needed with plenty of options to exploit by applying what they knew best:

well-timed acquisitions and liquidations. **Graph 2.4** illustrates the pattern followed by Greeks in second-hand tankers during the period leading up to the end of the century. Towards that time, the S&P activity declined when market started picking up again. By then they had already taken advantage of the lower tanker prices affected by the Asian crisis in the late 1990s.

**Graph 2.4** VLCC Freight Rates, VLCC Prices and Share of Greeks in Tanker SandP. - Data in Clarkson Research Studies. Shipping Intelligence Weekly, various issues (source: Thanopoulou 2007).



*Note on Graph: Tanker price refers to end year prices of five-year-old VLCCs in million. Rates refer to average earnings per day for the respective year for VLCC vessels in the Gulf-Europe route in thousand US dollars. Percentage of Greek share in total was calculated on the basis of all transaction data on tankers over 10,000 dwt.*

### 2.2.4 '00s-'15s

As described in previous part, the dawn of the 21<sup>st</sup> century found the industry amidst regulatory changes, focus on quality and the Greeks under fleet renewal effort to meet these requirements, especially in Tanker segment. But then, it was precisely tankers, which were to bring the first signs that the markets were turning, altering the picture and Greek shipping prospects.

During year 2000 the market gave considerable profits to ship-owners, especially tanker operators but short after a drop followed in 2001. Year 2002 was a highly volatile year which started low but picked up towards its end. The period from 2003 till October 2008 has

undoubtedly remained in shipping history books as the most profitable for shipping companies. This didn't come about by chance. It was a series of events inside and outside of shipping that resulted in this 'golden' period which found no match to whatever the world of shipping had experienced in the past. The monstrous growth of China's demand for raw materials, the U.S. economy growth rates and the emerging BRIC economies set the pace during that period. The limited yard capacity to accommodate new tonnage demand and big delays in export terminals of Australia and Brazil just made things worse – or better, depending on one's perspective. This period was, in a nutshell, a ship owner's market, whatever that meant for profits and market psychology. Some other developments also took place during that period. New ship designs, for bigger and safer vessels, came into the scene, new rules were enforced based on international standards on pollution and safety and a general modernization trend was adopted by much of the Shipping industry.

This unexpected – in terms of intensity - upturn provided a helping hand to the renewal of the Greek owned fleet.

*'Dissipating all fears, the forever surprising shipping markets carried with them financial institutions as well. Banks returned massively to shipping in the early years of this century financing eagerly Greek – among other - ship-owners. The elements were there for another Greek shipping renaissance and this time even external finance seemed redundant due to the unprecedented influx of revenues associated with the state of the main markets.'* **Helen A.**

**Thanopoulou p.43.**

The high activity of the Greeks in the S&P market started dropping as the market started climbing and gradually moving to the levels described above. The Greeks, as well as many other ship-owners, started benefiting from increased revenue streams and building up liquidity. The obvious challenge now was how to capture more and more in a market where tonnage is given. The owners that believed that this upward market rally would last for long, were putting in orders for new tonnage while at the same time, the share of Greek purchases in the total S&P activity was dropping year by year as markets kept rising from 2003 to 2005. The anticyclical pattern was again obvious amongst Greeks. During the next 3 years, till 2008, there were noticeable short term ups and downs in the separate markets but the overall average and most importantly the overall duration resulted in massive profits for

shipping companies with vessels primarily trading in spot market. Records were set just to be broken. Greek owners used this opportunity to further mitigate the areas they had been lagging in the past: fleet age and diversification. Therefore, this time around, apart from the 'good old' asset-play, priority was also put on achieving one more objective: the overall makeover of the Greek-owned fleet. In the years that followed, Greeks utilized a combination of second-hand and New Built investments funded by the eager financial institutions and the liquidity they got from the booming markets to achieve their goal. That eventually led to the reduction of the age of the fleet by five years within a period of just six. While the Greek owned fleet still remained older than the world fleet, the improvement was clear and that was remarkable feat. Age differentials between the Greek-owned and the world tonnage were reduced in 2006 at the level of a few months in terms of vessel numbers and of 1.7 years in terms of GT (Greek Shipping Co-operation Committee, 2006, p. 6).

In terms of differentiation and specialisation the Greek Owners seem to have followed the established trends of global shipping and economy. Areas where Greek owners had not ventured came into focus. LNG, LPG were segments where competitors were already well established years ago leaving the Greeks very low in market shares. The gas carrier sector was not the only one outside the traditional bulk shipping markets to attract the interest of Greek-owners, over a period of 10 years, the share of pure container vessels in the total fleet has more than doubled.

During the 10 years starting from the end of the 20<sup>th</sup> century and up to the end of the first decade of the 21<sup>st</sup> century Greek fleet underwent a massive renaissance as well as re-orientation. New segments were 'attacked' and others were gradually abandoned, such as combination carriers. The belated adjustment to the new reality could be seen by some as lack of foresight but also a result of the strong competitiveness they demonstrated on the traditional segments, making cash when others couldn't and were fleeing towards new market niches. What is important, is the fact that the Greek owners would have faced a gradual increase in pressure if they didn't modernize, considering the global trends on regulations and new technologies. And they seem to have done so on the right time. During these years Greek – owned fleet somewhat declined and dropped as % to the global tonnage but that was probably a conscious step back to take for it to adjust and reposition itself and push forward as a fleet with improved characteristics.

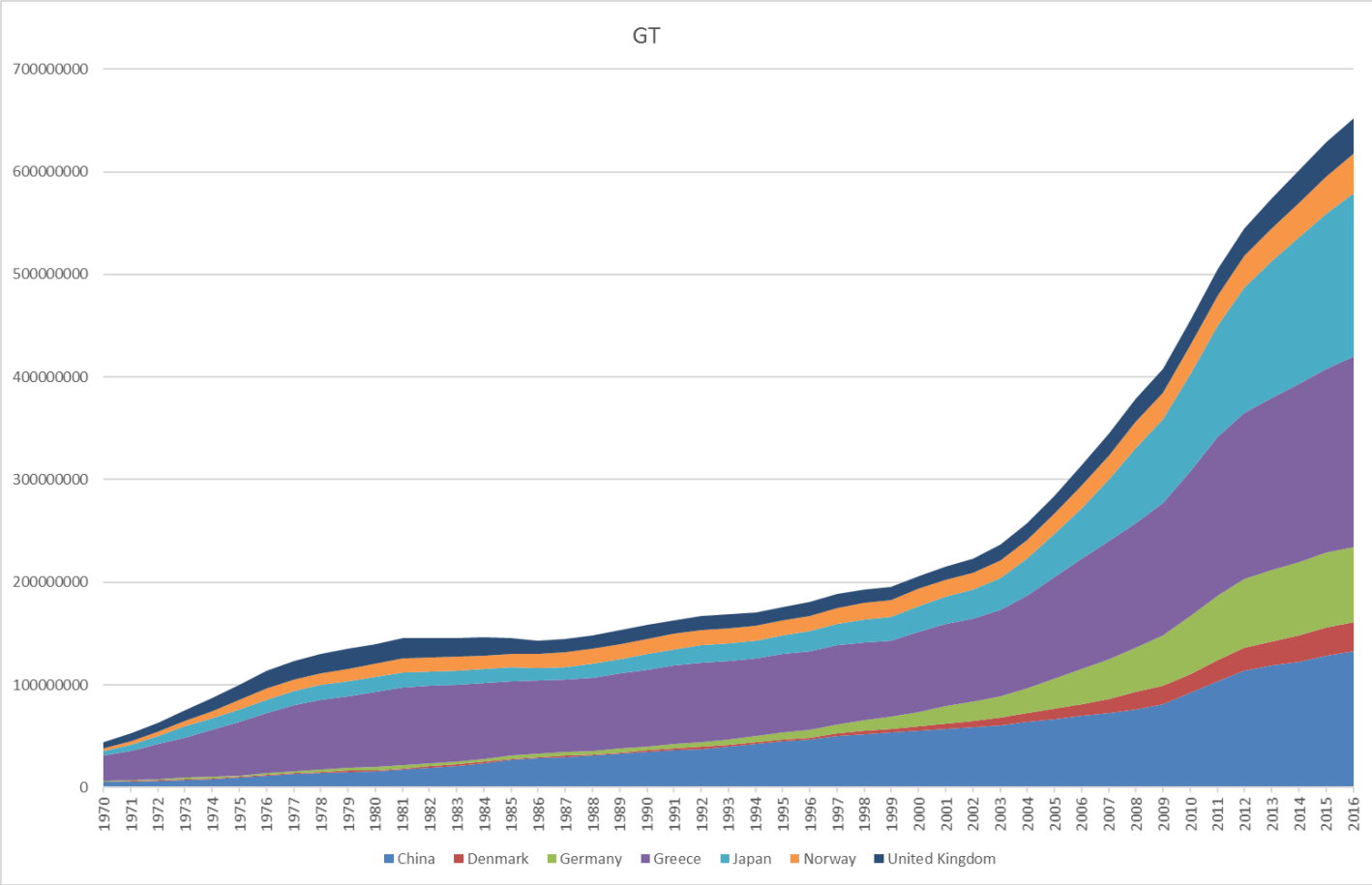
Year 2008, turned out to be the best proof of the unstable and unpredictable nature of the shipping business. The first 8 months of the year were a continuation of the previous period. A Capesize could be hired for 130K\$/day in February's spot market only to shoot up to 320K\$ in June and then down again to 80K\$ in September. The Lehman Brothers case on the 16<sup>th</sup> of September was the tip of the iceberg of what followed and the quickly deepening financial crisis soon affected the global economy, production and consumption. Although the yearly average was still at good levels the year end was a shock. (Giziakis et al. p. 275)

Although the market recovered soon after the big crisis – albeit not reaching the record levels of 2008 – the effects of the big boom of the preceding years were yet to come in effect. The world fleet continued growing between 2010 and 2013. At the same time, China doubled its shipyard capacity and took huge orders for new ships as it sought to control the commodities trade. A quote from a broker is self-explanatory: 'The dry cargo market was used to growth approaching 10pc for quite a few years on the trot," said James Kidwell, chief executive of London-listed broker Braemar Shipping. 'All of a sudden, you've hit a market that's gone flat. That is a radical change. If you've got more ships than there are cargos, then freight rates are going to be weak - it's that simple.' And it is indeed that simple. What the Baltic Dry is telling us is not that global trade has collapsed. Rather, that global trade isn't growing as fast as the supply of ships capable of performing that global trade. Thus, the price of trading has fallen. The years that followed and primarily 2015 turned out to be a huge challenge for bulk carrier operators. Once again, the companies that had a diversified portfolio and low (or none) capital costs were the ones that would make it through the storm with low losses or even be well positioned to acquire new tonnage at bargain prices.

After the drop mentioned earlier in % of world tonnage, the Greeks showed once more that they know how to 'play the game'. Despite the reduction of number of companies during the latest bulk market challenging period, Greeks emerged as the no.1 shipping power again in 2014 after losing this title for 6 years (source: Fairplay). Doing what they know how to do best, they came back to the top, having now also a much younger fleet: Anticyclical investments and costs squeezing. On the latter, the fact that traditionally many Greeks bought ships 'in cash' or with low leverage helps in times of economic downturn. **Graph 2.5** is indicative of the strategy of the Greeks. The data represented show number of vessels by **ultimate owner nationality** i.e. just before scrapping. The fact that Greek owned fleet is so huge already from the 70s compared to the others gives a good indication on how

the Greeks played the game on second hand purchases. As we progress to 'today' the differences balance out as expected to meet current fleet sizes.

**Graph 2.5.** Size of fleets by nation based on ultimate owner (source: Fairplay)



### 2.2.5 Today

Per 'Vessels Value' recent report - January 2017 - Greece has been the highest spender amongst the top 10 shipping nations (**Table 2.1**) in 2016 with a total expenditure of more than 84 billion USD in vessel purchasing.

*All values in USD Millions	TOTAL	BULKER	CONTAINER	LNG	LPG	SMALL DRY	TANKER	OSV
GREECE	\$84,079	\$25,413 <sup>1</sup>	\$7,898	\$13,610	\$3,321	\$232	\$33,539 <sup>3</sup>	\$65
JAPAN	\$80,169	\$29,297	\$10,115	\$15,144	\$4,066	\$3,059	\$18,432	\$57
CHINA	\$68,333	\$22,180	\$18,613	\$3,072	\$2,064	\$3,508	\$17,063	\$1,834
SINGAPORE	\$58,052	\$7,087	\$4,933	\$485	\$4,043	\$1,165	\$15,310	\$5,030
USA	\$34,432	\$4,180	\$3,243	\$2,441	\$245	\$376	\$16,281	\$7,666
GERMANY	\$31,544	\$5,357	\$15,223 <sup>2</sup>	\$632	\$1,422	\$4,161	\$4,246	\$502
NORWAY	\$30,427	\$3,725	\$1,443	\$3,970	\$3,045	\$530	\$11,534	\$6,181
SOUTH KOREA	\$21,204	\$5,721	\$2,575	\$3,502	\$1,296	\$656	\$7,452	\$3
DENMARK	\$19,492	\$1,400	\$8,399	\$871	\$1,052	\$551	\$6,061	\$1,157
UK	\$15,847	\$2,184	\$3,330	\$5,025	\$1,830	\$374	\$2,606	\$498

**Table 2.1** Expenditure of the top 10 shipping nations for 2016 (Source: Vesselsvalue, January 2017)

Tankers had the lions share in the invested capital closely followed by the bulk carrier segment which presented a high sale and purchase activity despite the all-time record low market conditions at the beginning of the year.

Banks retreated in 2016 with few banks actively expanding in shipping (Petrofin Research, 2016). As banks reduced significantly the financing towards ship-owners, only large owners had the ability and the required collaterals to secure funds through banks. This resulted in the rapid expansion of non-banking finance institutions and funds, which supported Greek owners to secure inexpensive tonnage but at higher effective borrowing costs (Petrofin Research, 2016).

Year 2017, has seen an increase in ordering interest. From the beginning of the second part of the year, ordering on deep sea vessels reached the number of 110 vessels. This is almost double compared to the 63 orders of the first 6 months. Majority of orders originates from Japanese owners with 41 bulkers while Greeks are second with 25 and Singapore 3rd with 13. It is worth noting that Greece and Singapore are the only nationalities in the top 5 owning nations that have a positive annual growth rate in the last three years in terms of carrying capacity.

Driven by the attractive New Building prices ship-owners with cash or access to financing rush to the yards in order to secure new tonnage counting on a market upturn. As seen and explained previously that can again backfire and lead to an upturn delay through tonnage

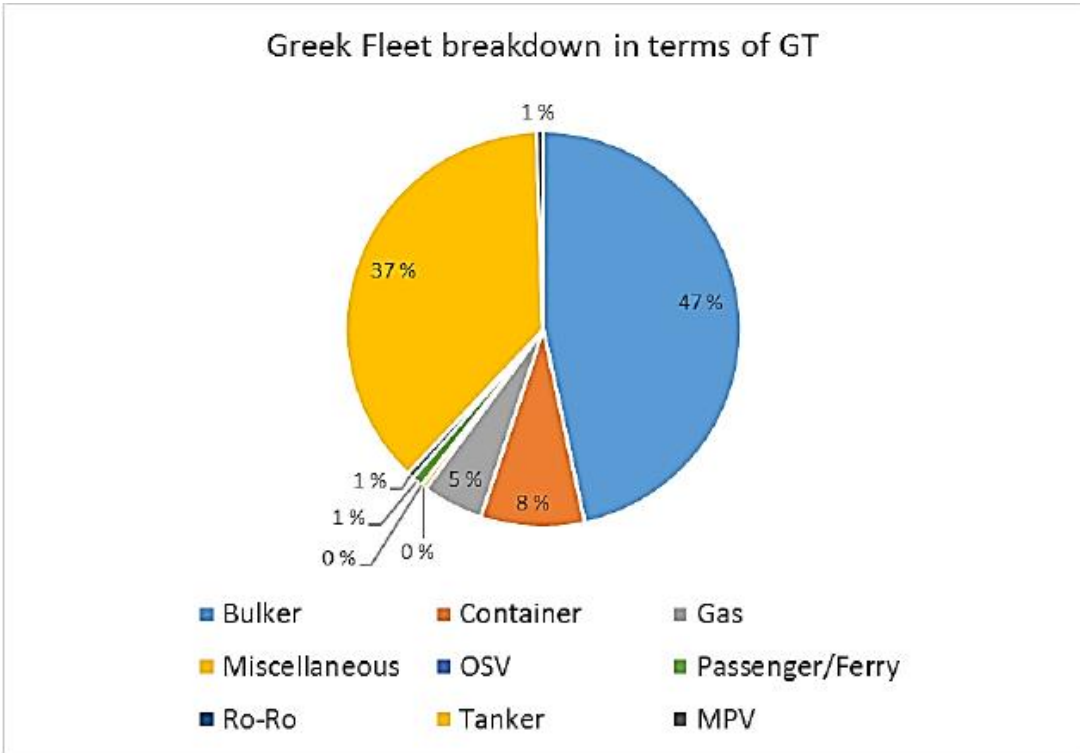
offer surplus. Clearly, risk and shipping go hand in hand and the Greeks have shown that they are not afraid of the waves, no matter how high.

### 2.2.6 Summing Up

Through disastrous and booming years for shipping, regulatory challenges, and technological evolution, today, the Greek owned fleet amounts to ~4,600 vessels (ships over 1,000 gt) of 341.17 million deadweight tons (dwt), representing 19.63% of total world dwt and 49.96% of the total European Union (EU). On segment side, Greek owners control ~30% of the world tanker fleet (crude oil tankers), ~21% of the world bulk carrier fleet and ~17% of the world chemical and products tanker fleet. Against shrinking ship finance and a depressed freight market, newbuilding orders by Greek interests amounted to ~400 vessels (over 1,000 gt), representing 44.83 million dwt in total of 3,507 orders of 260.35 million dwt. The fleet averages 11.2 years of age, whilst the average age of the world fleet was 14.4 years. It remains on the US Qualship 21 list, the International Maritime Organization (IMO) White List and the Paris Memorandum of Understanding (MOU) White List, while it is one of the safest fleets worldwide with less than 1% minor accidents recorded in 2015 (source: hellenicshippingnews.com). On segment distribution, Greek fleet composition is presented in **Graph 2.6**.



**Graph 2.6** Greek fleet composition (Source: IHS Fairplay)



Bulk carriers comprise almost 50% of the Greek fleet. This is the strongest vessel sector for Greek owners and no.1 globally. Following bulk carriers, tankers is the second largest segment that Greek owners operate in. Tankers and bulk carriers combined make up 84% of the Greek fleet. Bulk shipping, both dry and wet, are the two most dominant vessel segments in the Greek fleet and the two segments that Greek ship owners relied on building their legacy during the post-war era. The remaining two segments that have a significant share in the fleet composition are the containers with a fleet share of 8% and finally the promising segment of gas carriers with a fleet share of 5%. However, it is worth noting that Greek owners have the second largest fleet of LNG carriers and a global market share of 18% in terms of gross tonnage. The abovementioned segments comprise 97% of the Greek fleet.

The Greek-owned fleet is the world’s largest cross-trading fleet with 98.5% of its trading capacity carrying cargoes between third countries, thus, rendering an indispensable service to the world. The Greek-owned fleet is highly responsive to shifts in trade patterns, such as the rise of Asian demand, while its importance for Europe is twofold: in relation to securing its import / export needs and boosting the EU maritime cluster. Shipping’s largest ‘ship-owner’ zone in the world is the Athens / Piraeus cluster, closely linked to its national

ownership base, contrary to other such owner zones, like Singapore and London, with an owner base attracted from around the world. (source: hellenicshippingnews.com)

## 2.3 Comparison between Greek Shipping and other traditional Shipping Nations

### 2.3.1 Countries of interest

So, what does it take for a country to be a successful Maritime Nation? Long tradition and maritime history? Central coordination? Liberal non-regulated national framework? Domestically driven supply or demand for maritime services? Maybe even some luck i.e. be in the right place at the right time? Obviously, the answer is not simple and certainly not unique. There is no 'one size fits all'. In this second part of chapter 2, we will examine the cases of 6 different traditional shipping nations – Germany, Norway, Denmark, Japan, China and UK. Each one of these constitutes a case study to be analysed in thousands of pages so we will only focus on some key elements for the sake of our research. We will then try to identify commonalities with the Greek case and potential learning points, only to prove that, despite some overlapping characteristics, each case presents a different proposition. The sole common characteristic amongst all 7 is basically the access to the sea.

### 2.3.2 Germany

The economy of Germany is the biggest national economy in Europe and fifth-largest by GDP in the world. In 2017, according to the IMF the country accounted for 28% of the euro area economy. In 2016, Germany recorded the highest trade surplus in the world worth \$310 billion, making it the biggest capital exporter globally. Germany is the third largest exporter in the world with 1.21 trillion euros (\$1.27 trillion) in goods and services exported in 2016. Exports account for 41% of national output - the top 10 exports of Germany are vehicles, machineries, chemical goods, electronic products, electrical equipment, pharmaceuticals, transport equipment, basic metals, food products, and rubber/plastics. In short, Germany is the largest manufacturing economy in Europe. Although, Germany is rich

in timber, potash, salt, uranium, nickel, copper and natural gas, it still relies on import of raw materials and energy to keep this massive production engine running. Energy in Germany is based predominantly by fossil fuels (50%). The Industrial Revolution in Germany occurred a century later than in England, France, and Belgium, partly because Germany only became a unified country in 1871. (source: Wikipedia).

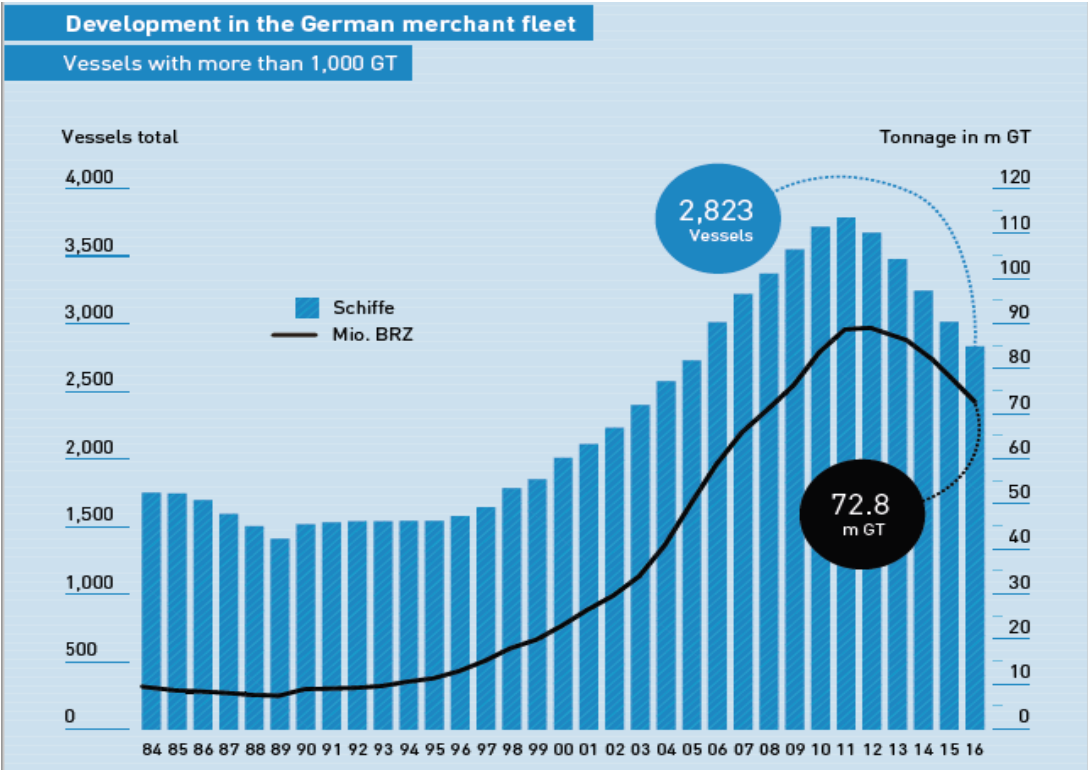
Shipping followed the development of the industry and Germany was a considerable power at the break of the 20<sup>th</sup> century. With all the ups and downs that followed the build-ups and falls connected to the two World Wars, in the 50s Germany found herself again in a process of rebuilding its shipping industry as well as the rest of the economy. For this research, not many sources were found to provide details on the historical evolution of German fleet. However, what seems to be the catalyst in the case of Germany is the central support from the government and the inclusion of the industry of shipping in the national growth plan of the country as a collective target. That is expected, considering the value of shipping in procuring the economy with raw materials but also delivering to the world finished German products.

Fast forward in 21st century and a good example of this approach can be presented: Over the past 15 years, Germany became one of the largest ship owning nations in the world. In 2016, Germany ranked #4, controlling 6,2% of the world fleet, 21% of the total container fleet, 10% of multipurpose vessels and 4% of bulk. Especially on Containers, Germany is ranking #1 (source: HIS).

One of the main reasons this happened, lies behind the term Kommanditgesellschaften - or limited partnership - that was used to form single-ship companies coupled with the tonnage tax. The KG structure or German Limited Partnership is a financial structure where most often a ship-owner will sell and charter back his vessel to a special purpose company which is set up to primarily own the vessel during the charter hire period. The arranger of the structure will negotiate with banks and will sell the equity to a group of German private individuals who will use the investment to reduce their individual income tax. This tax scheme, allowed flat-rate assessment of a vessel's profitability based on its carriage capacity, rather than its actual generated revenue, therefore this kind of investments became highly popular amongst individual investors. That resulted to an influx of capital into new buildings.

The “KG-System” was the result of the evolution of previous methods used by the state and German Ship-owners to raise funds for new tonnage funding. **Graph 2.7** below shows exactly what is described above.

*Graph 2.7 Development of German fleet (Source: BSH, www.bsh.de/VDR; 31.12. resp.; as per 1990, including the merchant fleet registered in Mecklenburg- Vorpommern)*



Due to its ‘favourable’ set up, it’s no wonder that during the high tide of this trend, 400 to 450 thousand investors had entered such KGs by acquiring shares of single-ship limited partnerships. That practically meant that they fully participated in the vessel's profits whilst their liability was limited to their share value. As mentioned earlier the tax treatment of the vessel was independent of the actual revenues, the tonnage of the vessel was the basis for a low flat-rate tax. It is easily understood that the individual investors that were flocking to invest their money in low tax, limited-liability ship shares were not the most ‘strategic investor’ sort. Rather, they were coming from all walks and trades of life looking for high guaranteed returns with low risk. Prior to the shipping crisis (ca. 2007), approximately 26% of global orderbook tonnage came from German single-ship KGs, post-crisis, that number

has shrunk to a mere 2%. German single-ship KG market has been - almost completely - annihilated - since 2008, over 180 one ship KGs have gone insolvent and been removed from the market.

Obviously, if charter rates are high enough this system is sustainable. Furthermore, the high charter rates meant that ships retained their value - in contrast to what happened after 2008, when certain ships were not able to operate commercially due to charter rates not covering their costs. Today, one ship KGs have a lot more risk and a lot less return. Consequently, this has led to an outflow of capital and German ship owners have had to revisit their corporate and funding models.

In the years that followed the 2008 financial disaster we started seeing a return of more entrepreneurial and pro-risk funding players, including private equity investors. Is that sufficient? In any case, for Germany, having a functioning domestic merchant fleet capable of domestic production to the world and global goods back to Germany is a vital national infrastructural asset and a major competitive advantage when it comes to the production and distribution sites geography. Therefore, it must remain a central part of the country's political agenda to provide satisfactory financial and legal support to both ship management companies as well as dockyards so that this important industry does not leave for abroad.

What is interesting is that at the same point of time the two biggest shipping nations of Europe, Greece and Germany, had strikingly different fates. The first set out to grow further and enhance its competitiveness while the latter faced contraction and bankruptcies. Why? The answer was sufficiently given in the previous pages. The level of competitiveness and dynamism is what made all the difference. Greeks showed a uniquely entrepreneurial face, willing to invest at apparently unfavorable times and owning a wide variety of ships. Most German shipping companies are cautious and rely heavily on now-scarce funds raised from private investors. At the end of the day, the unusual structure of these "KG funds" – which are owned by hundreds or thousands of small, private investor funds, where no one person has control – is a significant part of the problem, he says. As a General Manager of a German shipping company aptly put it at the end of a meeting with DNV GL class society: "I am now headed to a meeting with KG stakeholders to explain our latest decisions on crucial operational aspects of the company... therefore, I need to go for some schnapps first...".

What seems to be a weakness in other industries, played a critical role in the case of Greeks. Ship-owning, dominated by private, family-controlled companies gave the necessary flexibility and centralization of decisions in a market where fast decisions and foresight is of utmost importance.

### 2.3.3 Norway

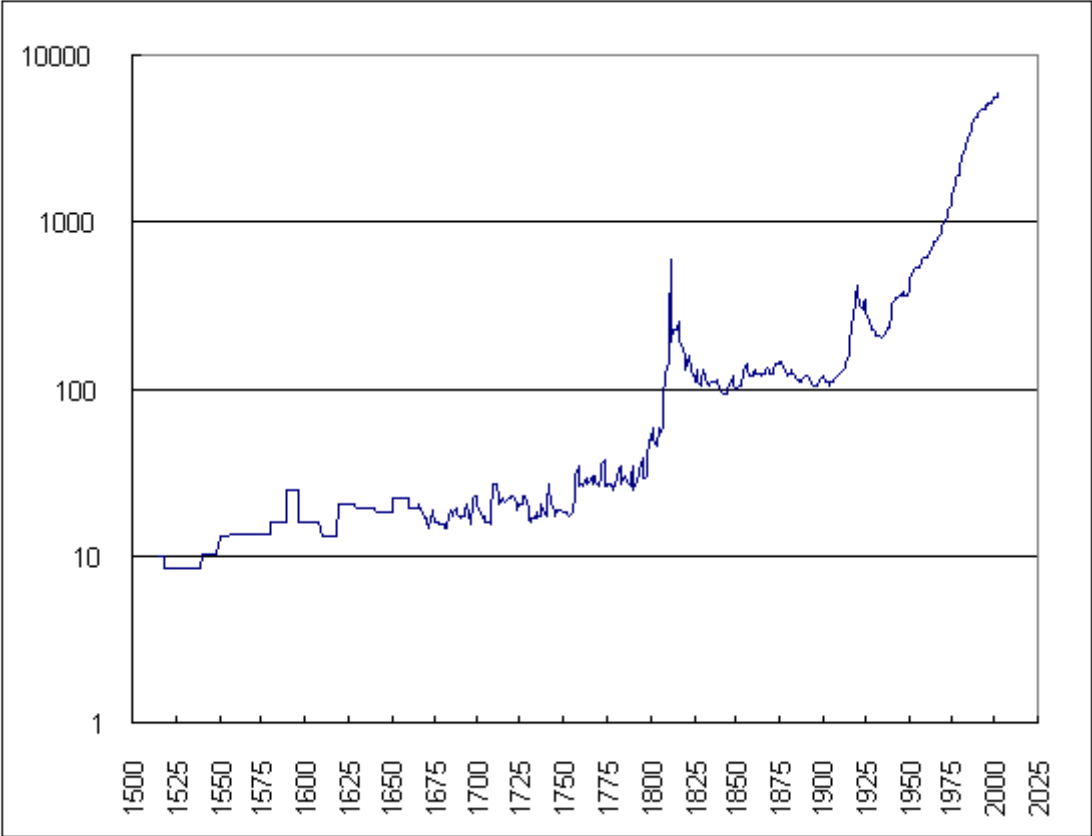
Norway, with its population of ~4.5 million on the northernmost part of Europe is together with Denmark – up next - the closest, in terms of size, to Greece in this research. This is where similarities end though, as Norway today is one of the wealthiest nations in the world both in terms of GDP per capita and in capital stock. Moreover, Norway has been among the three top countries for several years on the United Nation Human Development Index. In a nutshell, main characteristics of this Nordic country are the huge stocks of natural resources combined, the highly skilled labor force and the adaptability/openness to new technologies.

Norway is a mountainous country with a massive coastline therefore the sea has been traditionally a convenient transportation means. Furthermore, the richness in raw materials, and fishery has led to development of a substantial commercial fleet already from the 19<sup>th</sup> century. That fleet was not only serving country needs but was also a standalone service for shipping goods globally at competitive prices. Although the Norwegian Shipping industry had its ups and downs throughout the different periods it has always been in the top positions of global shipping. Measured by fleet value Norway is on the 6<sup>th</sup> place at the moment according to the Norwegian Ship-Owners' Association 2017 Maritime Outlook Report.

Although the Norwegian economy has always been on or above European average, the turning point that boosted the economy to today's levels, was the discovery of the Oil reserves in the Norwegian continental shelf in the late '60s. The exploitation of these reserves, consequently, affected the model of the whole economy and of course the shipping industry which in turn played a pivotal role to the whole effort. At the beginning of this effort - from the shipowners' side - we can probably identify two reasons behind this decision of the Norwegian Ship-owners. First it was a good opportunity to diversify and invest the acquired capital from the previous good shipping years and second the

opportunity for them to utilize their extensive deep sea experience and competence in a completely new market. **Graph 2.8** shows the effect of the oil discovery in the Norwegian CPI.

**Graph 2.8** Consumer Price Index for Norway, 1516-2003 [1850 = 100] (Source: Grytten 2004a)



But let's take one step back: Before the rise of the O&G industry Norway was already a traditional player in dry and wet bulk vessels. Third country shipping has been much more important to Norwegian ship-owners than domestically based transport services ever since the 1860s. The first modern large-scale manufacturing industry in Norway saw daylight in the 1840s, when textile plants and mechanized industry were established. A second wave of industrialization took place in the 1860s and 1870s. Following the rapid productivity growth in agriculture, food processing and dairy production industries showed high growth in this period. In general, the success of the Norwegian foreign sector can be explained by several factors. Liberalization of world trade and high international demand secured a market for Norwegian goods and services. In addition, Norway had vast stocks of fish and timber along with maritime skills. During this great boom, capital was imported mainly from Britain, but

also from Sweden, Denmark and Germany, the four most important Norwegian trading partners at the time. In 1536 the King of Denmark and Norway chose the Lutheran faith as the state religion. In consequence of the Reformation, reading became compulsory; consequently, Norway acquired a generally skilled and independent labor force.

Fast forward: In the '60s Norway controlled more than 15% of the world tanker fleet and was also characterized as 'The world's leading dry bulk nation'(Fon,1995, p.195). During the boom period, early '70s, Norwegian owners undertook big investments in bigger vessels, to take advantage of economies of scale and more specialized tonnage such as car carriers, product carriers, refrigerated cargo, chemical and liquefied gas carriers. In general, Norwegian owners were quick to adopt new technology and trends. This strategy, to a great extent, backfired during the years of the crisis that followed immediately after, especially on the Tanker segment. Dry Bulk operators were also affected, although numbers in that segment were a bit better during same period, as combined carriers rushed into dry bulk for Tanker segment. A considerable part of the divested fleet ended up in Greek hands whose strategy was more on focused on low cost. On the flipside, some Norwegian companies continued investing in market niches and grew considerable market share throughout the crisis years but in general that was a period of great turbulence for Norwegian shipping – probably the worst experienced over the previous century or so. The fleet size noticeably reduced and many owners transferred vessels under Flags of Convenience in a desperate attempt to cut costs.

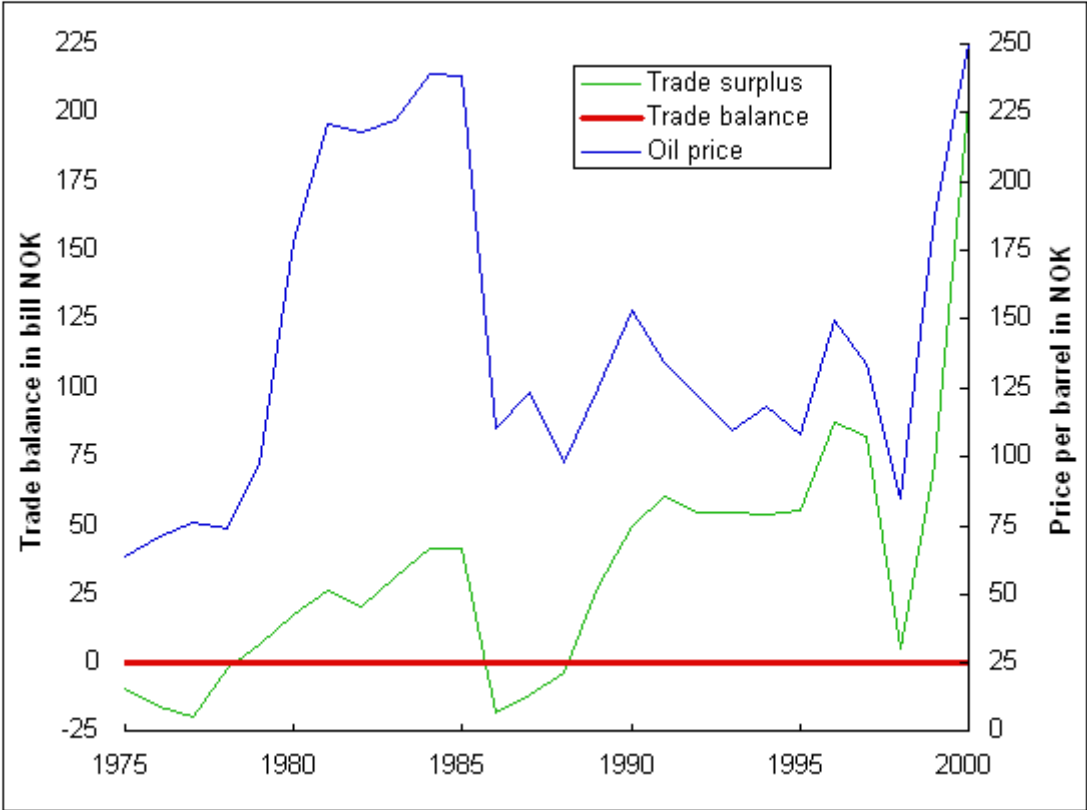
It was only after mid '80s that the situation improved with the upturn of the market and the intervention of the government that implemented some institutional changes. Traditional segments picked up again but investment and focus on specialized segments continue whereas the linkage of the shipping companies and the Norwegian economy became looser introducing bigger manning flexibility and cross-border investments. The important milestone for Norwegian Shipping was the introduction of the Norwegian International Ship register. Therefore, the Norwegian aspect of the country's shipping industry was diluted (Stig Tenold, 2012, p.40).

After entering the O&G era Norway lost significant competitive power, and large-scale deindustrialization took place, despite efforts to save manufacturing industry. An important



reason for deindustrialization was the huge growth in the profitable petroleum sector. Persistently high oil prices from the autumn 1973 to the end of 1985 pushed labor costs upward, through spillover effects from high wages in the petroleum sector. High labor costs made the Norwegian foreign sector less competitive. Thus, Norway saw deindustrialization at a more rapid pace than most of her largest trading partners. Due to the petroleum sector, however, Norway achieved high growth rates throughout the last 30 years of the twentieth century and climbed to the top of the world GDP per capita list at the dawn of the 21<sup>st</sup> century. Nevertheless, Norway had economic problems both in the eighties and in the nineties, due to monetary and credit policies followed by the governments. **Graph 2.9** shows the direct connection of the Norwegian economy with the oil prices.

**Graph 2.9** North Sea Oil Prices and Norway’s Trade Balance, 1975-2000 (Source: Statistics Norway)

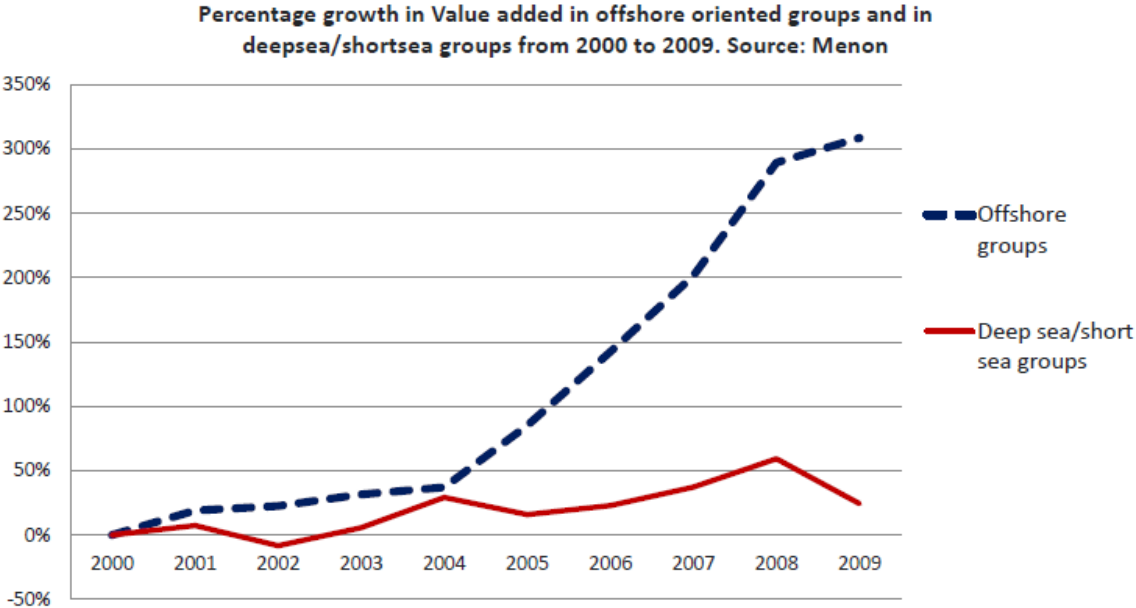


Throughout the period under research, Norwegian economy underwent many fluctuations, affected by global cycles but also the domestic economic policies. Today the country has a strong and sound economy.

The petroleum sector is still very important for Norway and is expected to continue being in the future. In a sense, the historical tradition of raw material dependency has had its modern version 'renaissance'. Contrary to other countries rich in raw materials, natural resources enabled Norway to become one of the most robust economies in the world. This, however, didn't occur by chance, Norway's ability to achieve economic maximum returns from resource abundance are attributed to the adoption of advanced technology, high education, democratic foundations and reliable institutions. (Ola H.Grytten, The economic history of Norway).

The focus of Maritime in Norway towards O&G and Offshore is shown in **Graph 2.10** below.

**Graph 2.10** Shift in focus of Norwegian Groups towards offshore (Source: Menon)



The graph shows that the increase in deep sea/short sea segments has -overall for the period - been marginal compared to Offshore. This is even more important, considering that during this period, as described in chapter 3, deep sea shipping experienced a boom that was no match to anything we have seen before.

During the last ~15 years, Norwegian Shipping has changed focus from traditional, Low-end, price-driven markets to the High-end, innovation and quality driven ones. The fact that the

domestic Oil market is one of the biggest in the world was the catalyst that steered towards this direction. Currently it is probably the most advanced as well. Today the Norwegian Offshore Cluster is a global business with presence and subsidiaries in Singapore, Brazil, China and elsewhere and some of its competitive advantages are (source: Menon Business economics):

- Cluster completeness and linkages
  
- Advanced competence: Knowledge, skills and attitudes
  
- Specialisation

### 2.3.4 Denmark

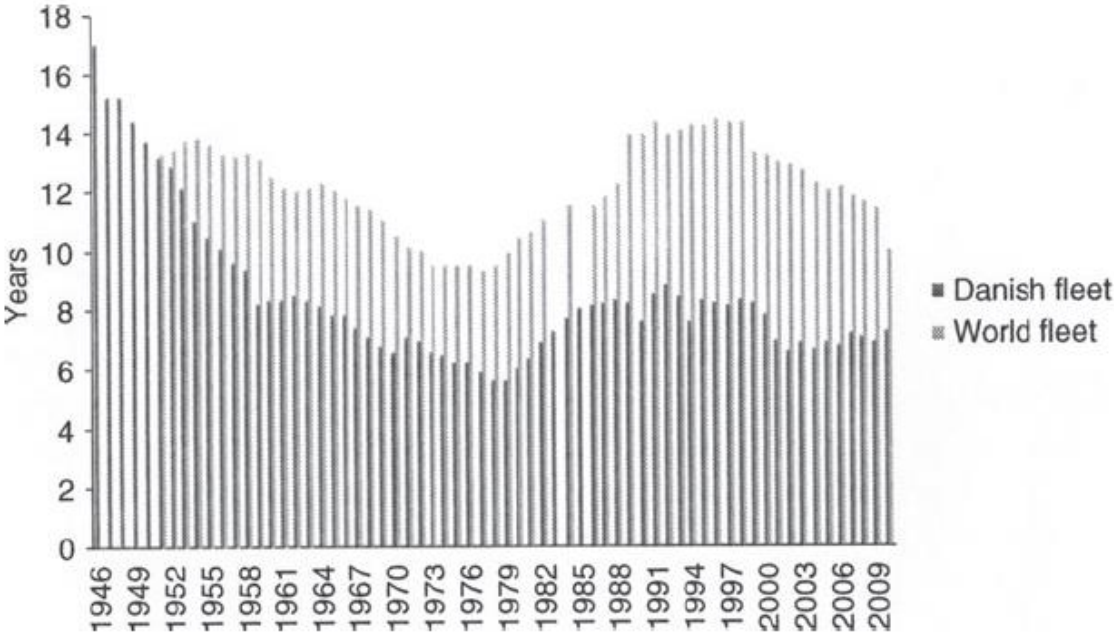
Denmark is the second Nordic country that we examine in this research. Denmark is also traditional shipping nation with long shipping history. The country 'owned' about 1,75% of the global fleet back in the 60s and was engaged in pretty much all the main segments. One interesting fact in Danish shipping is the high centralization of shipping companies. Whilst in other traditional shipping nations there is a quite vast distribution of the tonnage to numerous companies of different sizes, in Denmark there has always been – during the years under examination – high concentration in a few large companies. Actually, Six of the top ten largest Danish shipping companies today, as measured in terms of owned fleet - including A. P. Møller-Maersk (Maersk), DFDS, J. Lauritzen OL), Torm, Norden, and Dannebrog - were also in the top ten in 1960. (Henrik Soronn-Friese et al, 2009, p.62). That shows a remarkable stability for these firms and although in other nations there were new companies entering the scene and replacing older ones, in Denmark the 'revitalization' of the industry took place via the revamping of the structures, the strategies the traditional players. Another fact that shows the close connection of the Danish economy to shipping, is the fact that the biggest company in Denmark is Maersk group which, among other activities, is the biggest Liner Company in the world.

In the turmoil of the '70s Danish companies proved resilient, even more so compared to other Nordic countries and in general traditional shipping nations. That can be attributed to the strategy they followed and the key characteristics of Danish shipping. Danish owners

remained conservative and less expansive during the market boom of the '60s and early '70s maintain a steady flow of NBs. In addition, they chose not to be in the forefront in the adoption of new technological developments. That was particularly important, considering that already from the 60s Danish shipping was gaining its biggest share of revenues from liner shipping. This was the time when containerization started to gain momentum, so this strategy meant that some companies were soon out of the game but at the same time the big players like Maersk and EAC avoided the disruptive problems experienced by the pioneers of this era (Henrik Sornn-Friese et al, 2009, p.67). At the advent of the downturn, Danish Shipping companies were then less exposed in excess bulk shipping tonnage. Consequently, they had less capital costs to cover. What is interesting and different from e.g. what Greeks were doing at the time, is the fact that Danish shipping companies had a clear preference on new and efficient vessels versus second hand tonnage. Consequently, although Danish companies were not pioneers technologically, they certainly based their competitive position on a young fleet. **Graph 2.11** below clearly illustrates fleet age:

**Graph 2.11:** Average age of tonnage in the Danish and the World fleet, 1946-2010

Source: Danmarks Rederiforening (various years), annual report.



Two more factors played a role for the building up of this resilience. As mentioned previously, Danish Shipping had a good share of its fleet operating under Liner Segment which proved relatively stable. Finally, the big concentration in Danish Shipping showed that bigger companies had the financial strength to withstand for longer period of time the vibrations of challenging periods. Same was witnessed in Norway.

Despite the resilience demonstrated in this first period of the '70s-'80s crisis, the factors described above proved not enough to maintain the Danish fleet in 'safe waters'. Soon after the break of the new decade, in the early '80s, the erosion of the Danish shipping competitiveness intensified. Per the Danish Ship-owner reports, in just 5 years, the commercial fleet tonnage reduced by 2mil DWT, the NB order book reduced to record low levels and the age started climbing (Graph 2.11). This downturn was a again combination of factors; internal - such as bad strategic decisions, high costs for Danish Flag vessels – and external – prolonged bad market conditions. This crisis quickly turned into a country wide concern for this maritime nation-state forcing the government to get involved more actively. In the following years, the ship-owners association together with the government proposed, discussed and implemented many changes in the operational framework of Danish Shipping but also the Danish Shipping cluster in total. The aim of this effort was to build a robust and vibrant shipping environment especially in the Danish Capital. The institutional changes included, amongst others, the establishment of the Danish Maritime Authority, the creation of the Danish International Ship Register (DIS), the implementation of the tonnage tax scheme and the promotion of the professionalization of maritime education. The latter was a growing concern about shipping as it was considered as the cornerstone for driving developments and competitiveness in the broader national maritime sector. This overall revamping was not one off, it is a continuous process that is adjusting to the challenges and opportunities of each period (Henrik Sornn-Friese et al, 2009, p.78).

In the years that followed, 1985 to 2000, Denmark's share of the world merchant fleet more than doubled. The industry focused on new strategies such as the development of integrated logistics systems connected to Liner Shipping, diversification by entering new markets such Offshore O&G and International Shipping pools on bulk shipping. This prepared the fleet for the Chinese boom at the dawn of the 21<sup>st</sup> century. Over the short period from 2002 until 2008 the Danish merchant fleet grew by 38 per cent, from 6.7 million dwt in 2002 to 9.2

million in 2008 and fleet age also started decreasing again (Henrik Sornn-Friese et al, 2009, p.87).

When financial crisis hit, once more the big companies were well prepared and took the hit successfully. On one hand, Maersk had already initiated a cost cutting program and returned to profits way before its competitors, on the other the flexible models adopted by bulk operators enabled them to adjust swiftly into the new reality. All in all, this new critical period was a good test of what has been changed and built throughout the past 20 years and pretty much showed that Danish Shipping is based on solid grounds. 2010 found Danish shipping with the world's largest container shipping company, a few dry bulk carrier global leaders, and one of the largest product tanker companies in the world (Henrik Sornn-Friese et al, 2009, p.92).

If we would like to summarize, this success was a combination of factors, namely the ability to boldly adjust internally - or better put – nationally and of course the ability companies showed to respond to changing market conditions and needs. These required good cooperation between private companies belonging to the Danish Shipping Cluster but also between private and public sector. It is also a common perception that during this dynamic process, local extensive commercial shipping knowledge and experience played and will continue playing a crucial and pivotal role.

### 2.3.5 People's Republic of China

China is the only country of this research whose political system is Socialism. This fact by itself adds extra interest on the case of China especially on how and under which circumstance Shipping emerged as a strategic field for investment.

Same way as in other socialist countries, China's Shipping industry after 2<sup>nd</sup> WW was basically ran by the state, therefore it's policy's focal point was protectionism. China's Shipping in terms of development can be split in two parts: one was the initial development of the shipping industry through international cooperation and leasing foreign vessels. That was a necessary 'work around' for China as in the 50s priority was given to other tasks and the recovery of national economy amidst international trade blockade from the West. The other was the establishment of a fully owned national fleet when time was right and the development of international shipping business. That happened late '50s with the lifting of

the international embargo policy against China. The economy grew rapidly and it was time to invest on a national fleet. The advantages of such a move were obvious: The country would stop losing foreign currency, there would be no third-party interests with ability to influence economically and politically Chinese shipping and Chinese yards would grow in parallel by building the national fleet. It was in 1961 that China Ocean Shipping Company was founded and a new chapter for Chinese shipping opened. This strategic decision of the Chinese government to fund the development of a national fleet soon gave results. From a capacity of 140K GT in 1962 that represented a mere 1% of the total shipped foreign trade, national tonnage grew to 5M GT and 70% of the foreign trade by 1975. That meant the end of the period of foreign vessels used for export trade. On the flipside, international shipping was operated entirely by the state meaning that it was lacking economic pluralities and real market demand was not represented in its plans. That had an impact in the composition and the age profile of the fleet and in general led to rigid management that lacked economic sustainability and market extroversion. That led to a series of reforms by the Chinese government which transformed the state-owned companies to more contemporary organizations. This was achieved by:

- Separating the government and enterprise. Shipping enterprises assumed full responsibility for profits and losses and built an independent profile like other global players of the industry.
- Joining World Trade Organization and General Agreement on Trade Services which meant that China had to comply with international shipping regulations and practices.
- Change of Administration of the government from direct control to service. The government shifted to the adoption of a more macro-developmental strategy and took up activities such as the cascading of real market information, monitoring technology evolution and assessment of personnel qualifications. All these activities increased the competitive abilities of international shipping. (source: Tae W.Lee et. al., 2002).

Throughout the 80s and 90s China adopted policies on cargoes, foreign capital companies, ports and state subsidies that transformed the shipping industry dramatically into a much more open and competitive market and arena for global players. Up to 2000 there were more than 50 foreign capital shipping companies and 120 joint shipping companies, in

addition to 360 foreign shipping offices. More than 30 shipping companies have opened container lines within Chinese ports.

Today China is at the 3<sup>rd</sup> place globally in terms of controlled tonnage and it has come a very long way considering that it was not even in the shipping map in the '70s when the Greeks and the Japanese were already in the top 3 positions.

### 2.3.6 Japan

Without going into too many statistics on gross tons and other numbers and percentages one can look up, the simple fact in this case is that Japan was almost totally dependent on shipping since its very existence. It had - and still has - negligible natural oil reserves, and cannot produce nearly the food needed for its people. Consequently, Japan had to import virtually everything. (source: japantimes.co.jp).

One of the reasons for her expansionist/aggressive policies before WWII was to ensure there were adequate supplies of food and raw materials. Evidently, Japan's shipping industry was vital to her very existence. During WWII, the US used this need to cut off most of her imports resulting in starvation and loss of production of anything not military.

Japan was quite late in joining the industrialized economies of the world but caught up very quickly in the shipping race. By 1910 its fleet ranked third behind UK and Germany. Even though today Japan's shipbuilding capabilities world renowned, it took many years to bring Japanese shipbuilding up to a competitive standard. And it has been a central decision of Japan to build up this competence. At the beginning of the 20<sup>th</sup> century it was cheaper to import ships than to build in Japan. Domestic quality was also not the best. However, the government subsidized domestic production. That resulted by 1910 that half of Japan's merchant fleet was built in Japan. The decisions and the assistance of the government played a pivotal role towards the achievement of this target. In the 'early years' in the beginning of the 20<sup>th</sup> century, Japan was actually operating British and American vessels in the competitive routes and kept all the own built ones for the bottom of the market. It was only after WWII when the quality picked up and by end of the '50s Japan was able to deliver top quality vessels at competitive prices.

Japanese central administration didn't just influence Shipbuilding but played a similar role in the development of Ship operation. Ever since the 19<sup>th</sup> century it was again government



decisions and strategy that led to the creation of the Japanese shipping giant, NYK, which came from the unification of KHK – a firm founded by smaller owners - and Mitsubishi. Both these firms were subsidised and supported by the government but were forced to merge after suffering poor results due to the competition they had developed between them. Another Japanese giant surviving till today had a similar kick start, OSK. Today known as Mitsui OSK Lines (MOL) was founded as OSK back 1884 again with the support of the government. (Peter N. Davies p.123)

In general, the impressive evolution of Japanese shipping and shipbuilding was directly tied with the growth of the entire Japanese economy. The evolution of Japan to become one of the biggest exporters and producers along with fact that all raw materials and energy were imported, presented a massive opportunity for Japanese shipping. As mentioned above, governments played a critical role in this. Furthermore, Japan showed remarkable adaptation during the ups and downs of the market by taking collective decisions such as mergers and restructurings and supportive measures such as subsidies and regulatory changes.

Japan is now faced with new challenges, such as the rapid growth of China as a producer/exporter and ship-owner/shipbuilder and maybe India further down the road. As seen in **Table 2.2**, even compared to USA and Europe, Japan is expected to fall behind in growth. However, before we run into quick conclusions we need to keep in mind the entrepreneurial skill and its enforcement which has kept Japan in the forefront of developments for more than a century and will probably continue doing so in the years to come.

**Table 2.2** *Gross Domestic Product and Its Projections, Various Nations, 2000–2050 - US\$ trillion. (source: Japanese Shipping and Shipbuilding in the Twentieth Century)*

	2000	2005	2020	2030	2040	2050
Japan	3.27	3.47	4.24	4.71	4.99	4.99
China	4.96	7.73	17.33	25.16	30.42	33.39
South Korea	0.76	0.94	1.56	1.86	2.01	2.03
India	2.45	3.38	7.07	10.3	14.4	19.12
ASEAN	1.77	2.21	3.87	5.46	7.29	9.24
US	9.59	11.09	16.75	21.41	27.17	33.96
EU	10.26	11.16	14.52	16.31	18.11	19.89

Source: *Japan Echo* (Tokyo), August 2007.

### 2.3.7 United Kingdom

United Kingdom has a special place in global shipping history and presents a very interesting development throughout the centuries. However, it is also the nation that proved least resilient in the ups and downs of the 20<sup>th</sup> century. One could argue whether it has a place in this research due to its current ranking in global shipping. Nonetheless, it is still an interesting case to present.

United Kingdom is an islandic country that used to be the top colonial power which in turn means it had to rely on shipping to keep strong commercial and administrative ties with all its territories overseas. From 1850 to the 1<sup>st</sup> WW, UK's share of the global tonnage was 40%+. Consequently, Britain has a very long tradition on deep sea shipping and commerce while at the same time is considered the birthplace of Marine Insurance and Classification. However, during the second half of the 20<sup>th</sup> century this dropped dramatically reaching, 9,7% in 1975, 5,9% in 1981 and around 1% nowadays. A few factors contributed to this downfall, some of which were: cost, increased competition and regulatory environment. That led to a dramatic drop of British seafarers. Similar development was experienced in Shipbuilding. The once thriving NB yards were downsized and eventually closed, one after the other. In 1976 134 vessels were delivered totalling 147mGT of tonnage. Only 4 vessels were delivered during 2011. The huge competition from the far east took a heavy toll on the British Yards, which didn't manage to present an alternative proposal focusing on niche markets such as Passenger or Offshore.

Nowadays, shipping continues to be the dominant mode of transport for UK international trade, moving around 95% of international goods to and from the UK by sea. In 2012, the total number of UK trading vessels directly owned, parent-owned, or managed by UK companies was 1504 – just under 2% of the world trade fleet. There was a total of 675 UK-owned trading vessels of 100 gross tons and over, representing an 8% decline in the total UK-owned fleet, compared to 2011. About 57% of vessels are container and ro-ro ('roll on-roll off') passenger and cargo ships; 21% are liquid (oil, chemical, gas) tankers; 14% are dry bulk carriers; and 8% are passenger or cruise ships. (source: New Economics Foundation, 2014).

On the flipside, the unparalleled tradition of excellence in legal, arbitration, insurance, P&I, shipbroking and finance makes the UK the first choice for those in the international shipping

community seeking maritime business services of the highest quality. UK is able to offer businesses a 'one-stop shop' for maritime services because the City of London is home to a wealth of companies providing expertise across all sectors:

- In insurance, the UK writes the largest share of all international marine insurance risks
- In broking, the UK has more than half the global share of tanker charter business and up to 40% of dry-bulk charters
- English law is the global industry standard and the UK boasts unrivalled legal and judicial expertise on shipping, insurance and international trade matters
- London is home to the leading source of market information on the trading and settlement of physical and financial shipping derivatives in the Baltic Exchange, with the majority of the Exchange's members based in London.
- UK P&I clubs account for approximately 60% of the global market It is testament to this thriving maritime business services and financial sector that a recent survey by Norton Rose Fulbright found that nearly half of industry respondents said London was the financial center most able to meet their financing needs.

The UK cluster is supported by a highly skilled pool of expertise available in the form of shipping professionals and former seafarers, not to mention the vast wealth of knowledge available across the financial sector – in which the City of London leads the world. (source: maritimeuk.org)

UK is counting on this advanced service cluster to attract foreign ship owners that would like to move their operations in UK. However, the past years, many countries have followed same path, primarily providing tax incentives, to retain, repatriate or lure new ship owners. Greece has done the same repatriating many companies back from London.

## 2.4 Conclusion

In this chapter of the research, the main effort has been focused in the collection of information from various sources, such as books, the web, articles and databases. The time span chosen and the number of countries is a limiting factor, therefore filtering and author's discretion was necessary to stay within required size limits.

Overall, from the information exposed in the previous pages the following are already clear:

- Greeks have chosen for many years the Cost leadership strategy.
- Greeks have benefited by their management styles and accumulated experience from the industry.
- Greeks were not the first to adopt new trends, only followed when necessary or when able to afford.
- There is no 'one solution fits all'. We saw that all countries under investigation have some similarities but – in the end - represent unique cases.

Information from this part will be used in the following chapters.

## 3. Methodology

### 3.1 Introduction

The primary objective of this research is to draw conclusions by examining key facts and figures of a certain period of the past. Key qualitative and quantitative information are identified and then mapped in a structured way. The conclusion includes the results of the findings on past performance of Greek Ship-owners vs. other Nations and assumptions and suggestions on future development and opportunities.

### 3.2 Time Span Selected

The time span of the analysis is from '70s to today (2017). This time span was selected as a good compromise due to following reasons:

- Selected time span includes several historical events and milestones of global economy and shipping, such as Oil demand and production booms and crises, Global financial unrests, periods of great change in Shipping industry and others – all mentioned in detail under literature review.
- A longer time span would be difficult to accommodate in a thesis research frame considering the level of detail we are after.
- The more we go back in time the more difficult it becomes to get hold of reliable data to analyze. Therefore, by adding another decade or so, the contribution of the findings would be in reverse proportion to the effort required for the analysis.

### 3.3 Countries Selected

In this research, we examine the case of Greek Shipping versus 6 other countries. These countries are as follows alphabetically:

- China
- Denmark
- Germany

- Japan
- Norway
- United Kingdom

The background of the selection was based on the historical shipping background of these countries as well as their past and current role in global shipping. Again, under literature review, details are exposed per country and findings are used in the analysis and the conclusion of the research.

### 3.4 SWOT

The SWOT framework provides a general summary of the Opportunities and Threats mapped throughout the industry analysis and the Strengths and Weaknesses identified in the company analysis (Johnson et al., 2015). A list of all the identified attributes is generated and becomes basis for identifying strategic options and assessing actions that need to be taken for improving the company's position in the market (Johnson et al., 2015). The framework used for this exercise is the TOWS matrix that builds on the information obtained from the SWOT list (Figure 6) Figure 6 : TOWS matrix (Source: Johnson et al., 2015)

Each quadrant of the TOWS matrix is used to identify options that address different combinations of internal factors and external factors as shown in the figure above.

### 3.5 Time series and Fleet Data

As expected, many quantitative data are presented in this research. These, were either gathered from the review done on relevant literature or from available online databases:

- Clarksons
- Fair Play
- UNCTAD
- World Economic Forum

### 3.6 Conclusion

For the most part, this research is primarily dependent on existing literature and online information that are brought together and are combined to reach the desired outcome. In the concluding remarks and other parts of the document some personal opinions of the author are expressed.

## 4. Findings Presentation and Analysis

## 4.1 Introduction

In this chapter, we will try to analyse in a structured way some key elements that were identified in the previous parts of the research. Then a ranking will be done based on findings and evaluation. The aim of this exercise is to reveal differences and similarities amongst countries under examination and how these are working for or against the success of each case.

## 4.2 Benchmarking countries on Key Elements

From the literature review above, it is evident that all the countries of this research represent a different proposal despite the existence of some similarities. There are numerous categories on which we can base a ranking for these countries. The four main categories analyzed in this part are:

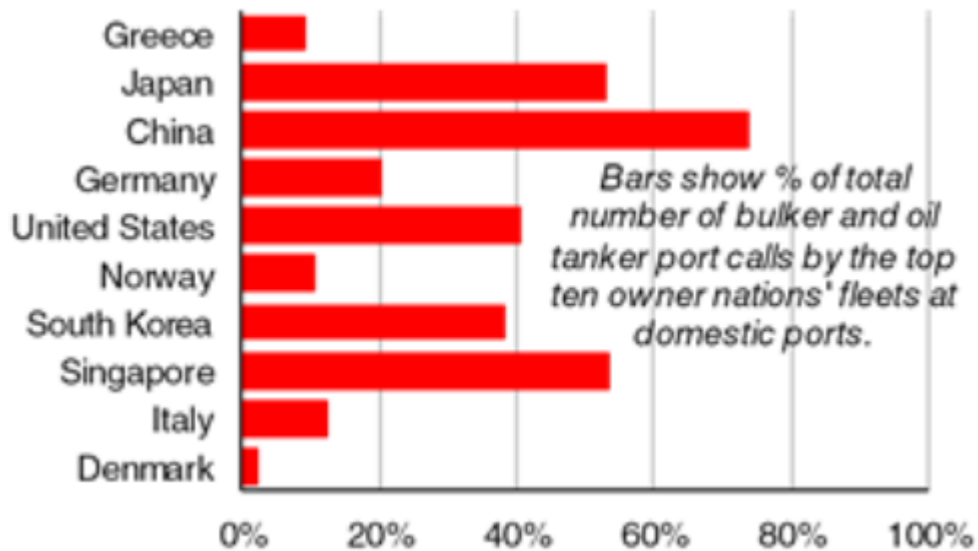
- Cross Trading
- Domestic Competitiveness/Economy/Regulatory Framework
- Concentration of Fleet
- Diversification of Fleet

### 4.2.1 Cross Trading

In **Graph 4.1** below the level of cross trading is shown i.e. what percentage of the carrying capacity of a national fleet is used for own countries commerce (import/export). That is very important as low cross traders are affected by own market fluctuations and high cross traders are affected by national protectionism and restrictions on who is allowed in ports and who can transfer goods and raw materials around.

It is then easily understood, that in today's volatile global political environment, national fleets that have high dependency on cross trading do face an increased risk of exposure to protectionism phenomena.

**Graph 4.1** *Share of bulk carrier and Oil Tanker domestic port calls of the 10 biggest shipping nations (source: Clarksons research).*



#### 4.2.2 Competitiveness/Economy/Regulatory

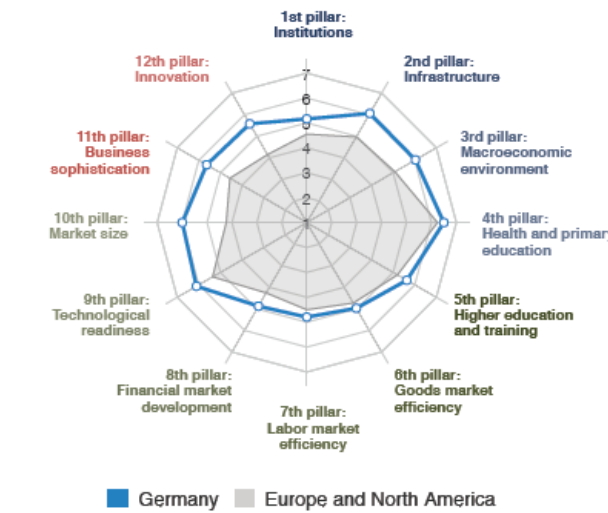
This is a big category which includes many variables. Under different circumstances, it should have been reviewed more thoroughly.

When it comes to **competitiveness**, as seen in the spider charts below, each country is graded for 12 key categories, and an overall competitiveness ranking is given – seen at the top of the chart. While all countries of interest score high or relatively high in positions from 6 to 28, Greece presents an extremely poor #86 out of 136 ranked. Greece is behind countries like Jamaica, Colombia and Guatemala. Figures below are taken from the annual reports of the World Economic Forum.

*Figure 4.1 Country Performance – Germany (source: World Economic Forum - Competitive Index Rating, 2016 2017)*

Germany (5/138)

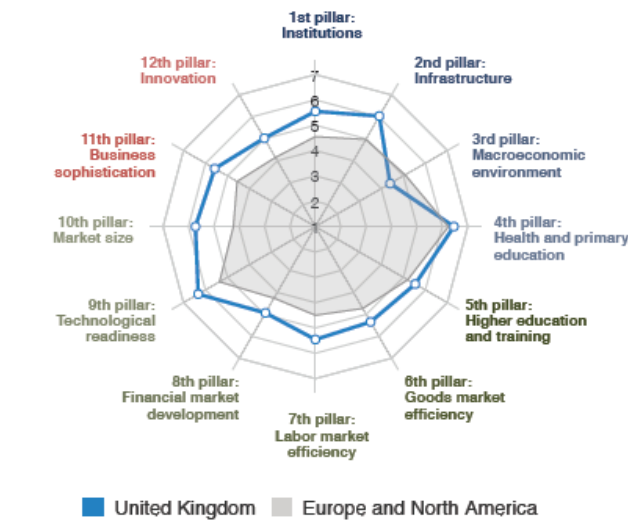
Edition	2012-13	2013-14	2014-15	2015-16	2016-17
Rank	6 / 144	4 / 148	5 / 144	4 / 140	5 / 138
Score	5.5	5.5	5.5	5.5	5.6



**Figure 4.2** Country Performance – United Kingdom (source: World Economic Forum - Competitive Index Rating, 2016 2017)

### United Kingdom (7/138)

Edition	2012-13	2013-14	2014-15	2015-16	2016-17
Rank	8 / 144	10 / 148	9 / 144	10 / 140	7 / 138
Score	5.4	5.4	5.4	5.4	5.5

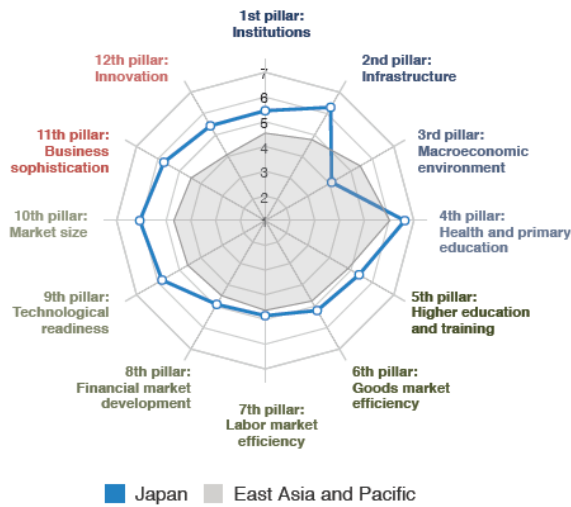


**Figure 4.3** Country Performance – Japan (source: World Economic Forum - Competitive Index Rating, 2016 2017)

### Japan (8/138)



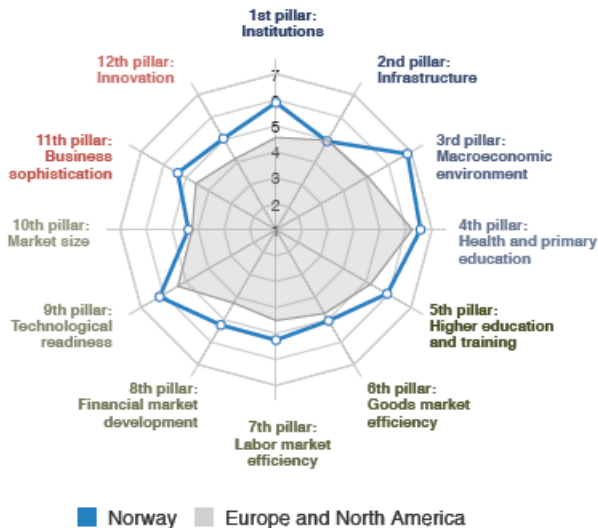
Edition	2012-13	2013-14	2014-15	2015-16	2016-17
Rank	10 / 144	9 / 148	6 / 144	6 / 140	8 / 138
Score	5.4	5.4	5.5	5.5	5.5



**Figure 4.4** Country Performance – Norway (source: World Economic Forum - Competitive Index Rating, 2016 2017)

## Norway (11/138)

Edition	2012-13	2013-14	2014-15	2015-16	2016-17
Rank	15 / 144	11 / 148	11 / 144	11 / 140	11 / 138
Score	5.3	5.3	5.4	5.4	5.4



**Figure 4.5** Country Performance – Denmark (source: World Economic Forum - Competitive Index Rating, 2016 2017)

## Denmark (12/138)

Edition	2012-13	2013-14	2014-15	2015-16	2016-17
Rank	12 / 144	15 / 148	13 / 144	12 / 140	12 / 138
Score	5.3	5.2	5.3	5.3	5.3



Figure 4.6 Country Performance – China (source: World Economic Forum - Competitive Index Rating, 2016 2017)

### China (28/138)

Edition	2012-13	2013-14	2014-15	2015-16	2016-17
Rank	29 / 144	29 / 148	28 / 144	28 / 140	28 / 138
Score	4.8	4.8	4.9	4.9	5.0

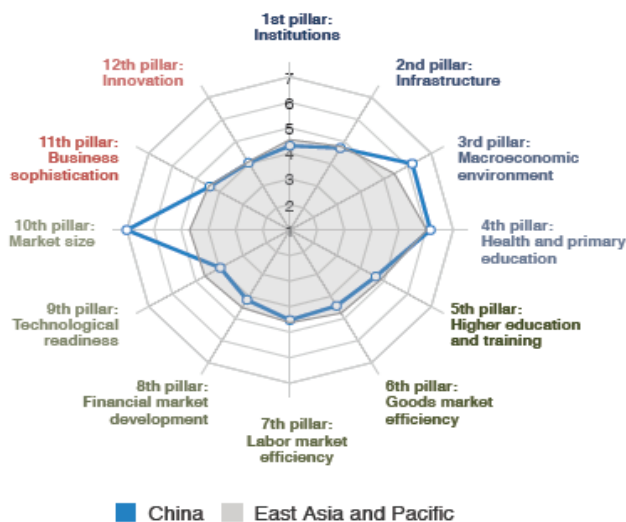


Figure 4.7 Country Performance – Greece (source: World Economic Forum - Competitive Index Rating, 2016 2017)

### Greece (86/138)

Edition	2012-13	2013-14	2014-15	2015-16	2016-17
Rank	96 / 144	91 / 148	81 / 144	81 / 140	86 / 138
Score	3.9	3.9	4.0	4.0	4.0



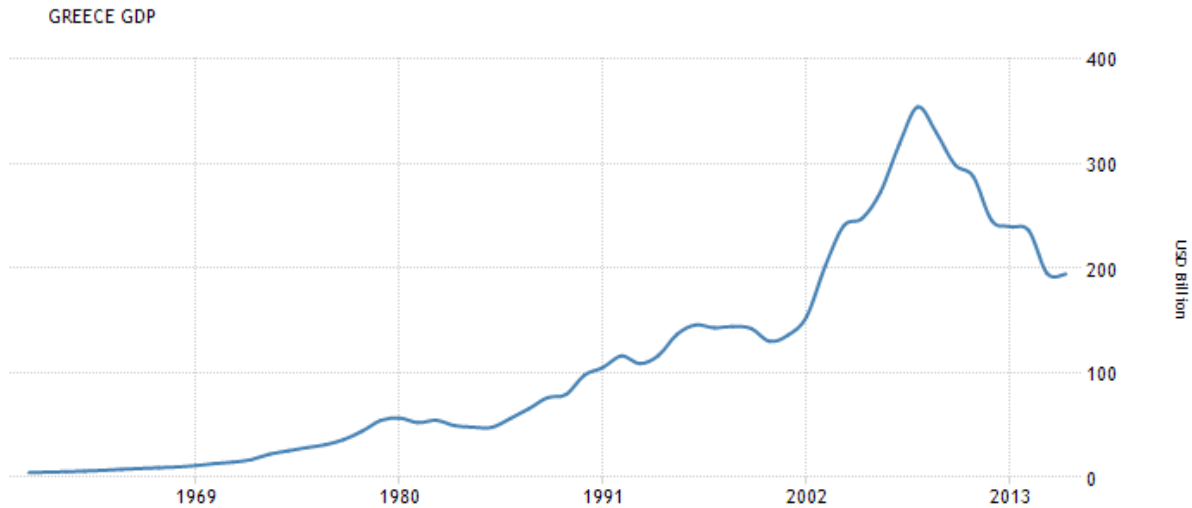
On **Regulatory** side, what we can say is that, traditionally, the Greek authorities have either been following international trends or just put forward by Greek Ship owners to serve their interests in international forums. There seems to be lack of strong competencies and leadership on political level. It is striking that a country with such an extensive controlled fleet, is not able to provide leverage to the industry by forming a modern framework on the creation and operation of a modern cluster and play a more active role in shaping maritime policies. The owners of course have adjusted to this and, in a nutshell, due to the lack of ability to add any value, the role of the country is to help the industry through its absence rather than its presence.

Concerning **Economy**, things are not promising here either.

- Financing from respective institutions is non-existent.
- Taxation and social contribution scheme is complex and ever increasing in cost. Shipping Companies are not taxed in same way as other companies but they are still affected by legislation over Social contributions and taxation of individuals. Meaning that attracting the right people is becoming more challenging and costlier.
- Contraction of local activity since 2010. In graph 4.2 we can see the sharp drop of Greek GDP by roughly 45%. That is massive and brought the Greek economy to the levels it was 15 years back. Although, as mentioned already, Greek controlled fleet is

not primarily serving Greek economy needs, that doesn't mean that it would not benefit from a thriving Greek economy, with strong production and consumption.

**Graph 4.2** Development of Greek GDP (source: Tradingeconomics.com/World Bank)



### 4.2.3 Concentration

As seen from the numbers in **Table 4.2**, Greeks are on the average of vessels/owner ratio. One might say: 'does this make any big difference?'. Nobody can say for sure that a big company is for sure going to survive versus a smaller one. However, statistically, bigger companies tend to show increased resilience due to:

- Diversification: Bigger companies can be present in more than one segments or sub-segments, spreading the risk.
- Access to Markets and Capital: Bigger companies can employ, get funding, and operate vessels easier and at lower costs due to economies of scale.

### 4.2.4 Diversification

**Table 4.1** below, includes 10 main segments and the percentage of its segment to each national fleet in terms of Gross Tonnage. These figures can assist us in drawing some basic conclusions on level of diversification of each Shipping nation. The red numbers indicate the leading nation in each category – not in absolute GT number but as contribution to the national fleet.

**Table 4.1:** % contribution of each category to each national fleet (source: Fairplay October 2017).

		Sum of GT as percentage of the whole fleet							
No.	Row Labels	China P.R.	Denmark	Germany	Greece	Japan	Norway	UK	Grand Total
1	Bulk Carrier	45,37%	6,37%	17,58%	44,23%	43,17%	19,20%	23,70%	36,75%
2	Tanker	13,36%	0,36%	4,12%	26,24%	9,12%	15,52%	9,53%	14,58%
	DRY/WET BULK TTL	58,73%	6,72%	21,70%	70,48%	52,28%	34,72%	33,23%	51,33%
3	Fully Cellular Container	16,28%	61,89%	59,02%	10,95%	9,65%	4,28%	24,57%	19,57%
4	Product Carrier	3,35%	7,75%	2,37%	5,91%	2,15%	5,23%	3,06%	4,05%
5	LNG/LPG	1,83%	0,36%	1,35%	4,68%	8,01%	10,11%	8,48%	4,82%
6	Chemical & Oil Carrier	0,65%	12,23%	2,97%	4,12%	0,53%	0,81%	2,05%	2,48%
7	Passenger	1,11%	2,06%	0,21%	0,52%	0,61%	1,26%	2,10%	0,81%
8	Cruise Ship	0,10%	0,00%	0,90%	0,14%	0,06%	0,50%	1,08%	0,26%
9	Ro-Ro	0,12%	2,62%	0,24%	0,09%	0,49%	1,24%	0,89%	0,43%
10	FPSO/FSRU/FSU/FSO	0,81%	0,23%	0,03%	0,11%	1,45%	4,04%	4,80%	1,17%
	Total % of fleet for 12 categories	82,98%	93,87%	88,78%	96,99%	75,24%	62,20%	80,26%	84,92%

Despite the investments on other segments – namely in Container and liquefied gases – during the last 10 years, it is evident that Greeks are, by far, still reliant on Bulk Shipping, Wet and Dry. Other numbers that ‘stick out’ are the Danish and German reliance on Container segment, and the relatively high percentages on high value fleets like LNG/LPG and offshore for Norway and UK. We need to mention here that high value assets with relatively low GT, such as Offshore Vessels, Offshore Floating units of all kinds and Liquefied Gas carriers are underrepresented in this table. We do see on the other hand which nations are investing on them. A table based on fleet value would give us interesting info but that is a research by itself.

#### 4.2.5 Benchmarking Summary

In table 4.2 below we summarize all items described above for better visualization of results.

**Table 4.2** Key Characteristics summary

Category	Greece	Japan	China	Germany	Denmark	UK	Norway
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1. Cross Trading	HIGH	LOW	LOW	MED	HIGH	MED	HIGH
2. Domestic Competitiveness/ Economy/ Regulatory	LOW	HIGH	HIGH	HIGH	HIGH	HIGH	HIGH
3. Concentration of fleet (vessels per owner >1K GT))	6,4	6,9	3,8	9,8	9,7	6,8	7,7
4. Diversification of fleet	LOW	MED	MED	MED	LOW	HIGH	HIGH

## 4.3 SWOT analysis

### 4.3.1 Introduction to the tool

The SWOT framework provides a general summary of the Opportunities and Threats mapped throughout the industry analysis and the Strengths and Weaknesses identified in the company analysis (Johnson et al., 2015). A list of all the identified attributes is generated and becomes basis for identifying strategic options and assessing actions that need to be taken for improving the company's position in the market (Johnson et al., 2015). In this case, of course, we talk about Greek-owners not a single company. From what we have 'collected' in the previous chapters we will try to identify the elements of each category.

### 4.3.2 SWOT analysis Greek Ship-Owners

**Table 4.3 SWOT Analysis Matrix Table**

<p><b><u>Strengths</u></b></p> <ul style="list-style-type: none"> <li>- Flexibility in Decision Making</li> <li>- World Class Knowledge and Experience</li> <li>- Low Capital Leverage</li> </ul>	<p><b><u>Weaknesses</u></b></p> <ul style="list-style-type: none"> <li>- Low diversification</li> <li>- Financial Political Environment</li> </ul>
<p><b><u>Opportunities</u></b></p> <ul style="list-style-type: none"> <li>- Growth of Greek Economy/O&amp;G</li> <li>- Development of Greek Cluster</li> </ul>	<p><b><u>Threats</u></b></p> <ul style="list-style-type: none"> <li>- National Protectionism and restrictions/Cross trading (short term)</li> <li>- Shift in trade patterns (long term)</li> </ul>

#### Strengths

From what has been presented so far, the undisputed strengths can be summarized as follows:

- **Flexibility** due to management and ownership model. One of the key elements that characterize Greek shipping is the management style of the Greek Shipping companies. As examined under the Literature review chapter, the boldness as well the speed of decisions played a role in the growth of Greek owned fleet. To a great extent, this is attributed to the management style of the Greek shipping companies. The main characteristics of which are:
  - Decision making limited to very few people (or even only one).
  - Confidence on own skills.
  - Hands on management for good control on cost and operations.
  - Trust, Greek shipping is a relatively 'closed' environment and new hires are based on recommendations.
  - Tough negotiators on all operational aspects.
- World Class **knowledge** and **competencies** that has been built bottom up. It is no wonder that the majority of the founders of the big Greek shipping companies have started their careers as Seafarers - Angelikoussis, Tsakos, Konstantakopoulos, Fragkos, Laimos, Livanos and many others.
- **Low Capital Leverage**. When things get south, the owners with the lowest level of fixed obligations will always be the ones better positioned to exploit the opportunities. Or if there are no opportunities, these are the ones to survive longer as well. Jochen Döhle, a partner in Peter Döhle Schiffahrts, a major ship-owner has quoted the following self-explanatory statement: *"Out of the 700 ship-owners in Greece, probably around 600 are playing with their own money and around 100 with other people's money"*, Mr Döhle says. *"In Germany, we have around 400 ship-owners, of which 370 are playing with other people's money. (source: The rise and fall of the German "one ship KG" financing model, K&K).*

### Weaknesses

- **Diversification:** Diversification of Greek Owned fleet remains low despite efforts to improve. On the positive side, fleet age has dropped substantially. One might argue that ‘a winning team should not change’ therefore why aim for changes. The flip side of this coin is that when all eggs are in one basket then this could mean trouble under specific circumstances. We saw the case of the Germans when Containers went down during the 2008-2009 crisis. Would that have the same effect if Greeks were in their place? During the rough years of Dry Bulk in 2015-2016 Greeks survived. However, this happened because Wet Bulk was doing good. It was exactly this diversification and the second largest part of the Greek fleet - tankers - came to the rescue of Greeks. The discussion on diversification is a big subject by itself. What is certain is that Greeks are on the lower end and that history has shown how diversification can – if not ensure – at least help the hedging of shipping companies during difficult times. This is something to have in mind, especially in today’s environment of increased volatility.
- **Financial/Political environment:** As we have seen, in other countries of this research, the state has played a pivotal role in times of crisis. Not always with success but with positive results when done in cooperation with all stakeholders. We saw the good examples of Norway and Denmark earlier as well as the case of the United Kingdom, where although we have nowadays a small percentage of controlled tonnage, we have on the other hand the development of the most comprehensive hub of Maritime Support services globally. State assistance can therefore be multidiscipline. In the current political instability in Greece and the traditional absence of the state it doesn’t seem likely that this will change in the future. Even though Greek owners have learnt how to ‘make their own luck’ that doesn’t mean that there won’t be a time in the future where some centralized leverage would come in handy.

#### Opportunities

- **Greek economic growth:** Greek Market is negligible on global scale; therefore, it can never have any significant impact on the Greek owned fleet either going up or down. However, from lessons learnt in the case of Norway, there could be some potential for Greeks should O&G business pick up in Greece. During past 5



years, especially after the discovery of the massive gas fields in Egypt-Israel-Cyprus, there have been discussions and explorations South of Crete and in the Ionian Sea. Would that be of interest for Greek Owners? Probably yes but will also depend on Greek strategy around such a possibility.

Furthermore, as mentioned under 4.2, the Greek economy is currently very much depressed in terms of production and consumption. Although nothing concrete is in sight, a well-planned growth strategy for the Greek economy could mean good news - in terms of opportunities – also for Greek Shipowners, not as game changer but certainly as another small pillar to support the growth of Greek shipping.

- **Development of Greek Cluster:** Greek Owners have been very adaptable, creative and international in their operations, adopting from early times foreign flags and establishing operations in countries with advanced clusters. However, an organized, dynamic and extrovert cluster, would only benefit the industry and the Greek economy. This is partly connected to the comments made above on the political situation in Greece and its agenda – or the lack of it.

#### Threats

- **Protectionism:** As mentioned earlier, Greek owned fleet is the largest cross-trading fleet in the world. Lately, there seems to be a rise in nationalistic voices advocating against globalization or the reinstatement of restrictions. These restrictions can:
  - Affect production and consumption, therefore shipping of goods and raw materials.
  - Affect shipping directly by regulating who can transfer what and where.

As per economic theory, decisions of this nature harm the ‘efficiency’ of global economy, as in practical terms, when a market operates in fully competitive terms it regulates itself for best resource allocation and value creation. Same goes for shipping industry. In any case, it is obvious that the Greeks are exposed to these phenomena if they escalate for short term or long term periods –

especially considering that Greece's global diplomatic and economic caliber is limited to provide support on that field.

- **Trading Patterns:** This is more theoretical and for now a longshot. However, it is hereby exposed for 'discussion purposes'. Could there be a risk for Greek Shipping due to change of trade patterns in the next 30-50 years or so? Could Africa be the new factory of the planet? If so, since it is rich in resources, would there be need for 'that much' shipping? What if China would establish a road connection to Middle East and Europe? This is a big discussion and obviously, a subject on its own. In any case scenarios like that can have serious consequences to global shipping.

## 4.4 Conclusion

In this chapter, we summarized key characteristics, we saw where the Greeks stand compared to the other 6 Shipping Nations. Based on the above, as well as elements collected in the literature review part, a structured approach - in the form of a SWOT analysis table - was then presented to summarize findings on strengths, weaknesses, opportunities, and threats.

*Overall, was the question put forward in the Abstract answered then? How did the Greeks do it?*

Let us see what have we identified then:

**Knowledge ↔ Experience → Foresight → Management Style → Bold decisions → Results**  
**Flexibility: 'No strings attached' to specific Market Geographies, Flags, Financing Institutions, even political decisions.**

## 5. Concluding Remarks

### 5.1 Introduction

In this last chapter, we close the research by exposing some necessary additional considerations, such as the limitations of the analysis to keep in mind as well as possible areas of further research.

The very last part is the Epilogue.

## 5.2 Limitations of the analysis

The following items need to be considered for subject analysis:

- The scope of the research is quite vast. We are focusing on a period of almost 5 decades and examining 1+6 different nations. Although the focus is primarily on Greeks, the amount of detail due to Thesis size requirements is a limiting factor.
- As expected, the availability of information and data is more and more hard to get hold of the more we go back in time. For Greek ship-owners, it was possible to put together the big picture by combining different sources but for other nations information where scattered if existent at all online. Therefore, a direct one to one comparison is not possible for all the years of the research. A comparison of general characteristics and qualities is presented for historical purposes and of course the focus under chapter 4, is primarily on today's status where more information is available.
- In this whole research we talk about Greek Controllef fleet and not Fleet under Greek flag. We must mention that during the last two centuries the choice of flag used by merchant vessels under Greek control has always been opportunistic or was the result of pure business and commercial interest. That is why in the research we always refer to the Greek fleet and not necessarily the Greek fleet as such. As Panos Kapetanakis writes for the difference between 'Greek Controlled' and 'Greek flagged' fleet:

*This distinction is more than semantic: members of nineteenth- and twentieth-century commercial and ship owning communities who lived all their lives abroad and were Russian, British, Ottoman, Italian, Austrian or American subjects retained their 'Greekness,' which was pivotal for their success and preserved by tight kinship and social circles. The successful progress of Greek-owned shipping was partly based on the fact that this identity guaranteed access to the informal 'club' of Greek merchants and ship owners abroad. (source: Greek Shipping 1945-2010: a success story of tradition, innovation, modernisation, Panos Kapetanakis).*

## 5.3 Possible areas of further research

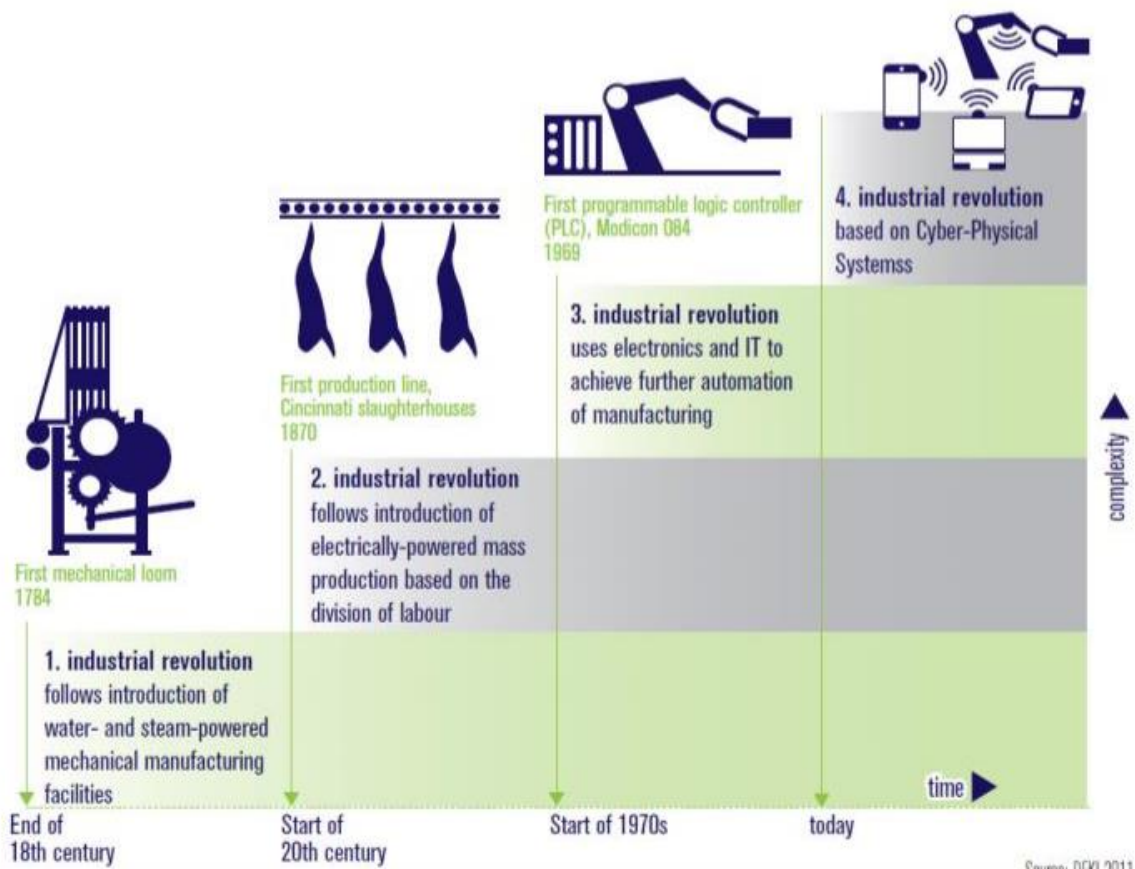
As described under section 5.2, the selected scope of this research is quite vast, therefore there is good potential for further in depth investigation either on country level or on specific parts of the cycles involved in the period of interest. However, as the first findings emerged from the research, three specific areas were immediately identified for further research:

Digitalization: In the previous parts of this research, we already talked about developments that had ‘disruptive’ effect in shipping industry. A good example is environmental regulations implemented from time to time. Having the above as a starting point for discussion: Is there a set of foreseeable events that can have a game changing effect on shipping as we know it today?

Historically, there are 3 widely recognized industrial revolutions: **1.** Steam Era and the harnessing of the ‘muscle power’ steam was capable to unleash - late 18<sup>th</sup> century, **2.** Introduction of Mass Production lines and use of electricity - late 19<sup>th</sup> Century, and **3.** IT, electronics, computing capacity and the Internet, that led to high automation, in the early ‘70s.

The exponential development of IT technologies on software and hardware in the past decades, have led what was just ideas and ‘possibilities’ in the past, to maturity. This is now acknowledged by Academia and leading organizations, as the **4<sup>th</sup>** Industrial revolution (Graph 5.1).

**Graph 5.1** The 4 Industrial Revolutions (*source: DFKI 2011*).



In a nutshell, this is about:

- Interconnection of not only humans but also ‘things’, such as appliances, sensors, means of transportation and all kinds of machines.
- The continuous growth of capacity in data storage and processing has introduced the term ‘Big Data’ which represents a huge possibility for reliable fact-based decision making and forecasting based on models.
- The increasing ability to ‘break down’ our reality to its smallest particles gives the possibility for innovative solutions to traditional problems of mankind. Nanotechnology and Biotechnology are perfect examples of the above.

All in all, we are moving towards hacking the ‘digital code’ of everyday life, the things we use, the things we eat and all the living organisms. This represents a massive amount of information and the key focal point in the center of this process is cyberspace. The above, tied with continuous developments on Artificial Intelligence and Machine Learning is almost mind blowing, considering the

endless possibilities and the fact that we really do not talk about something tangible. We talk about Digitalization. As expected, the discussion around Digitalization quickly becomes philosophical. Obviously, things that cannot be seen or easily understood due to their sheer complexity, how can we make sure that they are also controlled or used to the benefit of society? The possibilities are endless and they can be beneficiary as well as devastating in real life.

The question that arise then is: How can this affect the Shipping Industry? The answer is already here. Many ideas are being developed and tested as we speak. The leading industry stakeholders (owners, managers, class societies, makers) are experimenting constantly with new technologies and try to shed some light on how to improve vessels as well as their operation and management. Data, from various sources, are flowing in larger numbers than ever before from the vessels. Just to understand how fast things are moving, autonomous ship testing sea areas have already been designated by the governments of Norway and China.

**How will the Greeks respond to this game changing developments?** Here, we are not talking about ‘a new technology’, here we potentially look at a catalyst that will change the ‘way things are done’. If ‘big data’ and high automation enable all operators to take the optimal decisions for the operation, chartering and management of vessel fleets, this tied to the ever-increasing regulatory requirements on quality, pollution and safety (e.g. cap2020), what degrees of freedom will remain for differentiation strategies altogether? Could it be that this will lead to greater consolidation and vessel pooling for greater economies of scale? Many things to consider and further examine.

Shipping Company Management Style: When it comes to Greek Shipping there is always big discussions on the management style and the ‘know how’ transfer to the new generations. It would be interesting to examine deeper this aspect of shipping in Greece. Examine Ratio between listed companies or ‘anonymous’ corporations versus family owned and ran ship owning companies for Greeks and how the difference between the management styles can affect the chances of success or failure in the shipping business. It is true that in Greece a big number of ship-owner companies are, one way or the other, family ran. It would be interesting to dive into the management styles of these companies and see

what are the pros and cons compared to other types of companies. If this has served Greek shipping well in the past, can we expect the same in the future?

The role of the Greek State: By examining other nations, the research revealed a consistent lack of central coordination and support from Greek authorities throughout recent history. The stance of the Greek state towards Greek Ship owners has been, traditionally, neutral, opportunistic in recent years or simply non-existent. How can the Greek State adopt a more active and positive role towards such an important industry - especially during times of economic hardship for Greece? There are voices within the Greek Shipping community that the industry is better off with the least possible intervention from the State. However, examples from other countries show that there can be positive results from State support. It would be interesting to examine how a meaningful and mutually beneficial cooperation can be framed and materialized in Greece.

## 5.4 Epilogue

The scope of this research is indeed vast. It addresses a topic with multiple aspects, a fact which in turn does not allow for a deep and thorough investigation for these aspects. Many of them could easily be separate thesis'. The desired outcome, though, is exactly that: Stimulate the reader's interest for further investigation on topics of attention.

In lieu of a long epilogue, the phrase of one of the traditional self-made ship owners summarizes a lot of what has been analyzed in the chapters of this research. Referring to his son taking over gradually the family business he quoted (free translation):

*'If my son cannot tell the difference between the smell of engine oil and grease in the engine room, I don't see how management theories taught in classrooms can assist him in being successful in the shipping industry'.*

Exaggeration? To a good extent, yes. However, it metaphorically summarizes the thinking and the practices of most traditional Greek ship-owners: hands-on experience, deep knowledge of the industry, hard work, quick and bold decision making. And somehow, in recent years, where we have the 2<sup>nd</sup> or 3<sup>rd</sup> generation family members steering the

companies, Greeks seem to have managed to transfer this mentality from the engine room to the board room.

THANK YOU



## Bibliography

1. Κ.Γκιζιάκης – Α.Παπαδόπουλος – Ε.Πλωμαρίτου, «Ναυλώσεις» 3<sup>η</sup> Έκδοση. Εκδόσεις Σταμούλη.
2. G.Harlaftis, «A history of Greek Owned Shipping – The making of an International Tramp fleet, 1830 to the Present Day». Routledge Publications.
3. Thanopoulou, Helen A., 2007. "Chapter 2 A Fleet for the 21st Century: Modern Greek Shipping," Research in Transportation Economics. Elsevier Publications.
4. S. Tenold et al. (eds.), «Global Shipping in Small Nations». Palgrave Macmillan Publications.
5. Peter N.Davies, «Japanese Shipping and Shipbuilding in the Twentieth Century». Global Oriental Publications.
6. Tae W.Lee et. al., 2002. «Shipping in China». Routledge Publications.
7. Γ.Βλάχος, «Διεθνής Ναυτιλιακή Πολιτική» 3<sup>η</sup> Έκδοση. Εκδόσεις Σταμούλη.