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Title: How to Sail a Sinking Ship : Adapting to the Declining Competitiveness of the European Shipping Industry

Year: 2017

Version:

Please cite the original version:

Tenold, S., & Ojala, J. (2017). How to Sail a Sinking Ship : Adapting to the Declining Competitiveness of the European Shipping Industry. In B. Bouwens, P.-Y. Donzé, & T. Kurosawa (Eds.), *Industries and Global Competition : A History of Business Beyond Borders* (Article 215-234). Routledge. Routledge International Studies in Business History. <https://doi.org/10.4324/9781315563909-14>

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2 How to sail a sinking ship: Adapting to the declining competitiveness of the European shipping industry

Stig Tenold and Jari Ojala

1. Shipping: A special case?

International seaborne transport is – by definition – an activity that crosses borders. Due to the nature of the service produced, the factors of production are much more mobile than in any other sector (perhaps with the exception of the airline industry). As ships and seamen work all over the world, their link to the ‘home country’ is often very limited and practically always weaker than similar links in any other goods or service production industry. Consequently, shipping is sometimes referred to as ‘the world’s first globalized industry’ (Fink 2011). The shipping industry is, therefore, particularly relevant to the theme of this anthology –analyzing industries in a global environment, rather than studying firms in their local or national surroundings. The focus of this chapter is the declining competitiveness of European shipping in the face of global competition, as well as the political and business responses to this challenge.

The footloose nature of both the labor force and production capital implies that national and regional competitiveness can be challenged easily, as has indeed been the case in shipping over the last fifty years.¹ During the 15th century, Europe was clearly established as the world's maritime center, and this hegemonial role was maintained well into the 20th century. However, after World War II, and particularly after the shipping crises of the 1970s and 1980s, Europe’s position was challenged by other maritime nations.

This chapter consists of two main parts. In the first part, the question of competition in world shipping in the post-war period is analyzed. After a short discussion of how

competitiveness in this particular sector can be measured, we explain the leading role of European countries at the start of the period. Over the subsequent decades, European market shares became increasingly challenged, and the leadership shifted both from and within Europe. This development is discussed through an analysis of revenue generation and cost structures in shipping.

In the second part of the chapter, we show how institutional innovation – particularly the use of Flags of Convenience and the so-called ‘open registers’ – have been paramount in enabling shipping companies in European countries to maintain a relatively strong position. By adopting new regulations, which, in principle, enabled companies to slice up the value chain and outsource uncompetitive parts of the production process to low-cost countries, some European countries have managed to remain competitive. The shipping industry thus provides a case for studying general location choices of industries in global value chains, as discussed in the introduction of this volume.

2. Measuring competitiveness in the shipping industry

What determines competitiveness in the shipping industry, and how can it be measured?

Similar to most other industries, the answer for the shipping industry depends on the unit of analysis. The basis for the competitive strength of a shipping company differs from that of a nation, which again differs from the factors that make a region or continent competitive. At the same time, developments at the different levels of aggregation affect each other; it is difficult to have a competitive nation (on an aggregate basis), if the nation’s companies are not competitive (on an individual basis). Similarly, Europe’s competitiveness can be seen as the aggregate of various European countries’ competitiveness. As we will show, ‘European development’ involves a variety of national starting points, trajectories, and responses. Most of our analysis is based upon the ‘typical’ or ‘aggregate’ European experience relative to the

rest of the world. The different national developments are discussed; for example, the case of the Greek success is discussed in Harlaftis (1995), the British tragedy in Hope (1990), and the varied Nordic experiences in Tenold, Iversen and Lange (eds. 2012).

The competitiveness of the shipping industry based in a given country or region is a combination of the capabilities of its firms, the possibilities offered by the surrounding environment, and the demand of the markets in which they operate.² Moreover, the number and strength of the firms operating in the same geographical area and the vitality of related industries in the maritime cluster might have a decisive effect on competitiveness, as has been the case in some European countries (Sornn-Friese 2003; Wijnolst 2006).

Like in other chapters in this volume, the definition of industry competitiveness is problematic, and measuring competitiveness is challenging. In shipping, the drivers behind the competitiveness – in addition to factor costs – have been technological change and specialization, organizational innovation and development, and institutional changes. All of these changes occurred in global markets with an undercurrent of growing demand for shipping services. Technological and institutional innovations led to declining freight rates that increased the market competition further. Moreover, during the post-war era, shipping companies also faced increased competition from other transport industries: airplanes conquered the markets that had previously been dominated by passenger ships, whilst trains and trucks bypassed inland and coastal water transport in a number of countries (Boyce 2001). It is easy to forget that inland water transport may, in fact, also be international (Klemann & Schenk 2013). We, however, do not focus on this inter-industry competition but on the competition at the intra-industry level.

Due to the high mobility and easy transferability of the means of production (the ship), the size of a company's fleet should be a good measure of competitiveness. Shipping is characterized by strong cycles, resulting in relatively long periods of low revenues and

ensuring that uncompetitive companies lose their capital. Thus, in the medium to long term, market forces will ensure that companies that are unable to compete will see their fleets dwindle, and the same will hold for nations and regions.³ This will be the measure used – with some qualifications – in this chapter. However, before we discuss the development of shipping competitiveness and its basis, a few clarifications are in order.

When we use the term ‘shipping,’ we are concerned primarily with the provision of transport services from location A to B, and the term ‘shipping companies’ refers to corporations that organize and provide these services. At the end of the chapter, we will extend the analysis to include a brief discussion on ‘the maritime industries’ in a more general sense, saying a few words about the auxiliary service industries that make shipping possible. The bulk of the analysis, however, deals with shipping companies and their activities; in other parts of the maritime milieu, there are other competitive forces at play. Shipbuilding, for instance, does not have the same ability as shipping to combine capital and labor from different countries. Consequently, labor costs are extremely important, and this is partly an explanation of the greater decline of European shipbuilding than that of the European shipping industry.

Despite the massive loss of market shares for European shipbuilding, certain types of ships (high-tech, customized, and innovative) are still built in Europe. This is a result of the diversity of the industry and its market – such differentiation also pertains to the shipping industry. Just like in many other sectors, even though mass manufacturing has moved to low-labor-cost countries, high-cost producers and countries maintained competitiveness in luxury or high-quality niches, protected markets, etc. This is the case for shipping as well. Indeed, among the various segments of the shipping market, there is substantial variety with regard to both the product that is produced and the ability to outsource parts of the production process.

The shipping industry is fairly diversified, encompassing small ships for transporting goods and passengers for coastal trade as well as tankers, bulk carriers, and container ships that trade between continents. Our focus is the international segment of the industry – ships performing transport services in international waters.⁴ However, even this is a diverse activity, covering short and long trades served by a variety of specialized vessels for liquids, gases, commodities, and passengers.

This heterogeneity is relatively recent. At the beginning of the 20th century, the vast majority of the world's ships were versatile general cargo carriers that could carry all types of commodities or liners that carried passengers as well as cargo. Today, the situation is very different, as ships have become much more specialized.⁵ Now, there is usually limited competition on the customer side – a cruise tourist would never consider booking holiday space on an oil tanker, and an oil cargo would never occupy a stateroom on a cruise ship. However, there are still important relations on the input side. Often, oil tankers and cruise ships compete for the same type of labor, capital, and berth space.

Another important consideration is the manner in which shipping services are produced. Shipping is a truly internationalized industry, in which the potential to source factors of production where they are cheapest is higher than in practically any other industry. Ships are usually financed in an international market, and today several nationalities may work onboard the same vessel, making the idea of a single 'home country' for the labor force absurd. At the same time, we see that there is a tendency of shipping companies (and supporting businesses) to be lumped together in certain cities and countries. This 'clustering' must, of course, be considered when we analyze shipping competitiveness.

As Figure 1 shows, the European share of the world fleet has dropped from more than 50 per cent to around 20 per cent during the past 50 years. At the same time, Latin America and Oceania have increased their relative shares in world shipping. This analysis, based only

on the flag of the ship, does not reveal the complexities in the development of shipping tonnage and competitiveness. The flag – namely, the country in which the ship is registered – does not necessarily reveal the location of actual ownership of the ship. Rather, it reveals the existence of a number of countries specialized in ‘ship registry.’ To wit, the leading country in Latin America is Panama with around 20 per cent of the fleet, more or less the same market share as Europe.⁶ The rapidly growing share of Oceania is almost completely accounted for by more than ten per cent of the world fleet registered in the Marshall Islands, which comprise 29 atolls and five separate islands with slightly more than 50,000 inhabitants. The registry is administered by an American company, International Registries, Inc., based in Reston, Virginia.⁷ Nevertheless, Figure 2.1 provides a broad empirical description of the evolution of the global shipping industry.

<FIGURE 2.1 HERE>

Figure 2.1 reveals that the concentration of the registry of the world fleet has greatly reduced in the post-war period. In 1950, more than 85 per cent of the world fleet was registered in the two leading centers: Europe and North America.⁸ Today, the registration of the world fleet is much more evenly distributed. The share each of the five regions comprises 10 to 30 per cent of the world fleet, with only North America falling outside this range.

3. The European shipping industry: A competitiveness-based explanation of the decline

At the start of the 20th century, Europe dominated world shipping; with the United Kingdom at the vanguard, the European countries held a hegemonic position in the industry. This position was closely linked to the leading role that Western Europe played in international trade and politics. The European shipping lines supplemented the telegraph cables – tentacles of the European colonial empires – facilitating control of a large share of the world’s trade, capital, and people.

Around 1910, more than 80 per cent of the world fleet was registered in Western Europe (Lloyd's Register of Shipping 1972, pp. 66-67).⁹ In hindsight, such a market share was clearly unsustainable. The two world wars had a particularly detrimental influence on the fleets of European countries, and the breakdown of international relations in the interwar period also had a harmful effect. There were, however, differences within Europe in these periods. In particular, Greece, Norway, and Germany saw strong fleet growth and modernization in the interwar period, while the British fleet declined both in absolute and relative terms from the early 1920s to the late 1930s (Sturmey 2010). Still, even as late as 1950, more than half the world fleet was registered in Europe. Even if we accept the premise that fleet size reflects competitiveness, how can we explain the dominating position of the European shipowners?

In the first half of the 20th century, the European hegemony was partly a reflection of the fact that the region could still benefit from past glories. European shipping companies had spent decades – in some cases, more than a century – building an infrastructure that facilitated their business. Moreover, as shipping was – and is – a relatively capital-intensive sector, there were relatively few contenders. The European first-mover advantage was strengthened by the acquisition of superior skills and technology. Other countries (with the exception of North America and, to some extent, Australia and New Zealand) simply did not have the capital required to compete on a large scale in this industry. The other non-European exception was Japan, which, after the opening of the country in the second half of the 19th century, put much effort in establishing a navy and a merchant marine (Chida & Davies 2012). In his seminal book on British shipping, Sturmey (2010, pp. 1-9) emphasized four 'conditions of supremacy': colonies, industrialization, population growth, and establishment advantages. Europe's dominant position in international shipping was founded upon – and facilitated – the continent's dominant position in world trade and politics.

In the first decades after World War II, Europe was ‘much more maritime’ than today (Miller 2012). The central role of Europe in trade and manufacturing meant that the maritime dimension was very evident in most coastal European cities. The United Kingdom is a case in point: London, Liverpool, Glasgow, and Cardiff had bustling ports that stretched all the way into where people lived and provided employment to tens of thousands. In the northeast of England and on the Clyde, the biggest employer was the shipyards, which built a large proportion of the ships that traversed the world’s oceans. These merchant vessels were manned primarily by Europeans and provided an attractive employment alternative. Trade and transport went hand in hand, and nowhere more so than in Europe.

Today, more than 90 per cent of the world’s ships are built in Asia; the once bustling ports have moved out of the city centers, and giant and powerful cranes have replaced the muscles of the longshoremen. In the first post-war decades, there were some changes in the ownership of the world fleet, but the drastic transformation of the market shares did not take place until the shipping crises of the 1970s and 1980s. As the empirics showed, this was when Europe’s market share saw the most rapid decline.

When discussing the development of European shipping over the last decades, two features have to be explained. First, why did the European share decline? Second, what can explain the shifts in the relative strength of the shipping industries in various European countries; why did some countries (e.g., the United Kingdom and Sweden) lose terrain, while others (e.g., Greece and Denmark) prospered?¹⁰

In order to explain these shifts, it is useful to look more closely at the cost and revenue structure of shipping. Like in other industries, shipping companies are able to stand out among their peers if they can acquire higher revenues (sell at higher prices) or produce at lower costs. In his standard textbook on maritime economics, Martin Stopford (2009, p. 219) defines the ‘key variables’ in shipping as (1) the revenue received from chartering/operating

the ship, (2) the cost of running the ship, and (3) the method of financing the business. Within these three areas, Europe initially had absolute advantages. However, due to technological, economic, and political developments, these locational advantages evaporated as shipping increasingly became subject to international prices.

<TABLE 2.1 HERE>

Table 2.1 illustrates the basis for the competitiveness of a given shipping company or of a specific country's shipping industry. The crucial role played by European traders and customers gave a proximity to 'the market' that can explain why European shipowners dominated intercontinental trades. In other words, their market knowledge provided superior revenue-generating capabilities and consequently a hegemonic position. With regard to the costs of running ships and the method of financing the business, the advantages were based upon a specifically European skill set, more than 'costs' *per se*.

With the introduction of steam in the late 19th and early 20th centuries, the technological requirements increased, and a new set of skills – which existed almost solely in Europe – was necessary (Hynninen, Ojala & Pehkonen 2013). Indeed, with the transformation from sail to steam, access to capital and skilled labor cemented Europe's advantages. At the same time, two distinct operational modes developed within Europe. Broadly speaking, the British, German, and French shipping companies dominated the liner trades, providing scheduled services through fast and modern ships, often linked to their respective colonial networks. In other countries, tramp shipping dominated: shipowners in Norway, Sweden, Denmark, and Greece offered their services in a global market, their ships constantly plying the seas looking for goods to transport. Thus, the shipping industries of the leading European powers were closely linked to their own trade and empires. The smaller nations emerged as 'cross-traders,' fulfilling a transport need wherever one existed. In the longer run, this turned out to be a more sustainable business model.

The European economic development was (and is) closely related to the sea. During the 19th century, the United States shifted from a maritime, ocean-dependent economy to an inward-looking and land-expanding country. In Europe, however, and particularly in the North Sea/Baltic region and the Mediterranean, there were few efficient alternatives to maritime transport. Both within Europe and in Europe's relation to other parts of the world, shipping companies, ships, and seafarers provided the vital links.

Up until World War II, the European position in international shipping also reflected the continent's role as the center of international trade and production. For instance, Europe accounted for more than two thirds of the world trade during 1876–1880 (Yates, cited in Kenwood & Lougheed 1999, p. 80), whilst Europe's share of the world fleet, at around 74 per cent, was around ten per cent larger than the share of world trade (Ojala & Tenold 2017). Table 2.2 details the factors that account for Europe's leading role before the shipping supply was 'globalized.' Before World War II, a combination of empires, tradition, path dependence, and limited economic capabilities elsewhere meant that challengers to the European crown were rare.

<TABLE 2.2 HERE>

As long as Europe in general, and the United Kingdom in particular, was the nave of the network of international trade, the control of the world's shipping industry was simply an extension of this status. However, one dominant feature of the post-war world development is the spread of industrialization and relocation of manufacturing production, particularly to countries in East and Southeast Asia. A part of the basis for Europe's hegemony thus disappeared. Figure 2.2 illustrates the strong growth in the East and Southeast Asian share of the world gross domestic product (GDP) and the corresponding decline in the role of Western Europe.

<FIGURE 2.2 HERE>

The development would have been even more dramatic if we looked at manufacturing volumes rather than GDP. Japan, followed by two generations of ‘tigers’ and then China, has taken over as the ‘workshop of the world,’ implying that a larger share of the demand for shipping originates in this region. Manufacturing is based on the transformation of raw materials into finished goods, and import of raw materials is one of the most shipping-intensive economic activities. In the period of 1970–2000, the roles of Asia and Europe were reversed, as seen in Figure 2.3. Asia had overtaken Europe as the main importing region for raw materials by 1990.¹¹ Since then, the development has continued: in the new millennium, Asian imports have increased by more than 230 per cent, compared with five per cent in the case of Europe.

<FIGURE 2.3 HERE>

The demand development, based on growth and shifts of the world production, particularly manufacturing, is part of the story of Western Europe’s reduced role in international shipping (and the concomitant rise of Asia). However, not only is the reduced competitiveness a result of demand side considerations and developments, but the European ability to supply shipping services at competitive rates has also been seriously challenged, as shown in Table 3.3.

<TABLE 3.3 HERE>

Many functions – ownership, employment, port activities, and shipbroking – have followed in the wake of the shift of revenue-generating activities from Europe to Asia. New and newly successful ‘maritime clusters’ in Asia – Tokyo, Hong Kong, Shanghai, and, in particular, Singapore – have increased in importance.¹² However, many functions, institutions, and agents remain in Europe or are controlled by European companies.¹³ Indeed, Europe maintains hegemony within ship financing, classification, and insurance, and around 40 per cent of the world fleet is still controlled by European interests.

This is a stark contrast to the situation in shipbuilding (Todd 2011). There is still some production of luxury and technologically advanced ships in Europe. However, more than 90 per cent of the new ships delivered in 2014, measured in gross tons, were built in three Asian countries: China (36 per cent), South Korea (34 per cent), and Japan (21 per cent; UNCTAD 2015, p. 43).

The basis for the drastically different developments between the two industries is the manner in which the shipping industry – as opposed to shipbuilding – has been able to slice up the value chain and outsource the relatively low-skill, high-cost functions such as seafarers to countries with lower labor costs. This transfer was based on two institutional innovations: Flags of Convenience and ‘open registers.’

4. Institutional innovations and European competitiveness

The regulation of shipping is partly private and partly public. Since the 18th century, there has been an element of ‘self-regulation’ of ship standards through classification societies. Private sector institutions have undertaken the certification of vessels and their seaworthiness, while the flag state – the country whose flag the ship flies – may also enforce certain requirements. The latter regulations include elements such as crew requirements (both the demand for certificates and number of crew), tax conditions, trading restrictions, etc. Traditionally, Navigation Acts (e.g., the United Kingdom 1651–1849) or cabotage restrictions (e.g., the US Jones Act of 1920) have been the most important types of trading restrictions.¹⁴

Government regulation of maritime labor was primarily a 20th century phenomenon. For instance, in 1913, as much as ‘twenty-six percent of all seamen on Norwegian steamers were foreigners’ (Fischer & Panting 1985, p. 190). Subsequently, restrictions on foreign labor were introduced and enforced more strictly in most European countries. As a result, the degree of correspondence between vessel flag, ownership, and crew increased. One way in

which such restrictions could be overcome, however, was by re-flagging the ships; thus, there were US transfers to Panama in the interwar period and to Liberia after World War II.

Nonetheless, in the first post-war decades, the governments of most European countries restricted the ability to ‘flag out’ ships to Flag of Convenience countries. As Yrjö Kaukiainen (1994) points out in the article with the telling title ‘From Low-Cost to High-Cost Shipping: Finnish Maritime Labour Costs after the Second World War,’ around 1950, ‘only some six percent of global merchant tonnage was on the “convenience” registers while in 1980 the proportion was over thirty percent.’ The trend has continued subsequently: by 2015, the three leading flags – Panama, Liberia, and the Marshall Islands – accounted for almost 42 per cent of the world fleet, measured by dead weight tonnage (UNCTAD 2015, p. 42).

Up until the early 1970s, the strong demand for shipping capacity and the introduction of labor-saving ships utilizing economies of scale implied that the employment of seamen from high-wage countries was not too much of a handicap. However, the combination of the rapidly spreading use of Flags of Convenience and the depressed shipping market after the 1970s oil price increases changed all that. With more than a decade of freight rates that hardly covered variable cost, shipowners tried to save money wherever possible. The lobbying for more lenient labor requirements – and thus lower wage bills – rested on two main arguments. First, the owners wanted a ‘level playing field’ with Flags of Convenience countries and others that could use cheap labor. Second, the high mobility of the production capital – the ship – implied that the threat of closing down all activity by selling to foreigners was credible. In the case of, for instance, a factory, such a sale would usually have little effect on employment, taxes, etc., as the location of the factory was fixed. In the case of shipping, however, any link to the home economy could disappear the moment the ship was sold (Sletmo 2001).

In the end, the ‘globalized’ element of shipping, which posed a major threat to the continued existence of the European shipping sector, enabled the countries to find a sustainable development path. European governments responded in two ways. First, the access to register ships abroad was improved in many countries. Shipowners would then be able to use foreign, low-cost labor in the international market, while the activity in domestic waters and in onshore offices was more or less unchanged. Governments accepted the reduction in the number of seamen, bartering it against continued employment in the shipping companies’ offices. In the latter part of the 1980s, some countries introduced ‘open registers,’ also referred to as ‘double registry,’ where ships that traded *only* in foreign waters could combine the home country's flag with inexpensive foreign crews. The two most successful such institutions were the Norwegian International Ship Register and the Danish International Ship Register. In both instances, the new regulations provided an alternative to the sale of tonnage that, due to the level of European labor costs, had become uncompetitive.

Though flagging out was a common practice in many seafaring nations from the 1980s onwards, double registry was a more complicated question (Sletmo 1989; Sletmo & Holste 1993). This was something to be decided by governments, so the negotiating power of shipowners in political decision making may explain whether an open registry was introduced or not. In Norway and Denmark, for example, shipowners had an important position and considerable lobbying power (Iversen & Tenold 2014; Sornn-Friese & Iversen 2014), but in many countries, they did not. A case in point is another Nordic country, Finland, where almost 60 per cent of the tonnage was flagged out by 1990, but where there was no consensus on how to deal with the reduced competitiveness (Ojala & Kaukiainen 2012, pp. 129 - 155). Special committees discussed the issue, but the Finnish authorities chose direct subsidies to shipping companies, rather than an open registry. The recession of the early 1990s changed the situation, and, in 1991, a law on a parallel registry of foreign-going tonnage was enacted,

although it was eagerly opposed by seamen's labor unions. By the year 2000, 63 per cent of the Finnish-flag tonnage was on this double registry (Soukola 2003; Wasström 2000). Still, the decline of the Finnish fleet shows that institutional innovation in itself is not enough to ensure competitiveness.

The attempt to overcome the high costs of domestically based labor led to several responses in different European countries. When the introduction of labor-saving technology proved to be fruitless, a combination of flagging out, open registries, and accommodating policies solved the reduced competitiveness following strong wage growth.¹⁵ In some countries, European seamen were sacrificed in order to ensure the survival of shipping companies. In other countries, the attempt to maintain old and inflexible regulations resulted in a competitiveness shock that killed off all or most of the shipping companies.

Low labor costs alone are not enough, however. The 'globalization' of shipping supply also has a financial side. European countries have been successful in introducing regulation that ensured investment in shipping capacity. The basis for this is twofold: tax and finance. First, the shipping industry has gradually developed toward a regime in which tax has limited or no importance in choosing a location. Again, the impetus came from the Flags of Convenience and the shipowners' lobbying for fairness and a 'level playing field.' Today, most European countries, including those within the European Union, operate with a tonnage tax regime. Here, the conditions are almost 'tax free' and limited to a small fee per ton, like in most Flag of Convenience countries (Roe 2009).¹⁶

The movement toward this solution was gradual, but it is evident that the governments' reduced 'claim' on the surplus of the shipping companies is one element that has ensured the resilience of the industry. Still, this is a relatively recent phenomenon, not functioning fully until the new millennium. The tonnage tax solution became politically acceptable because European shipping companies contributed to public coffers through

personal and employment tax contributions related to the office workers of shipping companies. In a worst-case scenario, both the ships and land-based organizations would have disappeared, leading to no taxable activity at all (Knudsen 1997).

The European maritime environment has also benefitted from an impressive ability to raise capital for shipping investments. In European countries, there have been – and are – some extremely efficient ways to raise capital. In Germany, for instance, the existence of limited partnerships (*Kommanditgesellschaft*) has ensured a steady inflow of money from ‘doctors and dentists’ looking for investments that are beneficial from a tax perspective. The major shipping banks are also European, and in their perimeter, a number of ‘project developers’ and ‘project brokers’ ensure that Europe has an efficient system to raise private capital for shipping investments.

<TABLE 2.4 HERE>

Table 2.4 is a relatively recent comparison of the flagging and ownership of the world merchant marine. The left hand-side shows the registration of the world fleet. With the exception of Greece, the countries in the Top 10 are either Flags of Convenience (the Top 3 plus Bahamas, Malta, and Cyprus) or rapidly growing shipping nations in Asia. These are followed by another ‘European’ Flag of Convenience and some nations that have been most important in the post-war period but where the tonnage under their own flag has been reduced.

The right hand-side, on the other hand, is based on actual ownership. The data show that many of the countries that have dominated shipping over the last century continue to do so. Moreover, the only real challenges have come from Asian countries. Still, it is interesting to see that a number of formerly important European shipping nations have fallen by the wayside. The decline of the United Kingdom is spectacular, but countries such as France and Sweden have also gone from having large merchant marines to becoming more or less

invisible in today's shipping sector (Poulsen, Sjögren & Lennerfors 2012, pp. 100-128).

These countries do still have a handful of shipping companies that manage to compete and are still present in the industry, but it would be wrong to claim that they have any kind of vital 'shipping environment.'

Table 2.5 provides an overview of the varied experiences in the leading European shipping nations anno 1970. With the exception of Sweden, all these countries saw their fleets increase in absolute terms. However, only Greece, with its spectacular development, as well as Germany and Denmark, managed to grow faster than the world fleet *per se*. All the other nations saw their share of the world fleet decline by more than half, with Sweden, France, and the United Kingdom as the worst examples.

<TABLE 2.5 HERE>

The preceding analysis has focused primarily on ships and shipping companies, but how does the picture look if we extend it a bit to include other parts of the maritime cluster? There is no doubt that within shipbuilding, the European countries have lost their previous dominant position. European shipbuilding today is confined to pockets of specialized and high-technology construction, whereas the high-volume trades have gone primarily to Asia, where South Korea, China, and Japan construct 90 per cent or more of the world shipping capacity.¹⁷ With regard to the volume transported through various ports, Europe is also lagging far behind, with Asia again being the most dynamic continent.

Within other maritime activities, however, Europe is still *the* dominant arena internationally. Important economic activities such as ship finance, ship insurance, maritime law, and ship classification constitute an auxiliary framework within which shipping services are produced (Starkey & Murphy 2007). European companies still dominate these arenas, and such activities have followed the building and ownership of the vessels to Asia primarily via foreign direct investment of European firms.

Two factors, in particular, have enabled these auxiliary companies to remain competitive, even with high European costs. The first is proximity to and long-standing relationships with their customers: shipping companies and charterers. The second is an important organizational capability: command of specific, knowledge-intensive processes and procedures. Within areas such as contract law (both financial and maritime), naval architecture, marine underwriting, naval engineering, etc., highly skilled European employees are not necessarily uncompetitive compared with their Asian counterparts. In fact, in the emerging maritime clusters in Asia, the high demand for such skills, combined with their limited supply, implies that the costs might be even higher than in ‘sunset’ European countries.

While the ownership of the world fleet has moved east and there has been an even stronger dislocation in shipbuilding, the European heritage has created some resilience with regard to the framework in which shipping business is conducted.

Conclusion

At the beginning of the 20th century, Europe’s strong position in the world economy was mirrored in the maritime power of the continent. Britannia ruled the waves, and the most important contenders were other European nations. Few other countries had the skills or capital to compete with European shipping companies.

The spread of industrialization and a higher standard of living has reduced the European supremacy, in both world shipping and the world economy. As the other chapters in this volume show, the changing competitiveness has led to large changes in the manner and geographical locations of production. The global character of the shipping industry has created extremely strong competitive pressures. European adaptations to this – technological and, particularly, institutional innovations – have partly alleviated these pressures.

The basis for the European decline was partly the shift in the world economy and partly the manner in which the ‘national’ dimension of vessel ownership was challenged as the industry became increasingly borderless. Interestingly, this challenge initially came from European entrepreneurs such as Aristotle Onassis and Erling Dekke Næss, who built large fleets outside European jurisdiction and regulation. Onassis, born in present-day Turkey, controlled an international business empire with important links to Greece, Monaco, Panama, the United States, and Uruguay. Dekke Næss, born in Bergen, was one of the early adopters of Flags of Convenience (or Flags of Necessity, which was his preferred term) and also the architect behind the Norwegian International Shipping Register in the 1980s.

How do you sail a sinking ship? How do you try to compete as your advantages are gradually eroding? Some European companies and countries have managed to introduce technological and institutional innovations that have alleviated the competitiveness problems. Other European companies and countries have ignored the problems. As a result, their fleets have sunk, totally or to such an extent that the industry has more or less disappeared.

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Endnotes

¹ We primarily look at market share when discussing the competitiveness of various regions. However, we will take into account data and definition issues both with regard to the measurement unit (various tonnage measures versus value) and the reporting unit (flag versus ownership).

² In the case of the latter element of demand, in principle, there should be no differences among companies in the *international* segment of the industry. Nevertheless, national policies may play a role, as we shall see.

³ Exceptions to this can be found where subsidies or market protection ensure survival. However, in such instances, one might rightly claim that the protection and subsidies create a competitiveness that transcends the market setting. For a discussion of market shares as a measure of competitiveness, see the detailed discussion in Norway (1983, pp. 31–39). In the short term, capacity utilization – whether ships are trading or not – is also a measure of competitiveness, though one for which valid and reliable data are increasingly hard to find.

⁴ As a rule of thumb, domestically based market segments – local ferry services, for instance – have not been subject to international competition to the same extent.

⁵ This has also facilitated an element of national specialization within shipping segments. Classification societies categorize the world's ships into 13 broad types, primarily based on specifications such as construction and cargo suitability. With a world fleet of more than 100,000 ships (larger than 100 gross register tons), differences in both design and size create heterogeneity. Going back to the beginning of the last century, the main differentiation was between sailing and steam vessels, though with some size differentiation then as well.

⁶ Shares are based on UNCTAD (2015); they are based on decadal data before 1980 and annual data subsequently.

⁷ Interestingly, the businesspersons behind the Marshall Islands registry had previously managed the Liberian flag, but struck a deal with the island state after 'Liberia descended into bloody civil war' (*Tradewinds* [Oslo] 17 March 2016, p. 12).

⁸ The US data include the American reserve fleet, which, at the start of the period, comprised more than 2,500 ships and meant that the US share appeared to be three times higher than the share of the active fleet. However, the role of this declined across time as ships were sold, deactivated, or scrapped.

By March 2016, around 100 vessels remained. United States Maritime Administration n.d., *National defence reserve fleet*. Available from: <<http://www.marad.dot.gov/ships-and-shipping/strategic-sealift/office-of-ship-operations/national-defense-reserve-fleet-ndrf/>>. [25 April 2016].

⁹ Due to aggregation of the data, the 1910 figure includes ships registered in the British dominions of Australia and Canada. The main shipping nations outside Western Europe were the United States (ten per cent of the world fleet), Japan (3.1 per cent), and Russia (0.8 per cent).

¹⁰ Ojala and Tenold (2017) discuss the empirical basis for and dynamics of these two processes.

¹¹ The picture is the same for crude oil imports. In the European case, the seaborne imports fell from 608 to 480 million tons from 1970 to 2000, while the Asian countries listed above saw seaborne crude oil imports increase from 230 to 501 million tons over the same period.

¹² Surprisingly, a recent cross-country analysis of competitiveness of the shipping industry by Lee et al. (2014) does not even mention Singapore, which, by many accounts, has been the most successful Asian (and indeed world) maritime cluster over the last decades. An interesting take on the various types of clusters can be found in Zhang and Lam (2013).

¹³ In fact, in some cases, European agents – brokers, banks, and subsidiaries of European shipping companies – play a leading role in the new maritime clusters in Asia.

¹⁴ On the British system, see for instance, Palmer (1990); on the Jones Act, see for instance, Whitehurst (1985); a recent analysis on the navigation acts from the Nordic perspective is conducted by Ojala and Rähä (2017).

¹⁵ It is important to point out that the high costs of domestic labor were not based purely on wages; rota systems with shorter working hours and improved social benefits (including paid journeys home) also added significantly to the costs compared with those from hiring seamen from developing countries.

¹⁶ For an introduction to the system before this, see Mayr and McGrath (2006).

¹⁷ This depends on the manner in which the shipbuilding output is measured. In dead weight tonnage, the share is more than 90 per cent, but if the sophistication of the tonnage is taken into account, for instance, by looking at the value of shipbuilding contracts, Europe becomes more visible.