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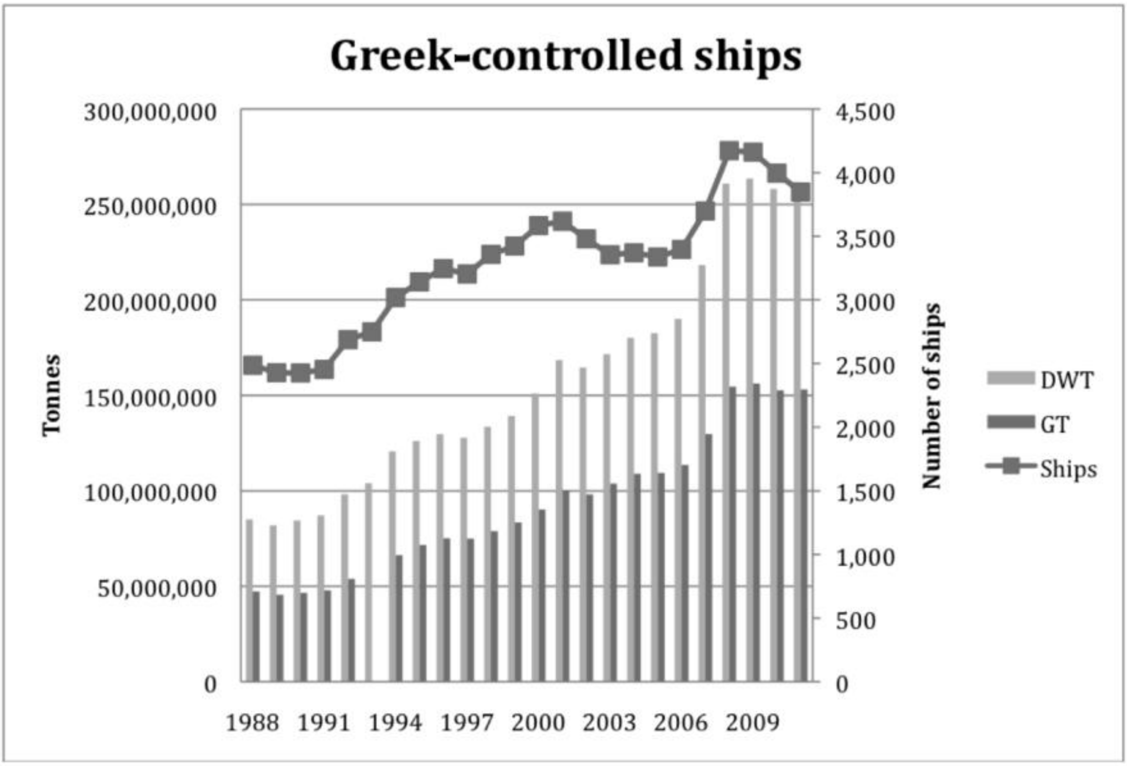
Introduction

In the immediate aftermath of the Greek sovereign debt crisis that began in 2008, the Greek shipping industry emerged as one of the few bright spots in an otherwise troubled economy. With most of its revenue stream coming from abroad, Greek shipping was relatively sheltered from the vagaries that befell other domestic Greek industries in the face of national insolvency. However, as the global financial crisis dragged on, Greek shipping companies encountered rough seas as increasingly strict capital requirements forced banks to reduce their lending exposure to shipping portfolios. How and to what degree Greek shipping has managed to weather this financial storm concerns many observers. Focusing on commercial shipping, this article evaluates efforts by the Greek ship owners to remain competitive in the face of the current financial crisis as well as the changing nature of the global shipping industry as a whole. This article begins by exploring the importance of the Greek shipping industry in the context of Greece's national economy and world shipping. Second, this article examines the reasons for modernization of the Greek fleet and the role of ship finance in this process. The concluding section highlights the future outlook of the industry, identifying measures that stakeholders should take to ensure continued competitiveness of Greek shipping.

Why Greek Shipping Matters

Greece is a maritime nation with a long tradition in ship owning. In early 2010, Greece controlled the highest percentage of the world's tonnage (the measure of the size or cargo carrying capacity of the ship) at 16.2 percent or 202 million deadweight tonnage (dwt). In comparison, Japan, Germany, and China control 15.8, 9.2, and 8.6 percent respectively (UNCTAD 2011, p. 43). It is important to specify that the ships a company owns are considered

Figure 1

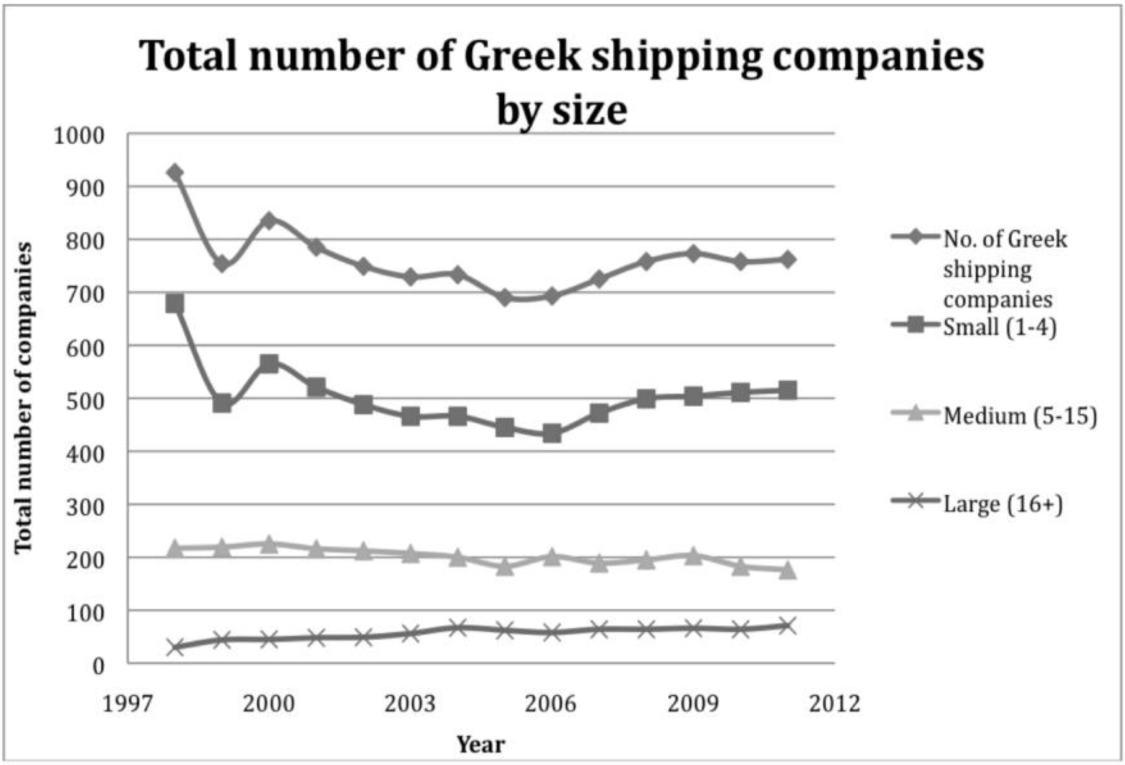


Greek-controlled if the company is owned by Greek interests, irrespective of the location of the company's headquarters and independent of the flag under which the company's ships are registered. This definition of ownership is especially crucial considering that 68.3 percent of the world tonnage is foreign-flagged (UNCTAD 2011, p. 45). So-called "flags of convenience" may allow companies to escape stricter regulations and higher taxes of their home registries, one such tactic being the employment of foreign seafarers willing to work at lower wages. In terms of nationally-flagged and beneficially-owned[1] tonnage, the Greeks own the world's largest fleet at 65 million dwt, followed by the Chinese-owned (and flagged) fleet with 46 million dwt. However, in terms of number of vessels, Greece, with a total of 3213 ships, lags behind Germany, Japan, and China, which indicates that Greek ships carry greater tonnage on average (UNCTAD 2011, p. 43). The difference is in large part due to a Greek preference for bulk carriers and tankers, which tend to be bigger than general cargo ships.

Greek shipping companies can be either the principal owners or management companies that operate the ships, whereby, in the latter case, the effective owners are also those who enjoy owner benefits independent of whose name is on the title. For the most part, shipping companies are established in countries that provide corporate and tax freedom, with both the principal and the management company invariably related to the same person or family (Theotokas, p. 72). Greek-owned ships are managed by companies of various sizes, with standard classifications of small (1–4 ships), medium (5–15 ships), and large (16+ ships). The majority of Greek shipping companies are pure transporting companies concerned exclusively with shipping. When ship owners invest in non-shipping enterprises, the shipping companies generally devote the vast percentage of their time to "preserving their characters as shipping

[1]Beneficial owners enjoy the benefits of ownership when another name is on the title, sometimes held through a shell corporation. Such a beneficial ownership retains legal and financial responsibility for the ship and its activities.

Figure 2



entrepreneurs who only seek supplementary profits from other industries" (Theotokas, p. 72).

The shipping industry is Greece's largest export[2], an interesting fact given that the country's total contribution to world trade is minimal relative to other countries with large shipowning interests such as Japan, China, and Germany. George Gratsos, president of the Piraeus-based Hellenic Chamber of Shipping, notes that shipping accounts for 6 percent of the Greek GDP while generating 75 percent of the estimated 400,000 related jobs, which translates to about 6 percent of total employment ("Maritime Ties Help China, Greece . . ."). The broad Greek shipping cluster includes owners and operators of mostly bulk carriers and oil tankers; providers of maritime services such as ship brokers and agents, specialized legal services, specialized finance, underwriters and maritime insurance firms, port security operators; maritime equipment suppliers; and maritime education (Icaza et al., p. 16). The other 25 percent of maritime industries include fisheries, coastal shipping, port authorities, navy/coast guard, and ship building/repair.

Ship owners and the merchant fleet help the Greek economy in a number of ways. In addition to the aforementioned employment in the shipping industry and its domino effect in related fields, the shipping industry is a big contributor to the flow of foreign currency into Greece, compensating for up to 31 percent of Greece's trade deficit in 2004 ("Greek Shipping is Modernized"). Shipping income converts into domestic consumption through the wages and salaries of onboard (seamen and officers) and ashore (cluster employment) personnel that are spent locally in Greece. Seafarers aboard the merchant ships contribute their income to domestic consumption through remittances for their dependents in Greece. Although the shipping companies based in Greece are not taxed on profits and capital

[2]Since both imports and exports are made up of goods and services, it would be clearer to say that the shipping industry is Greece's largest export of services but that downplays the fact that it contributes the most value in the export column of Greece's balance of trade.

gains, direct and indirect tax receipts based on tonnage tax amounted to 5 percent of the Greek government's net budget proceeds in 2004 at €2.3 billion (Corres, p. 243).

The Greek shipping industry tax regime is one of the most favorable in the world. In essence, the Greek Constitution guarantees the right of capital mobility for shipping companies in order to reduce the level of uncertainty associated with shipping investments and encourage Greek ship owners to repatriate their capital into the domestic Greek economy. A main provision in the current tax regime is the enforcement of a tonnage tax (tax based on carrying capacity of ships) in lieu of a tax on profits for ships on the Greek shipping registry. By specifying ships in the Greek shipping registry, this tax regime also applies to foreign shipping businesses that are based in Greece, thus encouraging the development of the Greek shipping cluster in Piraeus and other major Greek ports. The taxable tonnage of the vessel depends on its tonnage size group, and the applicable tax rate corresponds with the age of the vessel ("Choosing a Profitable Course . . ."). All in all, the Greek government employs a hands-off regulatory approach for the commercial shipping sector, though coastal shipping remains highly regulated through the cabotage laws, which restrict the transport of goods and passengers between two points in Greece by a vessel registered in another country.[3]

Greek Fleet Modernization

Traditional Model of Operating Secondhand Ships

In the post-war era, Greek ship owners have profited from purchasing and operating secondhand vessels, with the most famous example being the acquisitions of U.S. Liberty ships following World War II by Greek entrepreneurs such as Onassis, Colandris, and Naiarchos (Elphick, p. 401). Entry into the shipping industry has been eased by the availability of secondhand cargo ships in the market and the willingness of Greek entrepreneurs to take risks. This historical model of business continued for decades alongside a culture of family-owned ventures that kept Greek shipping companies small and the industry diverse. About two-thirds of the current Greek shipping entities own only one to four ships each. Due to the dominant business model of operating secondhand ships, the Greek maritime fleet's average age has hovered above that of the world fleet, but instead of considering the high age of its tonnage as a weakness, Greek shipping companies actually face lower fixed cost obligations. This cost advantage is realized through lower payments for recent purchases or no capital obligations for the owners of old, fixed-cost free vessels (Thanopoulou, p. 36).

Reasons for Fleet Modernization

Greek owners have traditionally done well operating older ships, but following the turn of the millennium, they sought to modernize their fleet. One main reason for fleet modernization is the advent of "quality shipping" following the *Exxon Valdez* incident in 1989, along with the subsequent passage of environmental regulations outlining ship specifications. Passage of the 1990 U.S. Oil Pollution Act was followed by similar measures in the international arena with the swift 1992 adoption of amendments 13G and 13F to MARPOL[4] (Thanopoulou, p. 39). New ship construction specifications and a timetable for ship retirement were set in addition to the requirement of compulsory certification for management procedures onboard vessels and ashore (Thanopoulou, p. 39). Though the wave of new regulations affected shipping companies worldwide, Greek-controlled shipping was hit especially hard because of its preference for old tonnage.

Throughout the past two decades, Greek ship owners have made substantial efforts to modernize their fleets either through new buildings or secondhand acquisitions of newer ships. In regards to secondhand acquisitions, Greek ship owners used their experience in timing transactions to modernize their fleets by acquiring ships when the prices were depressed

[3]Since our focus is commercial shipping which deals mainly in the international arena, the cabotage law and the intricacies of coastal shipping in Greece will not be covered within this paper.

[4]MARPOL, an acronym for "marine pollution," regulated through the International Convention for the Prevention of Pollution from Ships, covers shipping pollution from both operational and accidental causes.

in the late 1990s, and by restraining their participation when markets started their ascent in 2003 (Thanopoulou, p. 44). The astute participation in the secondhand market by the Greek ship owners is reflected in a snapshot of the market in the early months of 2006 when the average age of Greek secondhand purchases was calculated to be 9 years while the average age of all ships sold was 15 years (Thanopoulou, p. 44). The cumulative effect of this strategy is apparent in the latest data provided by Murphy in 2011: the Greek-controlled fleet average ship age is currently 1.8 years below that of the world fleet, standing at 11 years, down from 20.3 years in 2000.

Another factor that encouraged Greek fleet modernization was the favorable financial conditions during the first decade of the twenty-first century. Banks, awash with liquidity and looking for higher returns, saw the shipping companies as attractive additions to their loan portfolios. At the same time, increased demand for shipping services worldwide led to higher shipping rates, which not only gave Greek shipping companies an influx of cash flow but also encouraged further expansion of their fleet capacities. Increasingly high secondhand prices coupled with a low interest rate environment led to new building orders, which also outpaced the rate of scrapping for old ships, thereby further speeding up the Greek fleet modernization.

Role of Ship Finance in Greek Shipping Operation

Overview of Ship Finance

Shipping is a capital-intensive industry wherein external financing is essential to the purchase of vessels. External finance is not limited to delivery of new buildings, for many leases and purchases in the secondhand ship market also require finance. In other words, any shortage of ship finance affects the markets in both new and used tonnage. Typically, shipbuilders sell their new buildings directly, while ship brokers handle sales of secondhand vessels (Frankel, p. 133). Owing to the volatile nature of the shipping business, especially the spot market for freight rates,[5] investment decisions in the shipping industry are burdened with a significant element of uncertainty. Greek shipping companies raise funds for the purchase of ships through a variety of ways, including a combination of bank lending, private placements,[6] public issues of equity and bonds,[7] commercial paper, and securitizations[8] (Syriopoulos, p. 173).

In the past few years, both domestic Greek banks and international banks have favored the financing of newer tonnage, which encouraged the modernization of the Greek fleet. According to Petrofin Bank Research, loans from around the globe made available to Greek shipping companies rose by an annual average of 23.7 percent between 2001 and 2008 to a total of $73.23 billion. There are three main types of financing supplied by the banks: the standard ship mortgage loan, fixed interest credit for new buildings advanced on the behalf of the shipbuilder by a bank with the backing of a state guarantee (mainly done by Chinese shipbuilders through Chinese banks), and lease or bare boat/hire-purchase agreements (Syriopoulos, p. 174).

Effects from the Greek Sovereign Debt Crisis

Before the financial crisis, Greek shipping companies used to be seen as attractive investments for banks in a way analogous to home mortgage lending. Ship purchases involve intensive capital tie-ups because of the large initial cost, but as with home financing, ships serve as stable underlying assets that could provide banks with a steady stream of income from the ship owners' loan repayments. However, the banking and economic crises that began in 2008 have led to restrictions on new lending. The resulting global fund shortage hit the Greek shipping industry particularly hard because of its growing reliance on external ship finance (Petropoulos, June 1, 2011).

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[5]A freight rate is the cost of delivery for a specific cargo.

[6]A private placement refers to securities sold without public offering to select investors.

[7]This is simply the opposite of a private placement whereby equities and securities may be offered to the public. The distinction between a private placement and a public offering is important mainly to securities regulation and the liquidity of their secondary markets.

[8]Securitization refers to the use of a stream of income and/or portfolio assets to back the issue of securities.

The Greek economic crisis has impeded Greek ship owners from securing finance through domestic banks for both new buildings and secondhand acquisitions, which accounts for 23.98 percent of the total exposure of the global banking sector to Greek shipping (Petropoulos, June 1, 2011). The decrease in bank lending was a symptom of the deleveraging process undergone by banks, which was driven by the lack of funding following the collapse of the interbank lending market. At the same time, freight rates fell because of an excess in tonnage due to over-ordering in the heyday of the period ending around 2008. By comparison, the Baltic Dry Index[9] currently hovers around 2,000 points, which is 85 percent lower than the record high of 11,793 points on May 20, 2008.

The financial crisis notwithstanding, investment decisions in the shipping industry must account for high degrees of uncertainty. For one, the derived nature of demand makes the shipping industry directly susceptible to movements in the global business cycle; in other words, the shipping industry declines during a recession because of the contraction in trade but is in high demand during periods of economic and trade growth. In the first instance, with intensive capital resources tied up in leases and purchases of vessels, a fall in the demand for shipping services impedes a company's ability to make loan or lease payments, thereby increasing the company's liabilities. Ultimately, the company becomes insolvent if the value of assets does not cover liabilities plus equities. Because ships depreciate rapidly, companies that must use them as a primary form of collateral are highly susceptible to the vagaries of the market and changes in revenue streams. Moreover, the current oversupply of tonnage is also forcing down the prices of secondhand vessels, making it particularly difficult for ship owners to be as flexible with their financial planning as they were when the financial market was working in their favor pre-crisis.

Throughout the recent financial conditions, only the largest public and private ship owners have managed to secure ship finance because they provide more security than the smaller shipping companies can muster. For the most part, larger shipping companies have more resources, higher levels of transparency, and greater management depth than do smaller firms, which make them more attractive to banks. Moreover, medium-sized and large Greek shipping companies are mostly in good financial shape and are not overly in debt to the banks, owing to the restraint they exercised during the boom years ("What's in Store for 2012"). Smaller ship owners, on the other hand, face loan margins[10] that are double what they were before the crisis, in addition to stricter financing terms (Petropoulos, June 1, 2011). For example, New York-listed Omega Navigation had to file for bankruptcy in mid-2011 because the Greek ship owner had trouble negotiating a resolution with banks to repair its balance sheet, which had a market capitalization of about $3 million but close to $300 million in debt ("Omega Filing Stokes Row about Banks"). Such problems are not limited only to Greeks since non-Greek shipping giants also face cash flow issues in the tightening market.

Effects from the Global Financial Crisis

As noted previously, the shipping industry is very dependent on the conditions of the global market, with one result being that the larger European debt crisis is having a tremendous multiplier effect on ship finance. Due to sovereign risk factors, banks are required by the Basel III Accord to increase their capital adequacy ratio[11] on top of their daily battle to maintain liquidity, which has been hampered by a virtual halt in interbank lending in Europe. Because of this development, European banks are more likely to utilize their loan portfolio runoffs to shore up their liquidity instead of providing more loans ("The Retreat From Everywhere . . ."). An estimate by Petrofin Research indicates that European banks provide about 82 percent of global

[9]The Baltic Dry Index tracks international shipping rates for various dry bulk cargoes by measuring average rates in the short-term spot market for chartering ships to carry iron ore, coal, and other bulk commodities.

[10]A loan margin is the fixed portion of your loan rate that, when added to the index (base-line) rate, equals your full interest rate.

[11]The capital adequacy ratio measures a bank's risk-weighted credit exposures.

shipping loans, which means that ship owners around the world, including Greek ship owners, currently face slower lending from banks (Petropoulos, December 15, 2011).

Perspectives on Long-Term Competitiveness

Prospects for Large Ship Owners

Under these difficult circumstances, Greek ship owners have turned to non-European banks to keep financial commitments and remain competitive as they modernize their fleets. One current major ally of the Greek shipping industry is the Chinese banking sector; banks such as China Development Bank (CDB), Bank of China, Export Import Bank of China (EXIM), and China Construction Bank (CCB) continue to finance the construction of ships with Greek interests at Chinese shipyards. Because European banks have been reluctant to lend, the presence of Chinese lenders in the field of ship financing is not surprising, especially since orders of new buildings at Chinese shipyards stood at 2,876 vessels in September 2011, which accounts for 44 percent of ship construction around the world (Bardounias). Since 2000, Greek ship owners have ordered nearly 500 vessels from Chinese shipyards. The latest Lloyd's-Fairplay figures indicate that, as of March 2011, Greek-controlled shipping companies have 621 vessels on order from shipyards around the world.

The main tool used to finance the Greek shipping industry by Chinese banks is a $10 billion fund set up by the Chinese government in Beijing to back Greek orders at Chinese shipyards with competitive terms and interest rates (Bardounias). Some large Greek ship owners are taking advantage of this loan facility. In February 2012, DryShips obtained a $122.58 million loan from a syndicate of Chinese banks to finance the purchase of a trio of 206,000-dwt bulkers under construction at Shanghai Jiangnan-Changxing for delivery in 2013 and 2014 ("DryShips Wraps Up First All-Chinese . . ."). Lomar Corporation, which already has a fleet of 35 ships, announced in March 2012 an order of six containerships from Guangzhou Wenchong Shipyard in China due for delivery in early 2014 ("Lomar Back In . . ."). It appears that at least a few of the larger Greek firms have been successful in funding the purchase of new tonnage to remain competitive.

Small and Medium-Sized Ship Owners

Small ship owners face a different set of challenges. Owners of one to four ships are less likely than large firms to buy new vessels. Instead, most of their ships are secondhand and generally require less capital expenditure than new buildings. However, that does not mean that the small ship owners are forgoing ship finance altogether; the purchase of even a secondhand ship is still a serious capital undertaking that generally requires external financing. The role of banks as financial intermediaries is as crucial as it is with the larger shipping companies, but banks favor larger, and presumably safer, clients in a tight financial market. Furthermore, since secondhand vessels do not come directly from Asian shipyards, small ship owners lack access to Asian lenders, who are more willing than European banks to extend loans to smaller shipping firms.

Economically, it would make sense for small shipping companies to merge, thereby combining resources and expertise. Such economies of scale would help reduce costs, attain higher efficiency, and gain market share. Presumably, consolidation would provide newly enlarged shipping companies with ready access to chartering, contracting, and hedging opportunities (Thanopoulou, p. 49). Unfortunately, despite the obvious potential advantages of consolidation, without access to ship finance, even medium-sized owners with mid-aged units could not update their fleets, which would force them to rely on older vessels. Also, consolidations involving companies that wish to buy out smaller, less-efficient firms would require cash and/or equity and therefore some degree of capital financing. Banks unable to provide financing for what would normally be considered safe new-ship construction investments are unlikely to finance riskier mergers and acquisitions ventures. Thus, it is possible that small owners unable to adapt to the tight financial climate may be forced out of business entirely (Zolotas).

The facts speak for themselves: over the past 50 years, small firms have accounted for at least 60 percent of all Greek shipping companies through the industry's peaks and valleys, thus indicating that the Greek fleet has been consistently comprised of a large number of companies. Worries of consolidation during bust periods have always been alleviated when the shipping industry returns to boom periods. The continued diversity of the Greek shipping industry has been attributed to the entrepreneurial philosophy of ship owners and their adherence to the family business structure, accompanied by expert usage of networks to decrease transaction costs and increase competitiveness. In fact, Greek shipping companies are known to participate in multiple networks, some loose and some tight, across all company sizes, related through both horizontal and vertical linkages (Theotokas, p. 81). Networking allows the Greek shipping community to realize several advantages such as external economies, information sharing, cost reduction, and diffusion of tacit knowledge (Theotokas, pp. 83–84).

Taxing the Shipping Industry

Taxation in the Greek shipping industry affects both the competitiveness of Greek shipping and the economic solvency of Greece itself. Analysts have suggested that one possible response to the Greek debt crisis would be to increase taxes on the shipping industry to increase revenue. This article has already outlined how shipping companies in Greece benefit from a constitutionally protected status that exempts operating income and capital gains from taxation, so the question being asked now is whether or not Greece deserves a greater payback from the shipping industry in light of Greece's unprecedented financial crisis ("Has the Time Come to Tax Ship Owners?"). Even though shipping is already Greece's second-largest earner of foreign income after tourism, a case can be made that, given the significant share of the global shipping sector held by Greek companies, their contribution to the Greek economy should be higher than it is at present. In particular, receipts to the economy per gross tonnage amounted to only $150, which is just one-third of the corresponding average for the largest maritime countries ("Greek Shipping is Modernized"). One reason for this ostensible disjuncture is that, unlike other larger maritime nations, the volume of seaborne trade moving through Greek ports is miniscule because Greece is not a major exporting/importing country.

From the Greek ship owners' point of view, the current tax regime for the Greek shipping registry is a competitive advantage, as the guaranteed right of capital mobility for shipping companies reduces the level of uncertainty associated with shipping investments. In fact, it is the constitutionally-protected tax exemption that encouraged repatriation of capital as well as relocation of the Greek shipping companies' headquarters from places like New York and London to Piraeus, a port city just outside of Athens. An attempt to tax the income of Greek ship owners directly would most likely drive them offshore. With ships as their main assets and the assumed ease of establishing subsidiary offices in other countries, it would not take long for shipping companies to move their operations away from Greece, especially for the larger firms that control more than half the deadweight tonnage in the Greek fleet. Indeed, when the United Kingdom introduced in 2008 an annual £30,000 charge on long-term residents who claimed non-domicile status, up to 30 percent of the non-domiciled Greek shipping operations subsequently left the country ("Baltic Boss Blasts 'Non-dom' Moves").

Interim Prime Minister Lucas Papademos has reiterated the stance of previous administrations in ruling out changes to the current tax status for Greek shipping companies, even with the threat of a looming default on sovereign debt. This action is consistent with the goal of the Greek state to keep healthy and cooperative relations with ship owners so as to support the competitiveness of shipping. In addition to the favorable tonnage tax regime, the Greek government employs a hands-off regulatory approach which has allowed Greek ship owners to be flexible in adapting to the needs and requirements of the constantly changing global environment. Thus, Greek ship owners, generally unencumbered by nationalistic and protectionist policies, are better able to handle the shipping industry's unpredictable cycles than they might otherwise were they forced to operate within a more extensive regulatory framework (Theotokas and Harlaftis, p. 100).

Conclusion

The shipping industry worldwide was hit hard during the recent recession by a combination of slowdowns in trade, associated reductions in freight rates, and the subsequent lack of liquidity available from European banks, resulting in more stringent lending policies that impeded fleet modernization and consolidation efforts. Despite these difficult conditions, the Greek shipping industry has been able to respond, first by working with the government to avoid alteration of the beneficial tax structure, and second by judicious international borrowing, most notably from the Chinese banking/ship building consortia, to finance fleet modernization and diversification. In placing new orders, many large ship owners have moved into acquisitions of containerships, liquefied natural gas (LNG) carriers, dynamically positioned drill ships, and shuttle tankers (Murphy). The move into the container sector is notable, given Greek ship owners' historic specialization in dry bulk tonnage. The diversification into the offshore oil-drilling sector, however, is indicative of the Greeks' opportunistic traits since oil prices have consistently remained high.

Greek ship owners have been bold and responsive in the effort to remain competitive as the global shipping industry slowly recovers from the recession. In the past, Greek shippers have managed to emerge from recessions even more strongly positioned than they had been before the downturns, so it is not implausible, given the fleet modernization and diversification efforts described above, that they will be equally successful this time around. While the global financial crisis has diminished the liquidity available for ship finance, Greek ship owners have been able to maintain their leadership in total tonnage among the world's fleets through their timeless "buy low, sell high" strategy. The shipping industry plays a significant role in the Greek economy, and it will be important to avoid impulsive changes in taxation policy because the potential economic downside for shipping is too great a risk for the modest tax returns that might be gained. It is especially crucial for the shipping industry in Greece to maintain its competitiveness as it navigates through this financial storm, both for its own financial well-being and for its contribution to the overall economic stability of Greece.

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