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THE MEDITERRANEAN MERCHANT FLEET ANALYSIS – CURRENT SITUATION AND PROSPECTS

SUMMARY

Though International Ocean trade shipping is plagued with low freights and a continuous inflow of new buildings, this is not the case with smaller (geographically speaking) markets where the merchant fleet is caring for the special needs of the market. Under these conditions the merchant fleet trading in the Mediterranean sea suffers from aged ships that will soon be unable to trade in the European shores under the impending regulations for the safety of shipping. The author analyzed the characteristics of the Mediterranean merchant fleet in order to assess its future and prospects.

The methodology of the analysis is based on statistic and data-mining techniques in combination with the author's in depth knowledge of the shipping industry so as not to make long from the original data. Based on the findings from this analysis, the author will try to point out the rising need to renew the Mediterranean merchant fleet¹. Also the current building trends are analyzed presenting an assessment of the new building sizes on the main types of merchant ships for the market at hand. Finally this paper will attempt to show that if proper motives are given to European shipyards or ship owners the majority of the shipbuilding activity will reside in European shipyards and the European proposal of Short Sea Shipping can become a fact in turn resulting in a steady flow of building activity for the years to come and a far cheaper trading path for goods.

1. THE MARKET AND THE MEDITERRANEAN MERCHANT FLEET

1.1. *The Mediterranean sea*

The Mediterranean sea has always been one of the most traveled seas and one of the most important trade routes of the international commerce. Apart from that, the

¹ The oldest merchant ship trading in the Mediterranean is the motorship "Captain Manolis" built in 1917.

Mediterranean is also a place of internal trade to and from the countries enclosing the Mediterranean sea and a place of feeder traffic to and from international routes. Internal trade is conducted by a group of smaller vessels between 10 and 6.000 dead weight tones capacity. These ships constitute the Mediterranean fleet [1].

Without covering the whole demand factor for the Mediterranean market it is necessary to summarize the basic players and their cargoes. Both coastal shipping and international Ro-Ro trading will be left out since their cargoes and politics are far too diverse to analyze without slipping away from the goal of this paper.

Table 1 Mediterranean Cargoes and Players

Cargoes	Players
Gas - Oil - Naptha - Crude Oil - Airplane fuel - Lubricant	Oil Companies
Cement (bulk or bagged)	Cement Industry
Cars	Car importers
Containers	Shipping Lines - Importers - Exporters
Agricultural Product	Importers, Exporters, Agricultural Associations
Frozen Products	Frozen Product Importers (meat, fish, fruit)
Break Bulk (excepting iron products)	Various players
Chemical Product	Chemical Product Importers, Oil Companies, Paint Companies, Plastic
Clare	Steel Industries, Aluminium Industries, Alumina Exporters, etc
Fertilizers	Fertilizer Manufacturing Industry
Iron Products	Iron Industries, Steel Industry, Exporters, Packaging
Liquid gas	Liquid Gas Companies

Source: Greek Mediterranean Shipowners Union

At this point the authors choose to avoid to further analyze the demand of the Mediterranean sea for the obvious reason that it is a vast market with diverse and numerous trade goods and a multitude of players.

1.2. *The Mediterranean fleet*

Main characteristic of the ships constituting the Mediterranean fleet is that it trades in an almost enclosed sea thus having special needs in size and greater age tolerance². Since the great majority of the Mediterranean fleet is constituted of ships belonging to European interests, without that meaning that there is an analogy in European flag presence, these ships will be regarded as reflecting the whole Mediterranean fleet [2].

Our sample as examined in this paper is constituted of a total of 1664 ships and various seafaring vessels auxiliary to shipping of European interests.

In detail:

- The dominant (in numbers) ship size in the Mediterranean region in dead weight terms is the one between ten and a hundred (10-100) dead weight tones in total of 691 ships (41% of 1664 ships).
- The dominant ship types in the 94% of our sample (Mediterranean ships of European interest) refers to tankers (266 ships) followed by general cargo carriers (265 ships), ferry boats (231 ships), tugs (176 ships), passenger carriers (108 ships), hydrofoils (85 ships), reefers (78 ships) and bulk carriers (56 ships) while the rest are presented as cement carriers and vessels auxiliary to shipping.
- The dominant flags, as bore by the Mediterranean fleet of European interests are, for ships between 10 and 6.000 dead weight tones, the Greek flag (1070 ships), the Panamanian flag (161 ships), the flag of Saint Vincent (97 ships) and others such as the flags of Malta, Cyprus, Honduras, Bahamas islands, Italy, Liberia etc [3].
- Of great interest is the age allocation of Mediterranean ships. From a total of 1.664 ships, 38% is over 32 years of age, 50% lies between 12 and 31 years of age, while only 12% are up to 12 years of age. This fact alone presents the need for the renewal of the fleet in the near future.
- In regard to the type of vessels that present the higher age, these are motor ships, fishing vessels, general cargo carriers, passenger carriers and tugs with a percentage of over 40% of them having surpassed the 32nd year of their life.
- According to the sample the author examined and under the hypothesis that all ships till ten years old will be considered newly-built, the authors have tried to make an estimate on the size trend for the major types (in numbers) of ships built till 1992. So the sizes of the ships as found in our sample tend to shape (on average) around 1.521 dwt for small tankers and around 5500 dwt for larger ones,

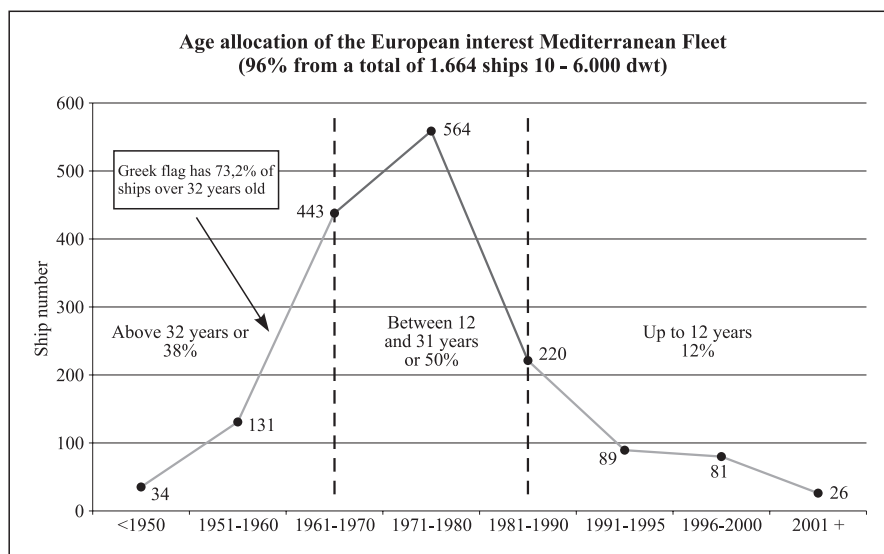
² The Mediterranean has by far milder weather conditions compared to the open seas of the oceans. This results in less stress laid upon ships travelling in these enclosed waters and in turn greater working life for these ships.

around 3500 dwt for supply ships, two basic trends for Ro-Ro ships for smaller ships around 420 dwt and for bigger ships around 4500 dwt, around 4440 dwt for reefers, around 5392 dwt for large passenger ships and around 200 dwt for smaller ones, around 200 dwt for catamarans, and last but not least around 44837 gt for bulk carriers.

2. THE AGING FLEET AND ITS PROSPECTS

On the previous analysis on the age of the Mediterranean fleet under European interests it was pointed out that almost half of it (38%) has surpassed the 32nd year. This and the fact that European governments are under pressure to take action against unsafe shipping (or substandard shipping) makes it clear that even ships that are virtually seaworthy and able to continue trading will be unable to reach European ports [4]. Of course the smallest of the vessels will not be touched by these regulations however some of the medium sized and larger ships will be affected [5].

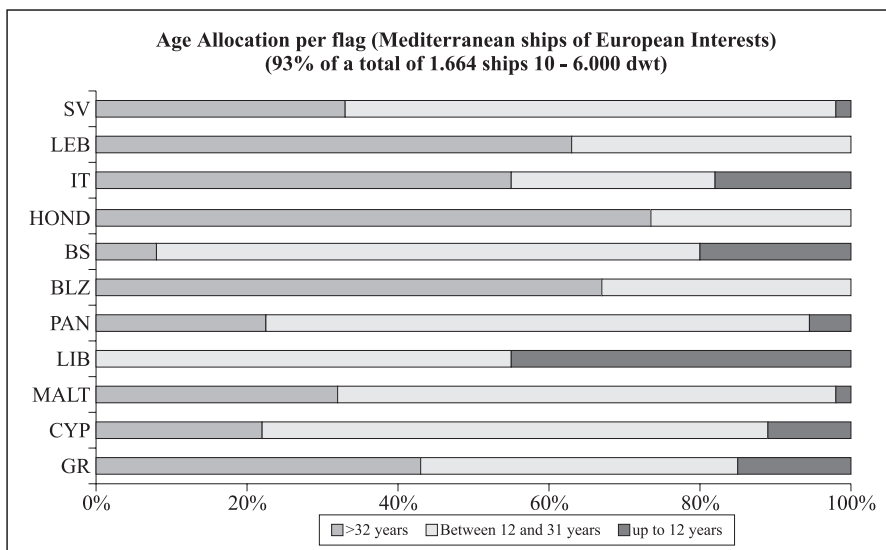
Taking also into account the European proposal for Short Sea Shipping (SSS) the aged fleet will be unable to comply effectively due to its inability to trade competitively with ships of more than 32 years of age however good their management and maintenance might be.



Source: compiled data by Author

Furthermore, the fact that the majority of the ships trading belong to small companies makes it difficult if not impossible for them to build new ships thus further deterring a solution stemming from the market³ itself [6]. On the other hand, if substantial means of financing the building of new ships can be found, the capacity of the European shipbuilders is able to cope with the demand and in the same time make a comeback from the rough competition of the Asian yards.

The above graphs show the extent of the aging of the fleet per flag and as a total.



Source: compiled data by Author

3. TYPICAL SIZES AND AGE OF BUILT OF THE MEDITERRANEAN FLEET

The analysis on the sizes of the ships is made based on the 64% of the sample. The author will accept this as a sample depicting the reality of the Mediterranean fleet because of the remaining 36%, 22% are ships that would not have been included in

³ The author is referring to the fact that the majority of the Greek companies trading in the Mediterranean own 1-3 ships on average. This is pointed out because the Greek flag makes out for 1070 ships of the 1664 and the association of Greek ownership with the flags of Cyprus, Panama, Honduras, and Liberia is a well known fact.

our analysis (this 22% is consisted of water tankers, small sized fishing boats, barges and small sized ferry boats that trade in the Greek archipelagos between the island and the continental country. A further 9% is consisted of tug boats under 12 dwt If this 22%+9%=31% is added to the working 64% our total working sample is 95%).

Their sizes for the purpose of this analysis have been categorized in: 0-100, 101-500, 501-2000, 2001-4000, 4001-6000 dead weight tones.

Table 1. Average Built year allocated per Dead Weight Size category

Type	1-100	101-500	501-2000	2001-4000	4001-6000
Catamaran	1994	1999	1994		
Ferry boat	1980	1973	1971	1974	1981
Fishing boats	1967	1965			
passenger	1981	1970	1967	1970	1984
tug boats	1974	1974	1976		
Ro-Ro		1986	1973	1977	1979
tanker		1964	1967	1972	1974
bulk carrier			1994	1979	1988
general cargo			1965	1975	1979
reefers			1967	1978	1985
chemical carriers				1977	1974
motorships			1956		

Source : compiled data by Author – Data base : Skolarikos S.A, Piraeus – Greece (2002)

As data shows the newest additions to the Mediterranean fleet are the Catamarans built in the last 10 years and mid-sized bulk carriers (501-200) with an average age of 6 years old. Both types at the spotted size are suited to cover the need of island communities in the Mediterranean Sea and specifically in the East Mediterranean [7]. The oldest additions as of average age are motorships built during the 50s. However old the ships might be, their size seems to be ideal for the cargoes they carry (general and bulk cargoes) as they are between 501-2000 dwt the same size the new bulk carriers tend to be and the size 1/3 (103 of 365 ships) of the general cargo ships belong to. Cross-analyzing the data of table 1 with the ships built the last ten years, it is evident that Reefers found to be tending around 4440 dwt follow the trend depicted in table 1 of the younger Reefers between 4001 and 6000 dwt [8].

The Ro-Ro assessment of two trends around 420 dwt (2 newly built) and 4500

dwt (1 newly built) also seems to correspond with table 1 as the most recent builds belong to the 101-500 category and the 2nd most recent builds belong to 4001-6000 category. The same applies for passenger ships were the two trends also correspond to table 1 trends for younger built (7 newly built belonging to 4001-6000 category and 3 newly built belonging to 101-500 category). On the other hand our assumption on tankers around 1521 dwt for smaller ones (3 newly built) is not verified while the assumption for larger vessels around 5500 dwt (3 newly built) corresponds with the data from table 1.

Thus we are inclined to reject, on the basis of unavailable data (small number of new buildings⁴) and the possibility that the building of those ships were for either a specialized use or a certain smaller market in the Mediterranean, the assumption for a trend of around 1521 dwt of smaller tankers [9].

Taking into consideration the above table 2 is formed with the building size trends of the aforementioned types of vessels.

Table 2. New-building Tendencies⁵

Type	Category
Tanker	4001-6000
Ro - Ro	101-500
Ro - Ro	4001-6000
Tanker	4001-6000
Passenger	101-500
Passenger	4001-6000
Cargo	101-500

Source : compiled data by Author – Data base : Skolarikos S.A, Piraeus – Greece (2002)

The existence of two types of trends for smaller vessels and larger ones depicts the diversity of the trading volumes. As smaller ships on a basis supply and trade

⁴ The last ten years 161 ships have been built representing a 9% of the total fleet. 46 of them belong to the types analyzed which in turn is 3% of the total.

⁵ Bulk carriers are not listed due to a vast variation between the average size of new buildings and the actual sizes. Though a third of the new-buildings converge with the findings of table 1, that they belong to 501-2000 dwt category. The rest of them are almost equally shared by other categories.

to the islands and larger ships trade between countries or to and from large island countries like Malta, Cyprus etc [10].

4. RENEWAL OF THE MEDITERRANEAN FLEET

With the obvious need to renew the fleet, the fact that European shipyards and smaller yards have transferred the majority of their activities to repair and conversion works combined with the need to realize the European SSS proposal, it is an ideal time to act against the problem of the aging fleet.

Since the fleet belongs to European interests and taking under consideration the inability of the shipowners to deal on their own with the problem, it resides with the governmental and EU authorities to find a solution on how to finance the renewal of the fleet. At the current, EU has defined a 9% barrier against all kinds of subventions either through shipyards or directly to the shipowners for new-building works. A barrier that combined with the shipowners' difficulties for sources of financing prevents any notion of new building by the majority of shipowners.

As the building trends have been analyzed it is clear that even smaller yards can benefit from the renewal of the fleet. Yards, that now are under financial strain due to the shifting of works to repair and conversion, the great number of yards in Europe and last but not least the competition of the Asian and European major yards. All these come along with the rising need for Europe to implement the SSS plan to subvert part of its trade to sea, so as to gain from friendlier to environment and lower cost transport [11].

The proposal at this point lies in the path of an EU incentive to finance directly or indirectly at a greater degree European yard. This will give life to the ailing European shipbuilding industry while making sea transport in the Mediterranean safer and cheaper. The loss of funds from EU is compensated by the fact that European yards will take the majority of the funds, sea transport will get cheaper and safer resulting to greater benefits to European traders and finally Mediterranean shipping will remain in European hands with the gains that come along with the fact.

5. CONCLUSION

This paper has tried to analyze the characteristics of the Mediterranean fleet and in specific the fleet of European interests. The analysis showed the problem that plagues the fleet concerning its age and the prospect of its regulatory inability to continue trading. With these in mind the basic building trends have been found depicting the sizes of vessels that the market supports. The diversity of size has given foothold to counterpoise the need of new buildings with the ailing European yards

small and larger. Combined with the need for safer and cheaper transport for Europe the author have proposed that E.U as the main concernee should take up measures to give incentive for the renewal of the fleet.

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ANALIZA SREDOZEMNE TRGOVAČKE FLOTE – TRENUTAČNO STANJE I BUDUĆNOST

SAŽETAK

Iako je međunarodni prekooceanski pomorski prijevoz obuzela pošast niskih vozarina i neprekidnoga pritjecanja novoizgrađenih brodova, to se ne može reći za (zemljopisno) manja tržišta na kojima trgovačka mornarica vodi brigu o posebnim potrebama tržišta. U takvim uvjetima trgovačka flota koja plovi Sredozemnim morem trpi zbog zastarjelih brodova koji uskoro neće biti sposobni ticati europske obale prema predstojećim propisima o sigurnosti u plovidbi. Autor je raščlanio značajje sredozemne trgovačke flote kako bi mogao procijeniti njene izgledje u budućnosti. Metodologija te raščlambje temelji se na statističkim podacima i načinima pronalaženja podataka

u kombinaciji s autorovim dubokim poznavanjem pomorstva, tako da se ne udaljava od izvornih podataka. Temeljem rezultata dobivenih analizom, autor pokušava naglasiti sve veću potrebu za obnovom trgovačke flote.¹ Ujedno analizira trenutačna kretanja u brodogradnji iznoseći procjenu veličina u novogradnji za glavne vrste trgovačkih brodova za najbliže tržište. Konačno, ovim radom on nastoji pokazati da će, budu li se europska brodogradilišta ili brodari na odgovarajući način motivirati, veći dio brodograđevne industrije ostati u europskim brodogradilištima te da europski prijedlog za kratku plovidbu može postati činjenicom koja će povratno dovesti do stabilne brodograđevne aktivnosti u narednim godinama i daleko jeftinijega trgovačkog puta za teret.

ANALISI DELLA FLOTTA MERCANTILE MEDITERRANEA – SITUAZIONE ATTUALE E PROSPETTIVE

SOMMARIO

Anche se la navigazione commerciale internazionale d'oltremare è infestata da costi di trasporto bassi e da un continuo afflusso di nuove costruzioni navali, questo non è il caso di mercati più piccoli (dal punto di vista geografico) dove la flotta mercantile provvede alle necessità specifiche del mercato. In queste condizioni la flotta del commercio marittimo nel Mare Mediterraneo risente di navi vecchie che presto non saranno in grado di commerciare lungo le coste europee sotto gli incombenti regolamenti relativi alla sicurezza di navigazione. L'autore analizza le caratteristiche della flotta mercantile mediterranea per valutarne il futuro e le prospettive.

La metodologia dell'analisi è basata sulle tecniche statistiche e di rilevamento di dati, unite alla profonda conoscenza del settore della navigazione da parte dell'autore, allo scopo di non allontanarsi troppo dai dati originali.

In base ai risultati delle analisi, l'autore cercherà di sottolineare la crescente necessità di rinnovamento della flotta mercantile mediterranea. Vengono inoltre analizzate le attuali tendenze di costruzione, presentando una valutazione delle dimensioni di nuove costruzioni per i principali tipi di navi mercantili del vicino mercato. Infine questo studio cercherà di dimostrare che, a condizione che ai cantieri europei o armatori vengano offerte le motivazioni giuste, la maggioranza delle attività di costruzione navale si svolgerà nei cantieri europei e la proposta europea di navigazione marittima di breve corso potrebbe diventare realtà il che, a sua volta, risulterebbe in un corso stabile dell'attività cantieristica negli anni a venire ed in un percorso per il traffico di merci molto più economico.

¹ Najstariji trgovački brod koji plovi Sredozemljem je motorni brod "Kapetan Manolis" izgrađen 1917. g.

La nave più vecchia che commercia nel Mare Mediterraneo è la m/n "Captain Manolis" costruita nel 1917.