Greek Ship-owners and the Multinational Oil Companies in the Oil Refining Industry in Greece*

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Introduction

The oil refining industry is often characterised as a "service" (4) or as a "management" economy (8). In fact, this activity is considered as a merely "technical constraint" between production of crude oil and distribution of refined products, since it has no autonomy within these processes. As Yves Mainguy points out, "an oil refinery is either an integral part of an oil company that pumps the crude oil and distributes the finished products or a kind of customised unit operating either for a producer or a consumer" (8). Barriers to entry in this activity are relatively low in contrast to the major difficulties in penetrating the oil pumpimg and refined product distribution circuit. Control of this branch was not therefore of prime strategic importance for oil capital, and did not offer a position of strength comparable to the two others. This may explain the early and quite spectacular fall in the degree of control by the oil companies over refining and the increasing rôle played by public capital. During the 1951-1968 period the share of the latter increased, in terms of refining capacity, from 6% to 12% in Europe, from 15% to 40% in Africa, from 0,3% to 18,3% in the Middle East, and from 6% to 19% in the Far East (8).

The retreat of private capital, and in particular of oil capital, came with the delocalisation of this activity from North America where it was concentrated before the Second World War towards Western Europe and Japan. The substantial increase in refining capacities of the European countries during this period (27% in 1968 compared to 8% of the world capacity in 1951) was mainly import-substitute oriented. Since the mid-seventies, the delocalisation movement has mostly concerned the oil producing countries and has been more export-oriented.

The Greek refining industry is particular on two counts: the evolution of the type of dominant control over branch units, and its production orientation. Thus, in contrast to the overriding tendency, up to the beginning of the seventies, the rôle of private capital was clearly reinforced, notably by the Greek shipowners. This resulted in major investments that were financed quasi-exclusively by foreign based capital. According to our estimations, this branch absorbed the major part of foreign capital invested in Greece, i.e. approximately 27%, until 1974. This is quite an exception, not only in Europe but equally on a world-wide level, and is even more noteworthy for Greece, which is not an oil-producing country.

The result has been a considerable increase in production capacity and in refined product exports. In 1982, the former attained 18 million tons and the latter 8 million. In comparison, the production capacity of the branch in Turkey, whose consumption is nevertheless 1/3 higher than in Greece did not exceed 16 million tons in 1982, whilst that of Irak merely attained 8 million tons (14).

The advantages for the Greek economy from production development and exports in this branch are far from obvious when one considers pollution, the extremely limited employment effects and the substantial expenditure of currency in importing crude oil when compared to the low rate of added value in this field.

The aim of this paper is to analyse the relations between the Greek shipowners and the Multinational Oil Companies (henceforth referred to as M.O.C.) in maritime crude-oil transport and in the field of refining in Greece between 1958-1976. The Greek refineries' operating conditions are also examined in comparison to international conditions. This study shows that the autonomy of "independent" crude-oil transporters in relation to oil capital is very limited. The control of refineries enabled shipowners to improve their bargaining power with the M.O.C. We also demonstrate that the operating conditions in the Greek refineries were, up to the seventies, very faborable toward the shipowners and oil capital. Since then, the obervable tendency has been for an alignment into international market conditions, accompanied by a fall in the rôle of private capital, and in particular of oil capital.

I. Relations between Greek Shipowners and the Multinational Oil Companies in Maritime Crude-oil Transportation

Close ties have been established between Oil companies and the Greek shipowners since the Second World War, with the increasing importance of oil in economic life and in world maritime transports. The tanker fleet controlled by Greek shipowners (flying greek and foreign flags) was estimated in 1972 at 18-20 million gross tons (G.R.T.), i.e. around 20% of the world tanker fleet (1). The Greek shipowners, e.g. Niarchos, Onassis, Goulandris and Livanos, to name but the most famous, are some of the most important tanker owners of the last twenty years.

Given that tankers represented about half of the Greek shipowners'commercial fleet, (for some of them the percentage is much higher, up to 80% of total capacity), it follows that a major part of their maritime activities depended directly on the M.O.C. It should also be pointed out that the merchant fleet controlled by Greek interests is highly concentrated : 16 companies control around 36% of total tonnage (3).

"Independent" shipowners controlled 64-66 % of crude-oil sea transport, oil companies 30-33%, and states themselves controlled the rest.

The first determinant in the low degree of autonomy of "independent" shipowners, to which the Greek shipowners belong, stemmed from the fact that the oil companies controlled crude-oil supply and had a major part in world refining and distribution. The quasi-totality of the Greek tanker fleet was thus chartered and hence controlled by the M.O.C.

Another factor that explains dependence of the Greek shipowners on the M.O.C. is the limited concentration of capital that characterises the "independent" shipowners on a world level (15), linked to the fact that the M.O.C. themselves control a large share of the tanker fleet. This low degree of concentration of capital is due to certain characteristics relative to crude-oil sea transport, and especially to the absence of sophisticated technology (running a tanker does not require specific technological knowledge) and the relative ease of access and exit in this branch. The latter feature stems mainly from the low average optimum size of a tanker together with the limited risks the shipowner takes. In fact, the average optimum size of a tanker does no exceed 0.0004 % of world oil tonnage. Moreover, often, in rising demand periods, the tanker owners did not have to finance ship building themselves, since the banks and insurance companies financed up to 80, and sometimes 90 % of the cost, on the basis of a "bona-fide charter agreement". To this, we should add the substantial loans and payment facilities afforded, in particular, by the Japanese shipyards.

These characteristics, and given the imposing presence in this activity of the oil companies, prevented in intensive capital concentration by the "independent" shipowners. The low degree of concentration considerably limited their bargaining power with the oil firms.

Finally, the fact that freight charter agreements are directly concluded without intermediaries gives top priority to personal relations.

For the above reasons Greek shipowner autonomy from the M.O.C. was quite limited.

II. Greek refinery control by the M.O.C. and the Greek shipowners

1. A brief survey concerning the ownership of capital

The refinery branch was controlled by the Greek shipowners and oil company capital until the mid-seventies. During this period, the terms of exploitation for refineries -i.e. crude-oil supply and transport, "ex-factory" prices of refined products- were fixed in long-term contracts. Since then, the refineries have been run according to market conditions. Besides this, two out of the four refineries have gone under public control.

The control of Greek oil Refineries

Refineries	Owner and value of the investment	Crude oil supply	Transport of crude oil
1. Refinery of Aspropyrgos(1958)			
Productive capacity : -1958-70 : 1,8 million t. -1970-76 : 4,5 million t. -1976-to day : 5,5 million t.	1958-70 : State initial invest.:21,4 million \$ Exploitation undertaken by Niarchos	1958-70:BP,MOBIL SHELL,CALTEX & PETROFINA (70%)at prices of the 1958 agreement	1958-70:Niarchos at the 1958 agreement prices
	1970-76 : Niarchos (2/3) and State (1/3) Invest. : 35 million \$	1970-to day : under State responsibility	1970-to day : under State responsability (undertaken by greek shipowners)
	1976-to day : State		
2. Refineries of Salonica (1966)			
Productive capacity : 3,2 million t.	1966-83 : ESSO initial investment : 24 million \$	1966-73 : ESSO (85%) at prices of the 1962 agreement State (15%)	1966-73 : ESSO (85%) at prices of the 1962 agreement, State (15%)
		1973-83 : ESSO (at market prices).	1973-83 : ESSO (for the mo part) at market prices
	1983-to day : State	1983-to day : under State responsibility	1983-to day : under State responsibility
3. Petrola 1972)			
Productive capacity : 4,5 million t. Export oriented	Latsis and arab funds initial ivestment : 55 million \$	Under Latsis responsibility (from Saoudi arabian origin)	Latsis
4. Motoroil (1972)			
productive capacity 7 million t.	Vardinoyannis investment : 53 million t.	Multinationa oil companies	Vardinoyannis

The Aspropyrgos refinery (1958)

The Aspropyrgos refinery, the first operative refinery in Greece and the only one until 1966 was State property. From 1958-68 it was run by a company controlled by the shipowner Niarchos. In 1970 it came directly under Niarchos's control, who committed himself to enlarging it and effecting a number of investments in the industry. In 1977, this was taken over by the government, for the shipowner was accused of reneging his promises and of having committed a number of illegal offences.

The Salonica refinery (1966)

This refinery was built by Standard Oil of New Jersey (Esso) and is part of a petro-chemical complex including units for steam-cracking, PVC, ammonia, caustic soda, solvants and an anti-knock production unit financed by the Ethyl Co. Parallel to construction permission, Esso was granted the right to take part in the internal distribution market for refined products. Since 1983, after agreement with the company, the refinery has come under public control.

The Petrola refinery (1972)

This belongs to the Latsis group. Arab capital helped to finance it, but there is no available data concerning the country of origin or the type of association that was formed to work the plant. The contract did not make provision for parallel investments in industry. On the othe hand, the State should have a 50 % stake in the profits of the refinery.

The Motor oil refinery (1972)

This plant is controlled by the Vardinoyannis shipowners and was intially created as an export refinery. Its rôle is essentially to meet the demand of the 6th american fleet.

2. Supply and crude-oil transport control and the forms of association between the Greek shipowners and the M.O.C.

Analysis of the contracts and agreements has led us to conclude that refinery operation and the commitment to invest in the branch were linked to obtaining quasi- or sole exlusivity rights for supply and crude-oil transportation.

Amongst these contracts, that of Niarchos (1970) has not been applied as far as supply and crude-oil transportation conditions are concerned. Since prices have been fixed at relatively low levels, Niarchos has only applied the clauses relative to refined product prices which have been very profitable for him. The Latsis contract has not been applied either, as the shipowner has refused to fulfill the terms of the agreement concerning the supply and crude-oil transportation. This refinery has essentially functioned as an export refinery. According to a new deal made in 1979, it obtained the right to pass agreements with the Public authorities to supply the domestic market at SPOT prices plus 2.5 $/ton.

We also remarked that in all agreements made with the shipowners there has been provision made for crude-oil purchases from the major oil companies. In the first contract drawn up with Niarchos in 1958, sole crude oil supply rights were granted to BP, Shell, Caltex, Petrofina, and Mobil. In the 1970 Niarchos contract the quasi-exlusivity of crude oil supply and transportation was granted, and specified that Majors would supply him with the oil he was entitled to. The same clauses were foreseen for the Onassis (1970) and Andreades (1972) contracts, although these were never applied because of the withdrawal of the former and the cancellation of the contract by the state for the second. Majors also supply the Motor Oil refinery. Designation by the American authorities on an annual basis decides the crude oil supplier to this refinery which fuels the VI fleet.

Hence, it may be supposed that the concession clause for sole crude oil supply to Majors constitutes the officialisation of an earlier agreement betweeen the M.O.C. and the Greek shipowners, who gain a compensation by this. The only contract where such a clause is absent in the Latsis agreement.

All contracts agreed upon with the shipowners grant them also a State concession in the refined products' distribution market by creating their own network of gas stations. None make use of it, apart from the noteworthy and significant exception of Latsis. Il is likely that obtaining this right added power to their elbows in their overall dealings with the M.O.C.

Finally, in certain cases the association with the shipowners constituted the necessary passage for oil capital to obtain the exclusivity of crude-oil supply. It is characteristic that a first offer from the B.P., Shell, Caltex, Petrofina, and Mobil companies concerning the supply of crude oil to the state-run refinery of Aspropygos (1958-1968) has been rejected by the public authorities and it was necessary for the firms to associate with the shipowner Niarchos to have the first adjudication annulled. Another revealing fact of the influence of shipowners over the public authorities at the time, was that this decision had been taken although the conditions of this offer were far more costly for the Greek economy than others.

In the agreement concluded with Esso (the Salonica refinery), the firm obtained the exclusivity of not only crude oil transport and supply but also the right to create its own network of filling stations.

III. The operating conditions of the Greek refineries compared to international market conditions

The comparison between the Greek refinery operating conditions and those of the international market show that up to the seventies, they were very favourable to Oil company capital and to the Greek shipowners. Since then, an alignement of operating conditions of the Greek refineries onto international conditions has been observed, especially on the crude-oil supply level.

The Niarchos Agreement (1958) (6)

This agreement fixed the supply and transport of crude oil, and the "ex-factory" prices of refined products at a very high level. Crude oil supply prices were fixed according to Persian Gulf lowest posted prices, with a 7.7 cents/crude oil barrel reduction.

It is not possible to analyse here the formation mechanism and evolution of lowest posted prices, for which an ample bibliography exists (9), (12), (13). Nevertheless we can recall certain points. It may be said that the Persian Gulf lowest posted prices were mainly created to be used as a basis for reference in calculation of the taxes due by the oil companies to the oil producing countries. Up to the beginning of the seventies, these prices were higher than those on the "free" market, and substantially higher than the cost of production which was estimated at around 10 cents/barrel on a lowest posted price of 1.8$/barrel for the 1958-1971 period.

During this period, reductions on lowest posted prices ran to 40-50 cents/barrel (around 28%) and in long-term contracts, like that between Niarchos & Mobil Oil and Esso, they were even higher. They were also accompanied by other facilities, like freight-cost reductions, easy-term loans, participation in financing industrial investments, etc...

According to our estimates (6) gross profits made by Shell, B.P., Caltex, Petrofina, and Mobil during the contract period amounted to 83 million dollars and their net profits (after the 7.7 cents/barrel reduction) to 75 million $. By comparing the prices of the latter with the prices of the other offers that had been rejected by the public authorities at the time (10) we have observed that these contracts resulted in an extra expenditure of some 40-50 million $, which is approximately the same as the value of the productive foreign investments realised during the 1958-62 period.

The "ex-factory" prices of refined products in this agreement were also high. They have been calculated on the basis of the lowest posted f.o.b. port of shipment price as listed in Platt's Oilgram plus freight charges Persian Gulf-Piraeus. This tariff system, that was used by the oil companies in other countries as well, can be criticised for several reasons (2). First of all, the real cost of refining, which is often markedly lower, is not taken into account. Moreover, the markets of reference (apart from the Persian Gulf there were also the Caribbean and Gulf of Mexico markets), were not representative at all of the international refined products' market. The quantities dealt with on these markets represent less than 10% of world consumption of finished products, because since the Second World War most countries have endeavoured to meet their needs for refined goods by their own production. We can therefore say that they were practically private markets, insofar as they were very often concerned with exchanges of finished or intermediary products between the major international companies.

This invoicing system, which was adopted later and by the Salonica refinery, resulted in prices for refined goods being fixed much higher than those in the "free" market. For example, in 1963, the ex-factory prices from the Aspropyrgos refinery were 54 % more expensive for fuel

and 123 % more expensive for gas than those of the Italian refineries (10).
Crude oil transport costs were also fixed at a high level with Niarchos. These freight rates were defined in reference to the AFRA index (Average Freight Rate Assessment) with a small reduction of 8 % for the single period of 1965-68.

The AFRA index (13) is published monthly at London and is equal to the weighted average of the freight rates effectively paid during the month, regardless of the date on which the relative chartering contracts were concluded (this includes the "spot" charters, in consecutive voyages and in time). This index, which is often used by the M.O.C. and "independent" shipowners to invoice crude oil transport prices is calculated for four categories of ship in function of their tonnage. The lower the tonnage the higher the rate is. It should also be noted that to calculate this freight charges paid today are taken into account, even though many of these contracts may have been concluded 5, 10, or even 20 years ago.

If we take into consideration that tanker exploitation was characterised by diminishing costs, in particular because of the fall in construction costs (capital charges represent about 40% of the cost of crude oil transport) we can deduce that the freight charge rates expressed by this index were far behind the downturn tendency that characterised tanker operating costs. The downturn tendency also prevailed in terms of overheads because ship speeds were higher, unloading facilities were improved, and because of lower unit salary costs. However over recent years this downturn tendency has considerably slowed down. Take for example the case of Shell, that virtually held its transport costs stable over the 1947-1967 period, although the transport capacity of its fleet was multiplied by five. It is for this reason, that very often sizeable reductions were made in comparison to the AFRA index where transport costs were fixed in long-term contracts at a stable sum/month, with freight charge adjustment provision at fixed dates, in function of the "spot" market (9).

Thus in the Niarchos agreement, invoicing of freight charges in function of the AFRA index resulted in markedly higher transport costs than the real cost of transport. The 8% reduction foreseen for 1965-68 was very low compared to those normally granted. According to some sources of information, it may even appear that the transport costs paid to Niarchos were higher than those fixed in the contract. The difference was covered by the five companies that took charge of supplying the crude oil. This is a further indication of the rôle played by the shipowner in concluding the agreement. Moreover the public authorities committed themselves to deducting from the taxes due by the shipowner a sum equal to the agreed reduction with the oil companies on the supply of crude oil from 1958-64. Finally, Niarchos used small old tankers to carry the crude oil, which represented a large extra charge for the Greek Economy, since, as we have already said, freight charges are inversely proportional to the size of the tankers.

The Esso agreement (6)

The conditions of this agreement were very favourable for this company as well, in particular as regards crude oil supply. The crude oil supply prices were fixed on to the Persian Gulf lowest posted prices without any reduction, and this occurred at a moment (1962) when the downturn tendency for oil prices had become generalised and reductions on oil prices had become very substantial. Taking into account the fact that crude oil prices in long-term contracts, which was the case with Esso, were usually between 35% to 40% lower than the lowest posted prices, the excess profits from supplying crude oil up to the end of 1970 (7) may be assessed at 57 million $, whilst the value of its investments did not exceed 75 million $.

As for "ex-factory" refined product prices, these were fixed according to the lowest posted prices Persian Gulf plus the Persian Gulf-Salonica transport costs. In the case of this refinery also, this system of invoicing resulted in higher prices than on the "free" market. According to estimations the net cost to the Greek economy up to 1971, amounted to 2.3 million dollars per year, taking into account the royalties paid by Esso to the State (5).

The Esso contract transport charges (AFRA minus 25%) were relatively lower than those agreed upon with Niarchos. Nevertheless, they left a comfortable profit margin for the company. After the closure of the Suez canal, the freight charge rate became much more favourable to the company, insofar as the tankers sailed round Africa, for the transport cost per ton and mile fell following the distance to be travelled. (The agreement with Esso was concluded before the Canal closure, when the distance from the Persian Gulf to Salonica via Suez was much shorter). Finally, the freight charges agreed upon for crude oil transport, both for this contract and that of Niarchos, were to be paid for in currency (apart from 10% of transport costs owing to the latter that would be paid in drachmas).

The Niarchos Agreement (1970) (6)

Crude oil supply prices in the 1970 Niarchos agreement were fixed at lower levels, mainly because of the keen competition amongst several shipowners for the control of the Greek refineries. This contract was only applied to prices of refined products (ex-factory prices) which were very favourable to the shipowner. According to this agreement, the weighted average of the prices of refined products should be equal to the product 1.05x(A+B+C), where A is the posted price for the type of crude oil which is representative of the refined products market, B, the transport costs per metric ton agreed upon for crude oil transport, and C = 5.70 $/metric ton. We have estimated that the multiplication of the sum A+B+C by the factor 1.05 guaranteed Niarchos, when he signed the contract, 1.18 $ additional per ton on the basis of the advertised price of crude oil at 13.68 $/ton (1.80 $/barrel) and of transports costs of

4.16 $/metric ton. After the successive rises in the price of crude oil - 11.6 $/barrel in 1974 - it also insured him an **extra** 4.90 $/metric ton. Thus the refining costs for the shipowner (on the basis of the advertised price of 11.6 $/barrel) at 10.60 $/metric ton were : 5.70 $/metric ton + 4.90$/metric ton. These can be estimated as 140 % - 160 % higher than the real costs of refineries with the production capacity of the Aspropyrgos refinery, including the normal remuneration of the capital invested (11).

Conclusions

In analysing the operating conditions of the Greek refineries, we have found that for oil company capital and the Greek shipowners they were more favourable than international market conditions, in particular up to the beginning of the seventies.

Sizeable profit margins, on both the refining level and the crude oil supply level, explain the imposing presence of multinational capital. Since 1970, an observable tendency for the Greek refineries has been to align their operating conditions with those on the international market. This has been accompanied by a fall in the rôle of oil company capital, that henceforth only holds a monopolisitic position in refined product distribution. This equalisation tendency was largely encouraged by the very keen competition amongst shipowners for the control of the Greek refineries but also by crude oil price increases and other transformations that have taken place on the oil market over the last few years. The consequences of these transformations have meant that the expenditure for crude oil imports and the payment of freight charges have become too costly for the Greek economy to such a point that it is no longer possible to maintain the differences in prices between Greek prices and international ones.

We have also been able to note that the M.O.C. invested in this branch when refinery operation was linked to crude oil supply under favourable conditions for them. This attitude led the public authorities to link granting crude oil supply exclusivity to parallel investments in industry.

Shipowners invested in this branch because control of refineries enabled them to charter their tanker fleets under favourable conditions. The interest of the shipowners whose weight and influence over the economic and political life are well known in the country, explains the relatively limited importance of public capital, in contrast to the world tendency. The advantages in operating the refineries for the shipowners explains the part taken by this branch in realising foreign investments as well as a substantial increase in its production capacity.

We can also suppose that the control of the refineries strengthened the bargaining power of the shipowners with the M.O.C. that they depended on : granting crude oil supply exclusivity in exchange for chartering their ships. The protection and active support of the State contributed to reinforce this power, as is shown in the case of the Niarchos agreement.

However, recent changes, both on the world maritime transport level (the reinforcement of merchant navies by the East European countries and the creation of national fleets by developing countries), and on the level of the world oil market (the conversion of oil companies towards other activities) have not left the place of Greek capital and its international relations intact. This evolution is revealed by a tendency to turn back the clock and to look for new allies : the modification of its attitude concerning Greek/E.E.C. relations and efforts to tighten its links with the Arab countries.

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