Scale economies, intermodality and the evolution of competition in maritime markets

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1 Economies of Scale of the Ship
Ships intended for intermodral transport are generally characterized by complex technology and strong investment per unit of capacity. As such, they give rise to significant economies of scale, having relatively high speeds given the traffic connections to be served. As in all other cases relative to the economic theory of optimum ship size - apart from draught limits for international waterways, the continental shelf and harbour depths, as well as limits in relation to the size and type of market (the magnitude of the flows of traffic to be served) - the economies of scale of ships intended for intermodal transport could also not be allowed any limitation within the context of the intrinsic productive process of the ship itself. (This is with the obvious exception of large bulk carriers for liquid and dry cargoes, especially in relation to the costs linked to insuring against possible ecological disasters.)

Leaving aside the above factors, the potential for growth of the capacity of the ship, with the consequent benefits of economies of scale, is limited by the other element in the productive equation in shipping transport service - the port. Here, the rate of throughput of pier operations - i.e. of cargo unit handling - dictates the period of stay of the ship in port and reduces the possibility of exploiting the economies of scale of the ship itself.

The higher the rate of throughput - and, consequently, the more efficient, economic and well-organized the port - the greater the possibility of exploiting the economies of scale and, ceteris paribus, the lower the voyage costs per cargo unit.

But where the rate of throughput is high and increasing, this creates considerable and increasing requirements for space in the port area adjacent for the immediate stay of cargo units. In actual fact, such port areas normally tend to be scarce, due to the pressures for multifarious uses, so that they are only available at increasing cost per unit of space; and, in the case of intermodal transport, they are specialized, i.e. not (as a rule) employable for other uses, with the risk of the possible effects of "rationing" by the Port Authority.

The increase in space requirements in question may be reduced only where it is possible to regulate and accelerate the inflow and outflow of cargo units in port, and where the operations concerned (ranging from consolidation to deconsolidation, to the stay, to the repair of containers, to their maintenance, etc.) are decentralized to the greatest possible extent away from the immediate port area.

The Ro-Ro system, which has the highest investments per unit of capacity of transport (decks, access ramps, volume lost on board, etc.), manages to offset this due to the possibility of rapid loading-unloading of cargo units in port and immediate decentralization of operations, which obviates the problem of lack of space and increasing costs (as it, for instance, since long-time, is the case with oil and pipes). The greater the frequency of stays in port, the greater this possibility becomes. As is common knowledge, these are the reasons for the comparative advantage of Ro-Ro on short and medium haul routes.

The generational quantitative-qualitative leaps of container ships, for their part are generally correlated with
technical, organizational and territorial innovations enabling acceleration of the inflow and outflow of cargo units in port and decentralization of operations. It is sufficient, for example, to think of the principles "one trailer for every container" and "on wheel container" or the idea of silos for containers, of 15 to 20 years ago, or of the computerized handling and placement of container of more recent times, in order to appreciate this. Probably the most recent and striking example - apart from "Octopus" technology - is provided by the experience of Post-Panamax ships and by the fact that:

i) the possibility of success of ships of up to 6000 teu derives from a conspicuous precedent - that of the establishment of a railway landbridge from Los Angeles to New York for cargo originating in South East Asia and the Pacific - which has enabled cargo to by-pass the Panama Canal and ships to exceed the breadth limits imposed by that passage;

ii) the possibility of building broader ships has enabled the ships themselves to gain in terms of stability, thereby making less laborious and much faster the operations involved in placing containers on board and in positioning their weights, so to increase greatly the speed of pier operations.

2 Port Stage, Transport Networks and Internal Terminals
The above scenario has meant the development and gradual reinforcement of three needs on the part of the ship and shipowners:

a) to control by acquiring, and to manage as directly as possible, the port stage in the intermodal transport chain;

b) to integrate with road transport and establish agreements with railway transport in order to ensure a rapid rate of inflow and outflow of cargoes;

c) to establish inland terminals: inland goods depots, collecting and clearing stations, interports to decentralize port operations.

This leads intermodal transport to create a network with inland transport and terminals, even at considerable distances from the sea. At the same time, and via the same process, strategic "inroads" are made in relation to the promotion and acquisition of hinterland traffic.

In this way the investment requirements grow further, the (fixed) costs of the organization become more and more considerable and the economies of scale of both the means used and the organizational system increase in magnitude. In the meantime, the shipowners - particularly those in container transport - tend increasingly to offer transport "(inland) junction to (inland) junction", "inland point to inland point", if not "door-to-door", with associated unified responsibility and all-in tariffs.

3 The Role of the Port Factor
In the light of the above it becomes clear in the final analysis that the port, as a factor in the production of shipping transport service, is supplied at increasing costs per unit of time, considered: overtime, night shifts and the like; increasing amounts of work needed for a ship, which can cause difficulties and slow down operations on other merchant ships (a sort of congestion cost); plant and technology which are more advanced but able to offer higher rates of throughput per unit of time only at costs per ton handled which are higher than those for plant and equipment which would be economically efficient for the volume of traffic normally handled by the port. In any event, the ship's interest in supporting the economic weight of these increasing costs per unit of traffic handled in the time given is directly proportional to the burden of investment, and interest rates, crew, insurance, maintenance, organization and network, which weighs on every day (or hour). As is precisely the case for ships involved in intermodal transport in general and container ships in particular. Where an increase in the rate of throughput is not possible because the equipment or plant ashore is specialized, and therefore cannot be arranged and utilized for the ship considered beyond a given extent, the increasing cost per voyage occurs since the time spent in port - and hence the duration of the voyage - is lengthened, together with all the associated costs. This extension of time is reflected in the average costs of the voyage per ton of cargo transported.

In all cases - supply of the port factor at increasing cost in general, the effects of congestion, advanced but not yet economical technology or limited space due to the effects of "rationing" - the above-mentioned drawbacks can be avoided:

a) by means of the expansion of the port complex, its space and its overall infrastructure. But this may lead to diseconomies of scale of the port complex due either to the territorial impact - which may be curbed only by careful arrangement of port systems in the planning of coastal areas - or to the bureaucratization of the activity of the port complex. As is well known, diseconomies of the latter type can only be neutralized through an advanced productive decentralization, starting with the complete and systematic separation of the moment, or function, of planning and control (Port Authority) from the productive moment, or function, of the service and industrial activities in the port itself (licensees and terminal operators, industrial operators). In any event, a substantial financial commitment is needed and can only be offset by means of the intervention - if not the actual initiative - of those requiring the new infrastructures, plant and equipment (licensees and terminal or industrial operators), or by recourse to the capital market when the latter implicitly approves the
project, is interested and willing to risk in the venture;
b) together with the above, by means of massive investments in new technology and associated plant, equipment, infrastructural parts and/or inland terminals and any associated transport systems. Also in this case, however, the process requires either the financial intervention of licensees and terminal operators interested in such innovations or recourse to risk capital, where this is available.

4 Overlapping of Operational Areas, Agreements, Consortia and Alliances
The overlapping of operational areas of the large shipping companies in container traffic, which is a consequence of the need to establish networks of inland terminals, the magnitude of investments and financial requirements and the high “sunk cost” of the setting up and organization of the major complexes in the sector lead to the establishment of agreements, joint ventures, consortia and global alliances between the complexes themselves. This lessens the rigidity of the investments as well as the risks and is intended to rationalize - if not actually to optimize - the use of both the shipping fleets and the container fleets. In this kind of agreement, “slot arrangements” between the large companies and consortium groups constitute a particularly efficient instrument. They ultimately enable the reciprocal availability of the transport capacity of the shipping fleets and the container fleets.

The end result is the same as regards the move towards the concentration of traffic and the minimization of the number of ports of call for each ship and/or the fleet of each company. This move is due both to the need to reduce the idle time at ports of call - such time constitutes a kind of fixed (cost and time) factor for each port of call, which is a direct function of the investments and other charges on every hour and day of ship service - and to the “economies (of scale) of density” arising from the concentration of traffic (organization, basic services and equipment, costs of promotion and acquisition, etc.).

In this way - and thanks to a careful operating plan for feeder services - the need to minimize the number of ports of call for each ship and for the ships of a company is reconciled with the need to retain and not to lose traffic. That which a company in a consortium, joint venture or alliance loses by renouncing a given port of call is compensated for by the traffic acquired by other enterprises in the consortium or alliance in such port, as well as by that which the company gains which would otherwise go to other enterprises in the consortia, joint ventures or alliances if they were present in that port.

In this manner, the economies of density stemming from the concentration of traffic of one company or group - unlike what normally occurs with air transport, where the concentration of traffic in a small number of airports and on a small number of routes results in high social costs in the form of congested airports and congested skies, and unlike what happens due to the effect of excess territorial concentration of businesses and housing in the haphazard growth of urban agglomerations - manage to avoid the generation of the side-effects of congestion, and therefore to keep at bay most of the diseconomies of the concentration itself.

5 Special Agreements between Large Carriers and Large Shippers
Other types of agreements are being established within the context of the above-mentioned tendencies currently characterizing intermodal transport, particularly in container transport: agreements between large companies, groups, consortia and alliances of carriers on the one hand, and “large shippers” on the other. The latter are shippers providing the company, group or consortium with substantial quantities of traffic, agreeing on prices, times and service procedures different from those of normal shippers and from those generally established by the maritime Conferences.

This type of agreement is reminiscent of those used in the “captive transport” of the 1950s and 60s, for the transport of goods in bulk, as well as for other products and cargoes, within the context of the requirements of industry (manufacturing industry, but also, at times, mining, electricity and gas). The so-called “captive transport” was, and is, based on special ships in technically integrated ship-shore equipment sequences modeled on the needs of the cargo transported and was defined using long time charter contracts resembling (albeit inappropriate) forms of vertical integration of transport in industry.

While on this subject, it is interesting to note, as part of the description of the changes underway in shipping markets at present, that it was precisely the proliferation, and extension towards new channels of traffic, of these ship/special equipment ashoore sequences (also including channels characterized by flows of cargo, ships and shore equipment of limited dimensions) which led to the revolution in intermodal transport of the mid-sixties as a reaction on the part both of the shipping lines - whose slice of the market was being progressively eroded - and of that trade still based on small consignments, which was confronted with transport costs which had become prohibitive.

Leaving this aside, it is easy to appreciate an important circumstance at this stage: namely, that as the range of services offered by the joint enterprises, consortia and alliances is upgraded and extended - in relation to geography, commodities, the composition of segments of intermodal chains, and agreements between large shippers and large carriers - economies (of scale) based on
diversification (economies of scope) are created. The additional services produced by the consortia and alliances can be offered at lower costs and prices than those which would be determined if there were not already, at an earlier stage in the process, a large quantity and variety of services produced: this is the principle of "sub additivity".

6 Overlapping of operational areas, intermodal transport prices and Shipping Conferences

The networks of transport and inland terminals progressively established by the main companies, groups and alliances in intermodal transport, and in container traffic in particular, lead not only to the already cited overlapping of traffic areas of the shipping lines and enterprises. They also lead, in fact, to the overlapping of traffic areas (of jurisdiction) of the Shipping Conferences, resulting in a profound transformation of the general picture and range of operations of the latter, often accompanied by a loss of precision in their geographical delimitation.

Another contributory factor - again within the context of the evolution characterized by consortia, alliances, etc. in intermodal transport - is the establishment of networks of feeder shipping services between transshipment ports and supply ports, also taking into account the possible change in the roles of the individual ports in the overall organization of the activity of consortia and alliances. While these service networks may at times feature strong internal competition, they do at the same time constitute an important innovative element and a factor of development in areas of traffic such as those of Mediterranean cabotage or those of Northern Europe between the Continent, the British Isles and Scandinavia.

These factors, jointly operating to formulate supply prices for "inland junction (point) to inland junction (point)" (as opposed to "port to port") services, cast doubt and uncertainty on the meaning of tariffs limited solely to the shipping segment. In this way as well, the Conferences are propelled towards a pronounced evolution, with a possible loss of influence in their traditional fields of intervention and control. It is common knowledge that the loss of meaning for tariffs for shipping service only, together with the formulation of inland "point-to-point" or "door-to-door" prices, has become the focus of attention for anti-trust and fair trading bodies, at least as regards the European Union.

All this cannot fail to raise a series of weighty issues, especially if it is borne in mind that the modern Shipping Conferences were born in the 1870s together with the advent of steam navigation and the opening of the Suez Canal, as agreements limiting competition and aimed at ensuring the continued existence of commercial shipping lines and a sufficiently stable supply of services regarding traffic connections. The latter was, in turn, required in order to enable shippers, import-export operators and industry to formulate and implement their operating programs over time.

7 A Few Large Active Participants, Stabilization Agreements and Shipping Conferences

The effect of the evolution in intermodal transport - in particular, container transport (consortia, alliances, etc.) on the main international routes - is that there are fewer and fewer influential participants of significant dimensions with a determining role. And Conferences which were once charter agreements between ten, twelve or even twenty often medium-sized and sometimes medium-to-large sized participants, have turned into agreements between three or four very large complexes. Clearly, the procedures will also be different with respect to the past given the change in number and influence of the participants.

The market is evolving towards forms of oligopoly, albeit with considerable differences in configuration. Sometimes the relative homogeneity underlying the different services offered, together with the relative similarity of the size of the main groups, may lead to forms of collusion, perhaps following periods of bitter competition over charters. In other cases a few very large complexes find themselves operating in a market characterized by the presence of various medium-sized enterprises. In both instances it is not hard to understand why the outcome (while following different paths and with different objectives) is the establishment of the "stabilization agreements" of recent times between large alliances and groups. On agreements, i.e., based on tariffs and other transport conditions, different from those established within the Conferences.

Against this background and also in the light of US deregulation of shipping transport in 1984, the Conferences risk having simply to acknowledge price conditions and contractual procedures stipulated by each of the large groups, pricing and service procedures foreseen in contracts between large carriers and large shippers, and pricing and service procedures provided for in the stabilization agreements - and this regardless of the relationships between the above elements and the tariff schedules and transport conditions normally laid down in the course of the Conferences' own activity.

This state of affairs often replaces the former power to enforce tariffs, deferred rebates, loyalty bonuses, dual rates, etc., which characterized the charter agreement in times past, admittedly together with all the shortcomings of the conference system.

It is ironic, today, to consider just how often the Conferences were censured in the past - at least by the shippers - for wielding monopoly power. Once they were actors in a type of market which tended to maintain an almost pluralist level of supply, characterized by enterprises which were very often medium-sized and
only occasionally large-sized. Whereas, nowadays, with the transformation of their traditional role, the prevailing market form is that of a basically solid oligopoly, or an oligopoly characterized by the presence of strong leaders and other "followers".

On the other hand, in the present day, the shippers' front, united via the "Shipper Councils" with the aim of counterbalancing the virtual monopoly power of the conference carriers, precisely as a result of the establishment of the special agreements between large carriers and large shippers, constitutes an involution of the tendency to strengthen the united representation of the shippers.

8 Interconnections Between Traffic Areas, "Round-the-World" Services, Landbridges

The interconnections between the areas of traffic of the large companies, consortia and alliances operating combined with the overlapping of traffic networks using systems of transport and inland terminals, opened the way for one of the great innovations of the 1980s - "Round-the-World" services. On the one hand this innovation has coincided with greatly increased market horizons and potential flows of traffic and, as already mentioned, it has created the conditions for a generational qualitative leap in the dimensions of container ships. While, on the other hand, it means being able to take advantage of the concept of global circumnavigation in both directions so as to exploit every possible "outward" (outbound) voyage - in the direction of the greatest availability of cargoes - and alter the itinerary as necessary on those legs constituting the "inward" (inbound) voyage - where there is less availability of cargoes and where it arises the problem of "return load" - in order to increase such availability. Alternatively, there is also the possibility of including on the voyages (where it arises the problem of "return load") legs which, on other more limited local routes, would otherwise be considered "outbound" (as sometimes occurs, for example, in the case of the "thin lines").

Moreover, there is the previously described need, on the part of the large shipping carriers involved in intermodal transport, especially containers, together with their consortia and alliances, to create a network. This establishes the preconditions for a further step forward in the evolution of the sector: the creation of landbridges (also referred to as "dry channels" or "land linkages"). The consequence is to reduce, through the introduction of land-based legs, distances and time on international routes of great importance which would otherwise be covered entirely by sea. In such cases the means of land transport more frequently adopted is rail.

The most important example in terms of ramifications and innovative impetus is the landbridge constituted by the direct high-speed railway link between Los Angeles and New York previously mentioned.

It is well known that in the last few decades the major international economic epicentres - and therefore the principal sources of world shipping traffic, particularly in container transport - have been moving towards South East Asia, the Far East and the Pacific (at any rate, east of Singapore). This tendency is highlighted, as regards container traffic, by the fact that ten or eleven of the twenty major companies, of the twenty principal ports and of the twenty most important countries are located in this area.

While the other terminus for this traffic connection - that centred in New York - represents the interconnection of several North-American metropolitan areas and continues to constitute the greatest concentration of economic activity in the world.

9 An European Landbridge and "Pendulum Routes"

Very recently, in the wake of the experience and the effects of the North-American landbridge described above, a similar proposal has been launched - at least on an exploratory level - for a landbridge or "dry channel" in Europe between the Mediterranean and the North of the continent (with as a possible final point of reference the Rotterdam (Venlo)-Antwerp area). The argument in favour is based on the fact that there are already daily shuttle services for container transport by rail between Rotterdam and Milan. Therefore, it would seem both natural and feasible to extend such services to nearby Italian port areas, such as Liguria.

Above all, the idea is underpinned by three considerations:

a) a route from Singapore to New York via the Mediterranean, Northern Europe and a landbridge connecting these two areas of traffic would mean - at the most - half a day's extra travelling time compared to the route from Singapore to New York via Los Angeles and the North-American landbridge;

b) the land-based leg from the Mediterranean to Northern Europe would be much shorter than that between Los Angeles and New York. And since the cost of land transport is always considerably greater than that of sea transport, the overall result would be a substantial and undoubted saving;

c) The port of New York would regain the competitive position in relation to Los Angeles-Long Beach which it lost with the advent of the North-American landbridge and Post-Panamax technology.

The upshot of this hypothesis is the emergence of the "pendulum routes" Singapore (the East)-Mediterranean, and Northern Europe-North America (Atlantic) - routes which have played a major role in the economic history of shipping and would regain a competitive capacity of extreme interest. This appears to be highly significant for the position both of Europe and of the Mediterranean basin in the international traffic economy.
However, careful examination of the concept of the “pendulum routes” and the associated Mediterranean-Northern Europe link leads to at least two further considerations:

i) as was stated and written at the time of the introduction of “Round-the-World” services by the first container transport companies, global circumnavigation itineraries may be composed of (relatively long) sea legs and (relatively short) land-based legs. It was precisely in relation to the above factors that the idea of the landbridge was discussed in real terms;

ii) the “pendulum routes” Singapore (the East) Mediterranean, and Northern Europe-North America (Atlantic) are more than a mere alternative to the traffic connection from Singapore (the East) to New York via Los Angeles; rather, they constitute possible alternatives to “Round-the-World” services by sea. It is perhaps this second consideration which offers the most significant prospects for the proposed pendulum routes.

Similarly, it is precisely in this context that the role and function of certain ventures emerge clearly - those of Gioia Tauro, Cagliari, Malta or (within certain limits) the port of Naples, as strategic points located in proximity to the direct crossing of the Mediterranean between Suez and Gibraltar. And the fact that these ventures originated in Italian maritime regions is a favourable mark. While the fact that it was others who were responsible for the establishment of the transshipment centre in Malta should be interpreted as a missed opportunity from the Italian point of view.

10. Global Economic Competition, Shipping and Intermodal Transport

What has been said so far, particularly in the last few sections, points to several key elements regarding the central argument:

a) the “internationalization” or “globalization” of shipping markets and the competition therein. This global competition is distinct from the international nature which has always been attributed to shipping markets in that it takes place in real time, with instantaneous information and orders throughout the world economy, whereas the international competition in shipping markets consisted of effects and impulses conveyed over time from one area of traffic to another as a consequence of the information obtained regarding the supply and demand positions of holds in the different areas, from the advent of the telephonic time of the telex;

b) in the context of this global competition, the acquisition of the control and direction of traffic and the logistical arrangement of the transport cycle become more and more important;

c) also in the shipping sector, global competition does not take place between individual productive units but between rival economic systems with a territorial basis. Therefore, in the specific case in question, the competition is between port areas and regions on the one hand, and “routes” of international importance on the other;

d) the solidity of shipping or port-based economic systems with a territorial basis is determined by the efficiency, cost effectiveness and organization of the port complexes - see the discussion in section 3 above regarding port efficiency and organization - by the local transport and that connecting the hinterland, by the information and training systems, by the informal reporting networks of enterprises intended to stimulate innovation, by the cooperation between public and private sectors in implementing infrastructural and territorial plans, by the advanced professionalism, by the services of the advanced tertiary sector in the shipping world, by the logistics - in short, by the level of advanced facilities offered by the shipping centres.

Ultimately, global economic competition in the shipping sector in general and that of container and intermodal transport in particular boils down to the comparison between the economic strengthened shipping centres and between metropolitan shipping and port areas.

11. Intermodality and the Financial Revolution in Shipping

At this stage the importance of the role played by the rise of intermodality, and in particular, the widespread and increasing penetration of containers, in determining the “financial revolution” of the last twenty years in shipping transport can be clearly seen. The traditional methods of financing in the shipping industry - self-financing, state subsidies (for fitting out or for shipyards), bank loans or loans from financial institutions in any event part of the credit system - could not meet the challenge of the massive growth and increasing differentiation of the financial requirements of the present: for example, in relation to the demands deriving from a fleet of growing capacity and advanced technology, from the port plant and equipment, from the fleet of containers or other cargo units, from the inland terminals, from the logistics, etc. Hence, the need to resort to sources of finance and risk capital outside the sector, from industry to large distribution networks to institutional investors. With the consequent establishment of specialized types of investment companies, the concentration of specialized shipping services on the part of various credit institutes, the setting up of specialist financial consulting enterprises and finance companies in the shipping sector and/or recourse to the stock exchange. And so on.

It is not hard to imagine to what extent all this has influenced the establishment of conditions and modus operandi in the rules of competition in shipping markets.

It is difficult at present to foresee the future role and possible competitive arrangement of the Shipping Conference and shipping market systems in the aftermath of the globalization of the economy. The role may still be of considerable importance, albeit transformed with respect to the present. The recent experience and current position of IATA - the International Air Transport Association, which has long performed the role of the Shipping Conferences in the field of air transport - may well provide helpful clues and operating models concerning the Shipping Conferences themselves, their future and their function in global competition.

The position of IATA, arranged in three major sectors of world traffic, can provide a basis for identifying a destination in the evolution of the Conference system following the profound transformation of the geographical areas of traffic which is at present underway. For its part, the role acquired by IATA as “clearing house” for the credit and debit accounts of participating companies, mainly through “interline” services, may be a useful guide. Particularly when it is considered that IATA’s clearing function involves figures of the order of tens of billions of dollars annually (approximately US$ 22.5 billion in 1990).

Then there are certain fields which the most widespread presence of goods shipping transport leaves open. For instance, those traffic connections which are not intermodal or containerized and which will presumably continue to operate as at present (or as in the very recent past). Or local and regional (international) type traffic connections, such as those of “Short Sea Shipping”. Or, again, the many local and regional sectors for feeder services in container transport - even though, in this case there are possible differentiating elements with regard to other sectors of traffic.

All this must be placed within a framework in which a society based on information systems, telecommunications, information technology and telematics can strengthen the power of the Conferences in applying agreements.

Leaving aside this last factor, the types and arrangements of competition continuing in traffic sectors which may still be conceived as operational areas in an updated Conference system should not differ substantially from those of the past. The main issues are the presence of outsiders, competition concerning the quality, standard, frequency and times of the service offered, floating of cartels, and competition among different sources whose products - carried by companies from different Conferences - flood the market. Within the context of traffic connections covered by feeder services, the presence is more than likely of one or several components external to the sector and forming part of one or other of the large groups or alliances operating in intermodal transport on the major routes. This group or alliance may even have undertaken the formation of the sector and stayed on - for example by means of subsidiary companies - as active participants able to manipulate the situation and course of events.

13. Traffic Flows and Contestable Markets

Significant elements in the study of the arrangement and evolution of competition in the liner shipping considered may be found in the theory of the “contestability” of markets.

Barriers to entry may exist in national cabotage markets when the type of transport in question is subject to preferential treatment in favour of the fleet entitled to fly that nation’s flag. Obstacles to entry to a sector consisting of intermodal feeder services for containers may also be deliberately created by one of the outside components (groups and alliances operating on the major oceanic routes); however, it is difficult to discern any advantage that an outside component could derive from such action, given that the potential newcomer would constitute an additional competitor in a market where it is in the collective interest to keep prices down.

Leaving aside this possibility, the markets consisting of traditional liner shipping, international regional connections with limited traffic (“thin routes”) or local (short sea) traffic may be broadly termed “contestable”. This emerges in recent analysis and may be explained with reference to reasons such as the following:

a) lack of substantial and effective obstacles to market access for a newcomer (an outsider or a new participant in an open Conference of the North-American type) when there is no unilateral or bilateral flag discrimination. This has been the case even more since the traffic quotas (including those foreseen by the 40/40/20 rule of the UNCTAD Code for Shipping Conferences, approved in Geneva in 1974 and in force since 1983) have revealed themselves to be more sources of contention than of acquisition of traffic, and after the industrialized nations have adopted concrete persuasive measures in relation to the developing nations based on other types of advantage and concession granted to the latter;

b) lack of “sunk funds” due to the type of fleet and organization, as well as to the possible adaptability of material and organization in other not markedly different traffic sectors;

c) national or EU or UNCTAD Code regulations providing for fair play with regard to outsiders and new comers in general. The consequence is a limitation of the possibility of a reaction on the part of those already present in the market (the idea of the “inert monopolist”);

d) brief (hit and run) market raids, in specific conjunctures or situations, can always be carried out.
by large groups and alliances operating on major oceanic routes, given the dual factors, firstly, that the use of means necessary compared to the size of the capital and the structure of the alliances is limited and, secondly, that the means thus used can be employed elsewhere without any problem, thanks to the global operational horizon of the group or alliance. (Consider, for example, the possible intervention by large alliances on “thin routes” in reasonably close proximity to the major routes on which such alliances operate.)

14 Major Routes, Contestable and Non-Contestable Markets, Landbridges

As has been argued above, the most important new elements in the evolution of new market forms in international shipping competition regard the large companies, groups and global alliances, on the one hand, and the major oceanic or circumnavigation routes of intermodal and especially containerized transport, on the other. As far as concerns the major oceanic routes or “Round-the-World” services, the magnitude of the “sunk funds” is certainly considerable compared to the fleet, the shore structures, the networks of transport and internal terminals and the organization of the system. Here as well, as emerges from the recent surveys already cited, it seems reasonable at least for this reason to hypothesize, alongside a potentially very limited degree of competition within the markets, a substantial “non-contestability” (or at least low level of contestability) of such markets.

Nor should it be thought that the competition “between major routes” - for example the previously cited “pendulum routes” Singapore/Mediterranean/Northern Europe/New York as opposed to Singapore (the East)/Los Angeles/New York, or global circumnavigation routes - constitutes a case of “contestability” of markets. Each such system of routes and/or service requires its own organization involving a suitable fleet, appropriate technology, knowledge, an organizational complex, agreements between different types of major carriers and/or shippers - i.e. a very substantial “sunk fund”. The material, organization, network, technology and agreements generally cannot be transferred from one major route to another without heavy losses.

The situation which is emerging is simply that of competition between strong economic systems with a territorial basis - just as these may emerge in the shipping sector - and between large shipping centres in a global market. It is an emblematic example of global economic competition. This specific competition places important limits on policies of pricing, quality, fleet and organization implemented on the individual major routes, even though the latter have oligopolistic market forms in relation to the existence of other large entities operating on the world market. All things considered, this is simply a derivation from the theory of the limit price. And it is not accompanied by the distinguishing features of the contestability of markets.

Nevertheless, within this global framework it is possible to identify a number of cases of the contestability of markets. For example, both the North-American landbridge and those proposed in Europe are not necessarily based on material which cannot be otherwise employed, even where such material is specially built. Railway networks on a continental scale such as that in North America and, today, also that in Europe, can offer various alternatives for diversified use of the material employed. By way of example, in the previously mentioned case of the shuttle train for containers from Milan to Rotterdam, an extension of little more than 100 km can turn it automatically into a landbridge, which can just as easily revert to being a shuttle service on the original (or some other) route.

By the same token, the organization of networks of inland terminals, or operational complexes such as “Distriports” or “Trade and Distribution Centres”, could be utilized for different ends even though they were conceived and established for service on the “pendulum routes”. The port infrastructures and plant can be used by different flows of traffic, even where they are initially designed for one specific purpose. And so on.

In none of these cases is it possible to speak of a “sunk fund” or non-reversible commitments. While, for its part, the competition between ports and between shipping centres is intensifying considerably.

This paper has merely provided a few examples. The intention has been to extend the concrete analysis of the relationship between alternative competitors and contestability of markets, for a discussion on the subject in relation to the evolution of global economic competition in shipping transport following the rise of intermodality, in particular in containerized transport.

The subjects dealt with here are increasingly the focus of attention for anti-trust legislation and policy and fair trading at European Union level (EU bodies and governments of member states).

Appropriate intervention is far from simple. In fact, it is easy to err and intervene inappropriately giving rise to results which are contrary - or at least different - to those intended.