THE ITALIAN MARITIME ECONOMY IN THE MEDITERRANEAN AREA

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Abstract

The maritime industry approximately 2.6% of the Italy's Gross Domestic Product with an overall production of 42,170 billion lire and 308,680 employees, approximately 1.4% of the total national labour-force. Production data showed that every lira of additional demand in the sea industry sector activates an overall output of 2.6 lire (production multiplier) in the Italian economy by means of mechanisms transmitting impulses upstream and downstream of production process. As far as employment is concerned, each additional work unit requested by maritime sectors creates an overall total of 2.5 in the national economic system (employment multiplier).

THE INTERNATIONAL CONTEXT

The first step when carrying out a study into the maritime economy involves the reconstruction of the general international scenario and of Italy's role within it. Any discussion of the sea and related activities is necessarily conditioned by the planetary nature of the subject: given that most of the planet's waters cannot be attributed to a single State and belong to the whole of humanity, the sea becomes, by definition, an international environment.

I would like to begin by briefly reflecting on the nature of the **internationalisation process** which, leaving the physical and territorial aspects of the matter aside, has progressively brought the different sea-linked economies and activities of each country in contact with each other.

Although there are numerous factors favouring the internationalisation of the maritime economy, four stand out as indicating the sector's vocation:

- **globalisation of the market;** for some time now, the reference market for enterprises linked to maritime transport has not been domestic, but continental, in the first place, and planetary, in the second one. According to some estimates, in 1995, the world maritime transport of raw materials registered a 3.5% increase in traffic - with different trends according to the type of cargo transported - for the tenth year in a row;
- **the flexibility of production structures;** thanks to the internationalisation process and the consequent need to abolish any kind of protectionist system for national markets, large industries as well as small enterprises have been required to restructure their own production capacities or the dimensions of the services offered, even at the cost of great sacrifices. Fincantieri (large shipbuilding company), for example, was forced to reduce its workforce by about 5,000 units from 1991 up to today;
- **the development of port facilities;** in an overall situation characterised by the optimisation of transport quality and times, the port represents the logistic centre of international commercial exchanges and possesses the most advanced technology directed at closing the gap between land and sea, and at limiting cargo transfer time from one transport system to another (development of intermodality). This capacity is particularly relevant not only for the national economy in which the port is situated, but for the entire continent;
- **environmental protection;** the impossibility of containing the sea within national boundaries makes it a natural resource belonging to everybody and requiring a joint international effort to protect it; the sea industry, from major shipbuilding to pleasure boating, from the shipping industry to fishing, has taken on this burden by reorienting both its production processes as well as the finished products towards technologically advanced systems capable of limiting to the greatest possible extent damage to the surrounding environment. This new trend has made maritime transport highly competitive in environmental impact terms compared to air, road or rail transport.

Although it is difficult to separate national maritime economy from the international one, we can, nevertheless, outline the position of the enterprises "flying the Italian flag" in a planetary context. We must point out that, despite its diversification, Italy's presence in this international market sector is a significant one.

As far as the **large shipbuilding industry** is concerned, Italy plays an important role in the construction of passenger ships while it is second to Japan and Korea for the cargo ship construction.

As far as the **shipping industry** is concerned, the position of the Italian fleet is a secondary one with respect to overall size. Italy is in the 20th place in the world classification of national fleets, and reaches 16th place if we include ships flying foreign flags controlled by Italian shipping companies. This position is also a result of the growth of fleets belonging to the so-called "flag of convenience countries". The Liberian and Panamese fleets include nearly 30% of the planet's ships today, although these countries become insignificant if we consider the shipping companies controlling their fleets. In fact, Greece, Japan, Norway and the United States control over 40% of the world fleet. The Italian fleet clearly occupies an inferior position when compared to these "superpowers", although Italy is not lacking in sectorial success: the Italian passenger fleet is in second place among world fleets in the classification by flag, and in the third place in the classification by controlling shipping company nationality.

Although the Italian shipping industry controls less than 2% of the world fleet it is still capable of playing a role within international maritime transport markets by means of two strategies:
- the first, adopted by the major shipping companies, consists of the renewal and expansion of the fleet, in the re-engineering of transport organisation, and in the identification of a specific segment of the transport market (passengers, cargo, passenger-cargo, etc.);
- the second, adopted by the small shipping companies, consists of the reduction of company running costs in order to render tariffs more competitive and remunerative.

As far as the **port system** is concerned, Italy has experienced a period of crisis which has caused the country to slide to the bottom of international classifications for this sector. We are gradually leaving this period behind, thanks also to the major boost provided by the privatisation of the running of the main port operations and the opportunities arising from the process of reform of the Port Autonomies: from 1993 to 1995, the Port of Genoa practically doubled its container traffic (from 343,479 teu to 615,000 teu), exceeding the ports of Marseilles, Piraeus, Goteborg and Liverpool, while traffic at La Spezia has also undergone a sharp increase (from 764,970 teu to 965,483), exceeding the port of Le Havre. Although Italy has a long way to go before reaching the quotas of traffic handled by ports like Rotterdam (4,789,000 teu) and Hamburg (2,900,000 teu) the experience of some Italian ports is still significant because this growth trend will continue to increase. In fact, Genoese port authority estimates calculate that this Ligurian port will manage to attract approximately 1,200,000 teu in 1998.

As far as **fishing** is concerned, Italy is in line with the rest of European countries with fish catches which have remained more or less unchanged from 1983 to today, unlike other countries like the United States which increased the quantity of fish being caught by 21% during the same period. The divergence between the old and new continent is probably linked to the difficulties being experienced in Europe in balancing the desire to preserve marine fauna, on the one hand, and the far from marginal necessity of answering the fishing industry's needs, on the other.

The final area, often considered marginal in the maritime production sector, is **pleasure boating.** This sector is extremely developed both in terms of the tourist industry as well as sea economy on an international level as well as in some countries in particular. In the United States, France, Great Britain as well as - in the past - Yugoslavia, various public or semi-public initiatives were launched with the aim of developing tourist ports, marinas and landingplaces. These initiatives which intend to increase the number of berths available nationally and to improve the quality of services offered to national and foreign pleasure boaters have the merit of exploiting the surrounding areas from a naturalistic point of view, and the capacity to bring about major expansion of the tourist market. Italy is far behind with respect to the experiences carried out in the above countries, not only because tourist ports are incapable of handling foreign tourists, but because they are not even capable of satisfying the domestic demand. The Italian nautical reserve of over 800,000 boats may only count upon 77,000 berths available throughout the entire national territory, compared to France which has 120,000 berths on the 200-km stretch of the Cote D'Azur alone.

This lack of infrastructures represents a loss in earnings not only for those directly employed in the sector but also in terms of fall out activities which are estimated to employ approximately 60,000 units.

Italy's overall performance within the international scenario is **definitely encouraging**. However, if it is to play a significant role within the national and international economies as a whole, the maritime sector requires not only the approval but the involvement of the entire Italian political and economic framework which has, on the contrary, often demonstrated its lack of understanding for matters linked to the sea economy during the last few years.

THE NATIONAL SITUATION

It is not easy to establish the position of the maritime economy within the national situation in concise terms, because the formulation of hypotheses and evaluations capable of expressing the variety and complexity of the sectors forming it risks being limited.

Despite their considerable differences, the sectors of maritime transport, auxiliary services (terminal operators, shipping agents, etc.), shipbuilding, pleasure boating and fishing have a common base stemming from the culture and traditions of the sea. Even today they still possess three main joint references areas: the sea as a work environment, the ship as a vector around which the productive activity rotates, and the port intended in the widest sense as land-based civic reference for the development of the necessary links between the territory and social activities.

According to estimates carried out during this study, the maritime industry represents approximately 2.6% of the Italian Gross Domestic Product today with an **overall output equal to 42,170 billion lire** divided as follows: 17,360 billion from maritime transport; 6,450 billion from port operators, shipping agents and other auxiliary services for maritime transport; 3,900 billion from the boat repair and construction sector, 7,640 billion from the pleasure boating industry (intended in its widest sense of boat building, accessory production, and including fall out turnover from nautical tourism) and finally 9,250 billion from fishing.

The contribution of the maritime sector to the Italian economy as a whole is certainly a large one. In order to gain a better idea of its dimensions, we will supply some useful reference data. For example, this sector's contribution is nearly double that of the vehicle production sector (22,971 billion in 1994) and is just under that of the entire agricultural sector (53,563 billion) if we consider it to include the fall out turnover produced by nautical tourism.

The importance of the maritime sector is not limited to the turnover produced but also has repercussions in the field of employment. The maritime industry employs a total of **308,680 work units** (122,000 units employed directly and 186,000 units employed in fall out activities) approximately 1.4% of the national total in 1994 (equal to 22.3 million). Of these, 80,100 are involved in maritime transport (29,800 in direct activities), 54,700 in auxiliary services to maritime transport (port operators, shipping agents, and other auxiliary services) (of which 32,200 in direct activities), 34,500 in the shipbuilding and repair industry (of which 16,500 in direct activities), 74,300 in the pleasure boat industry (of which 7,500 in direct activities and 60,000 in fall out activities by nautical tourism), 80,400 in the fishing industry (of which 36,000 in direct activities).

By way of comparison, we should note that the entire agricultural sector employs 1.9 million work units (8.5% of the Country's total work units), while the construction industry employs approximately 1.6 million units (7.2% of the total).

In addition to the estimates concerning economic accounts and work units, the sea activities industry's contribution to the entire national economy can be evaluated by observing a number of economic parameters called multipliers (of production and of employment) which supply an indication of the extent of the potential impact an eventual increase in investments or employment in the sector would have on the entire economy.

As part of this study we decided to process these indicators; as far as production is concerned, every lira of additional demand within the maritime industry sectors activates (by means of impulse transmission mechanisms upstream and downstream of the productive process) a total output of **2.627 lire (production multiplier)**, while every additional work unit required of the maritime sectors generates **2.530** units in the national economical system (**employment multiplier**).

These conclusions show this sector's capacity to support the Country's development both in economic as well as employment terms, confirming the hypothesis suggesting that the sea economy is one of the driving forces behind Italy's economy as a whole.

This hypothesis can also be inferred by interpreting the statistic data gathered in framework of this study.

The port of Genoa expects its traffic to double during the next two-year period with container transport, for example, exceeding a million teu a year. The positive margin of the pleasure boating industry's commercial balance doubled between 1993 and 1994.

Although this data is incomplete, it provides an initial idea of the potential of the maritime system which does not only benefit this sector but all sectors activated by it. 75% of the value of a cruise liner, which reaches a total of about 600-800 billion lire, is represented by supplies (labour and materials) provided by subcontractors; in the same way, all the service activities linked to maritime transport have a strong impact on local set-ups connected to port systems in terms of development of transport networks and increase of commercial flows.

Table 1 - Estimates for the sea economy

Branch of activity	Production		Employment		
			Work units		
	GDP	Multiplier	Direct	Fall out	Multiplier
Maritime transport	17,360	3.143	29,800	50,300	2.688
Shipping agents, terminal operators and other auxiliary services for transport	6,450	1.887	32,200	22,500	1.699
Shipbuilding industry	3,900	3.963	16,500	18,000	2.091
Pleasure boating (Includes the estimate of fall out activities from nautical tourism, equal to 6,000 billion lire for a total of 60,000 work units. Excluding the values of fall out activities, the production and employment multipliers would amount to 2,278 and 1,907 respectively)	7,640	6.538	7,500	66,800	9.907
Fishing	9,250	3.211	36,000	44,400	2.233
Total (The total may not correspond to the sum of the single branches because it was calculated net of possible overlapping)	42,170	2.627	122,000	186,680	2.530

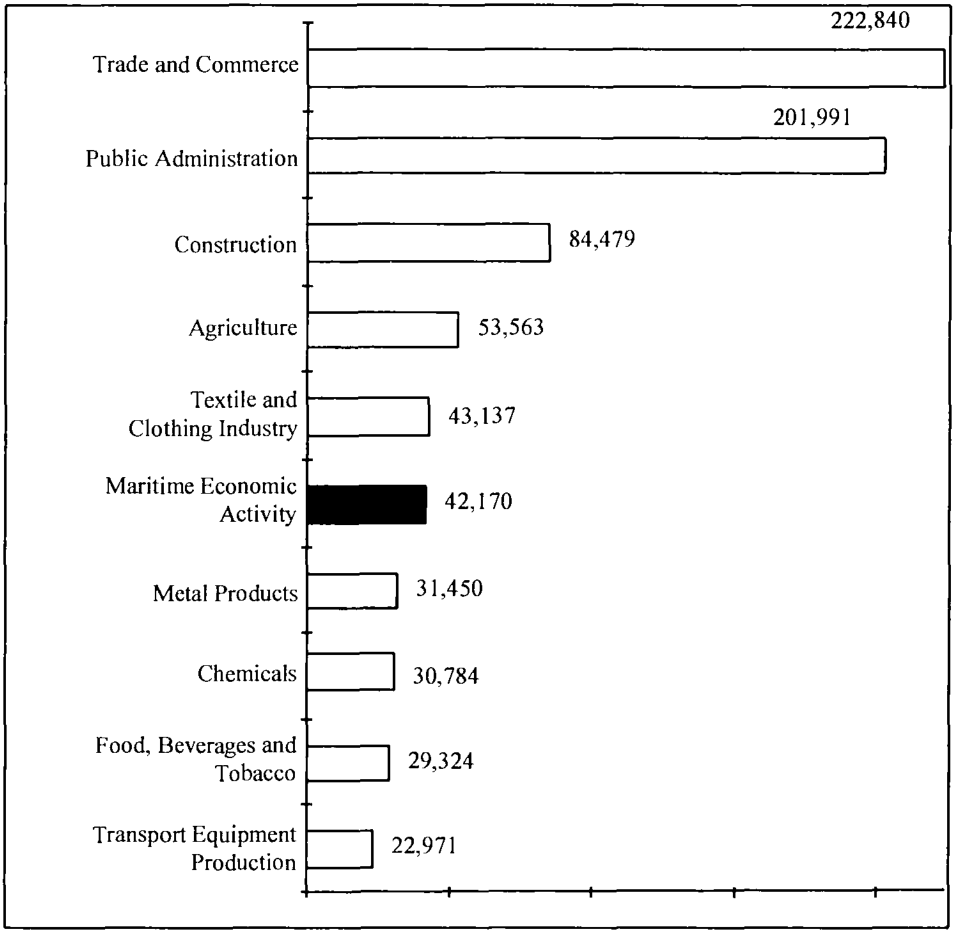


Fig. 1 - Gross domestic product at market prices for some economic sectors (Billions of Italian lire - 1994)

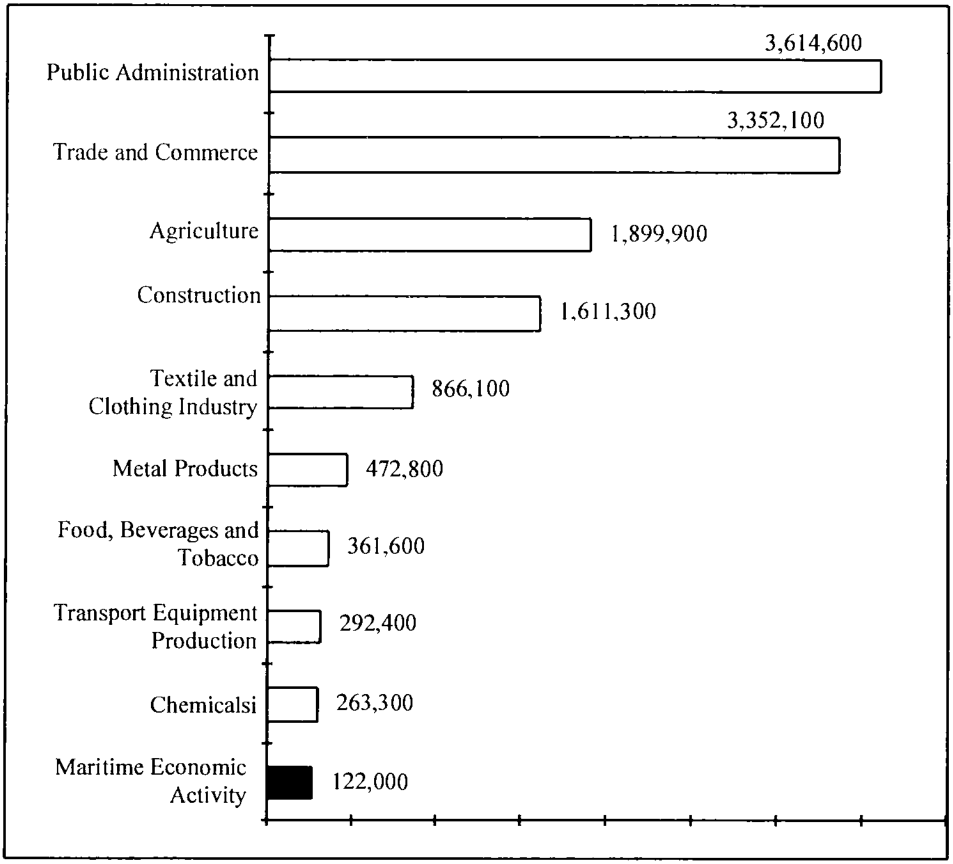


Fig. 2 - Work units for some economic sectors (1994)

PROFIT AND LOSS ACCOUNT FOR THE MARITIME SECTOR

After having described the national situation of the maritime economy in our study, we went on to analyse the profit and loss accounts for every single component of the sector. In particular, we analysed the economic dimensions and impact on the national production structure of the individual branches.

In addition to an analytical presentation of the corresponding profit and loss accounts and main indicators being considered, we thought it would be useful to carry out a concise comparison of the various branches within this report.

In this way, we highlighted a number of characteristic features of the various branches, both in terms of production and employment dimensions, as well as in terms of their capacity to generate income and work prior to and subsequent to the single production processes.

Below are two tables clarifying these aspects.

The *differing productive dimensions* of the branches considered is also summed up in the following graph. The maritime transport branch emerges as the leading area, (over 17,000 billion), its role yet more significant if we consider all the connected and auxiliary activities (approx. 6,500 billion). While few will marvel at the importance of the fishing sector, with a GDP exceeding 9,000 billion, given the major activities involved in transforming and commercialising the products, the same cannot be said of the pleasure boating sector. In the correct (complete) interpretation carried out by our study, this sector produces over 7,500 billion lire in resources.

Table 2 - Maritime activity sectors - resources and uses (1994)

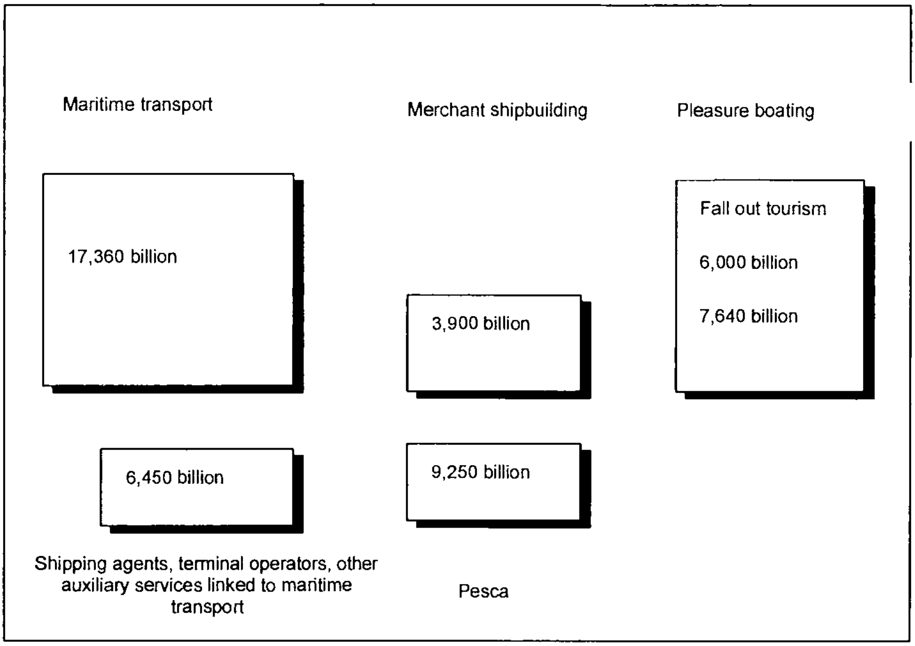
	GDP	Technical coefficient (*)	Downstream impact	Export	Multiplier
Maritime transport	17,360	0.69 (**)	0.064	14,850	3.143
Shipping agents, terminal operators, etc.	6,450	0.51	-	550	1.887
Merchant shipbuilding industry	3,900	0.76	-	700	3.963
Pleasure boating (1)	7,640	0.60	4.120	680	6.538
Fishing	9,250	0.26	2.153	320	3.211
TOTAL [net of overlapping (2)]	42,170	0.60	0.353	17,105	2.627

Table 3 - Maritime activity sectors - work units (1994)

	Direct	Upstream	Down-stream	Total	Multiplier
Maritime transport	29,800	58,000	(**)7,700	80,100	2.688
Shipping agents, terminal operators, etc.	32,200	22,500	-	54,700	1.699
Merchant shipping industry	16,500	18,000	-	34,500	2.091
Pleasure boating (Includes the estimate of fall out from nautical tourism: upstream of pleasure boating we have considered 6,000 billion for a total of 60,000 work units)	7,500	4,950	61,850	74,300	9.907
Fishing	36,000	3,900	40,500	80,400	2.233
TOTAL (Net of overlapping. The total does not correspond to the sum of the five branches. In fact, the sum of intermediate costs - in the first table - and of the upstream work units - in the second table - was obviously considered net of overlapping resulting from internal exchanges. We refer you to the next paragraph for a detailed description and provide the following figures by way of example: of the 58,000 work units upstream of maritime transport, 13,830 are direct work units from other maritime branches (mainly auxiliary services and shipbuilding) and therefore should only be counted once in the total sum of maritime services.]	122,000	92,030	94,650	308,680	2.530

(*) This refers to the ratio between intermediate costs and the output at the cost of factors.
(**) This is a negative entry because maritime transport is an ex-post balance, a branch selling not purchasing downstream services.

Fig. 3 - Aerogram of the GDP of the five main maritime branches (1994)



From the tables above we can observe that:

- the *important export factor* in the maritime economy mainly derives from the highly developed export component in maritime transport: nearly 15 of the 17,000 billion lire output; merchant shipbuilding is also distinguished by this tendency with exports equal to 18% of the output; vice versa, the foreign demand quota is considerably smaller for the fishing sector with an incidence of 3%. As we will describe below, foreign turnover in the pleasure boating division - if we consider the pleasure boat unit production alone - represented 77% of the total in 1994 (499 billion and 644 billion respectively);
- of the four branches considered, the highest degree of *upstream integration* takes place in the shipbuilding industry and the maritime transport sector, and the lowest in the fishing sector. In fact, for every lira yielded, the shipbuilding industry must purchase 0.76 lire of goods and services necessary for production from other branches, while the fishing sector purchases a mere 0.26 lire (technical coefficient). This observation is confirmed by the differing extent of upstream impact for the various branches described below;

A very different picture emerges from the comparison of the branches in terms of downstream impact measured by means of the ratio of distribution costs and production at the cost of factors. In fact:

- the production processes of services associated to maritime transport (agents, terminal operators and other linked activities) and the merchant shipbuilding industry do not produce downstream resources (zero downstream impact) for differing motives. The first branch represents a department already occupying a downstream position, that is, it carries out a distribution activity of goods transported on the market; the branch of merchant shipbuilding, on the other hand, carries out both production as well as distribution and commercialisation activities by itself;
- the maritime transport sector shows a negative downstream impact value. This characteristic is merely an accounting result due to the obvious negative value of the balance of distribution service purchase and sales by maritime transport companies. If fact, being a distribution branch, the maritime transport sector's output included the profit margins of other branches which must therefore be deducted from the resources produced by this sector;

- the fishing sector, which has the lowest activation capacity in terms of upstream impact, manages to activate a large profit output as far as downstream sectors are concerned: every 100 lire requested of the fishing sector (for example, due to high family consumption) produce 215 lire in the downstream activities, that is, the food industry for the transformation and conservation of fish and fish products, the wholesale and retail trades;
- as we would expect, pleasure boating, which was defined taking account fall out in nautical tourism, has the greatest downstream activation capacity of the various branches of the maritime industry: every 100 lire of additional demand, for purchases of sports boats for example, produces downstream resources of 412 lire.

The table clearly shows that overall the upstream and downstream multiplier is greatest for pleasure boating (6.54), followed by the shipbuilding industry (3.96), by fishing (3.21) and by maritime transport (3.14). The lowest value, due, as we explained above, to the downstream position of this sector, is recorded for auxiliary services linked to maritime transport (2.63).

If we consider the estimate concerning work units involved in the various maritime economic activities, the table above shows the work units directly employed in production and those activated upstream and downstream of the production process. It can be seen that:
- the branches of fishing and maritime transport each employ approx. 80,000 work units; while the transport sector reaches this total by means of the major contribution of units activated upstream (58,000, equal to 72%), the fishing sector reaches its total mainly due to downstream activation (40,500, approximately 50% of the total);
- the 74,000 work units activated by pleasure boating are mainly due to downstream production, equal to 61,850 units; as we have already explained, 60,000 of these are a fall out of tourism;
- the shipbuilding industry, which employs a total of 34,500 work units, activates over half in upstream productive processes (18,000); while the remaining 16,500 are directly employed in shipyards;
- the contribution of auxiliary services linked to maritime transport (shipping agents, terminal operators, etc.) to the sea economy's employment pool: 55,000 work units involved (of which 32,000 due to upstream production processes).