



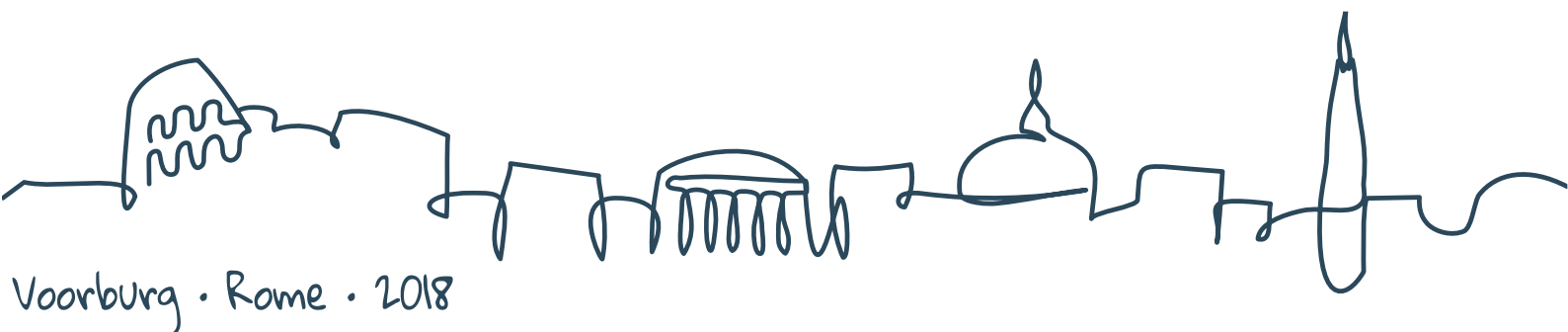
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# SPPI perspective of broker activity in sea transport

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# SPPI PERSPECTIVE OF BROKER ACTIVITY IN SEA TRANSPORT

## 1. Introduction<sup>1</sup>

This paper provides an overview of the sea transport sector highlighting broker activity and its features. Paragraph 2 briefly describes the maritime industry and its market conditions; Paragraph 3 presents the broker role; Paragraph 4 explains the involvement of brokers in the Italian sea transport producer price index and Paragraph 5 concludes.

## 2. The sea transport in Italy

### 2.1 Features

The sea transport sector is very important for modern societies. Increasing globalisation has led to a strong increase in international shipping activity: trade and shipping are closely linked.

Historically, the shipping industry has increased both in its fleets and in the total trade volume capacity. Shipping has long been the major form of transport and, like the rail transport, it is economically and environmentally a very efficient way to transport goods. At the same time, there has been an important increase of other traditional sea-related activities too.

According to the Eurostat Glossary, sea transport is made of both the so-called *deep sea shipping which refers to the maritime transport of goods on intercontinental routes, crossing oceans*, and the *short sea shipping that is the transport of goods over relatively short distances*.

While this definition refers only to goods, the OECD Glossary of statistical terms definition is more general and mentions *any movement of goods and/or passengers using seagoing vessels on voyages, which are undertaken wholly or partly at sea*.

The sea transport can be realized over any distance and for more purposes: commerce, recreation, military purposes. It is a complex sector, in fact, different modes of services and many operators characterize it and it splits up into two parts: passenger transport and freight transport.

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<sup>1</sup> Acknowledgments to: Salvatore Cavallaro for SBS data analysis; Roberta Cacciaglia and Fabiana Cecconi for interviewing brokers; Fabrizio Marinucci and Francesca Sansone for providing graphs.

Historically, sea freight was a key driver of the development of international commerce and nowadays is still popular due to low costs and high vessel load capacity. In fact, it is the first choice for many companies looking for a cost-effective solution in case of long-distance goods transportation while airfreight is preferred for time-sensitive shipments.

On the other side, the importance of sea travel for passengers has decreased due to the increase of air transport, but it is still effective for short trips and pleasure cruises.

For these reasons, the Italian services producer price survey on maritime transport is focused above all on the sea freight, as it is the most important activity in the field of business services.

Because of its geographical features, the Italian peninsula has about 7,458 km of coasts and this fact determines the presence of about 2,400 km of navigable waterways and of a large number of ports for the transport of goods and passengers. These conditions make the maritime transport market very important for the Italian economy. For example, the specialized port sector (containers) is in full expansion and 9 of the 30 busiest ports in the EU, in terms of container traffic, are located in Italy. Moreover, the role of sea transport expanded thanks to the project of 'sea highways' in the framework of the development of the trans-European transport network.

Two types of transport carry out maritime shipping: the liner shipping and the tramp shipping.

The liner shipping service is scheduled and it occurs when a ship carries cargo between fixed ports. It is offered at regular interval and operates even if a ship is not fully loaded. It requires that vessels are well equipped to deal with causes of potential delay, such as bad weather, and have better sea-keeping qualities, for these reasons they are more expensive to build.

On the other hand, in tramp shipping or chartering, the service is not scheduled and the vessel is chartered, with or without crew, for a given voyage (called spot charter or spot market) or for a period of time (time charter) and it goes wherever a cargo takes it.

One of the main differences between liner and tramp shipping is in the type of contract of carriage and Bill of Lading used, that determines the relationship between the ship owner and the charterer. In the first case, the carrier has to act as per terms and conditions contained in the Bill of Lading and similar pre-printed documents. He does not negotiate with the shipper on this issue. In the second case, the trader charters and pays a negotiated rate for the whole ship, for a voyage or for a period of time, with crew or not; therefore he stipulates an agreement with the ship owner.

According to the type of transport, vessels are categorized in different ways. Most modern merchant ships can be placed in one of a few categories, such as, for example: (i) *bulk carriers*, which transport unpackaged bulk cargo items, such as food staples (rice, grain, etc.), coal, ore, and cement in its cargo holds; a bulk carrier could be either dry or wet; (ii) *container ships*, that carry their entire load in truck-size containers, in a technique called containerization and they are known as *box boats* and carry the majority of the world's dry cargo; (iii) *refrigerated ships* (reefers), that

transport perishable commodities which require temperature-controlled transportation, mostly fruits, meat, fish, vegetables, dairy products and other foodstuffs; (iv) *tankers*, that transport or store liquids or gases in bulk; (v) *roll-on/roll-off ships*, which carry wheeled cargo such as automobiles, trailers or railway carriages; (vi) *multi-purpose ships* (general cargo ships), that transport a variety of goods, from bulk commodities to break bulk and heavy cargoes.

Two types of figures play an important role in maritime transport market: the ship owner and the broker. The first is the service provider, the second is the negotiator between the ship owner and the charterer (trader).

## 2.2 Official statistical data

The sea transport industry is included in section H - Transportation and Storage, division 50<sup>2</sup> - Water transport of NACE Rev. 2, the Classification of Economic Activities used in the European Union. The division splits up into four levels among with transport on sea-going vessel is classified in groups 50.1 - Sea and coastal passenger water transport and 50.2 - Sea and coastal freight water transport. The ship owners are classified in these codes.

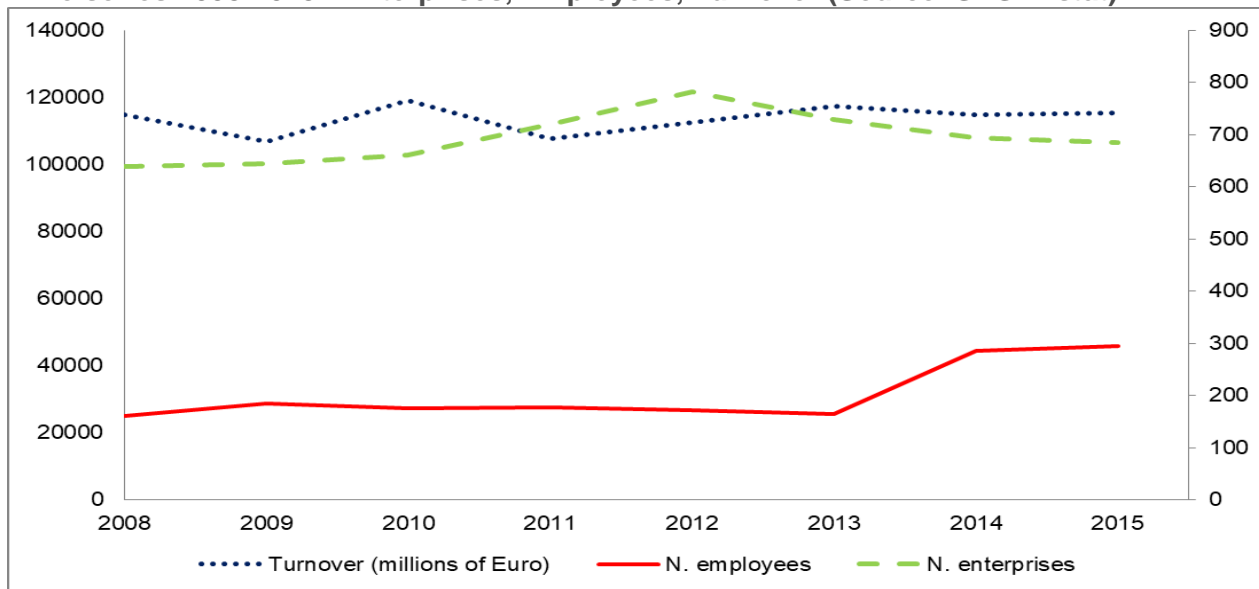
In Italy, according to Structural Business Statistics (SBS)<sup>3</sup>, ship owners are included in 50.1 and 50.2 but, analyzing data, a classification problem arises. All of the tramp companies are included in 50.2, which is the right code because they transport goods, on the contrary, only few of the liner companies, that mostly transport passengers, are in 50.1 code because many of them classify themselves in the wrong place, such as the 50.2 code. This fact misleads the statistical analysis of the universe and the sampling choice can be affected by bias. For this reason, statisticians use other different sources to work on the choice of companies to compose the sample.

From 2008 to 2015, in the sea transport industry, the trend of number of enterprises increases from 2008 to 2012, afterwards it begins to fall. Total turnover annual percentage rate has fluctuating values, with a range between -9.7% and +11.4% (Figure 1).

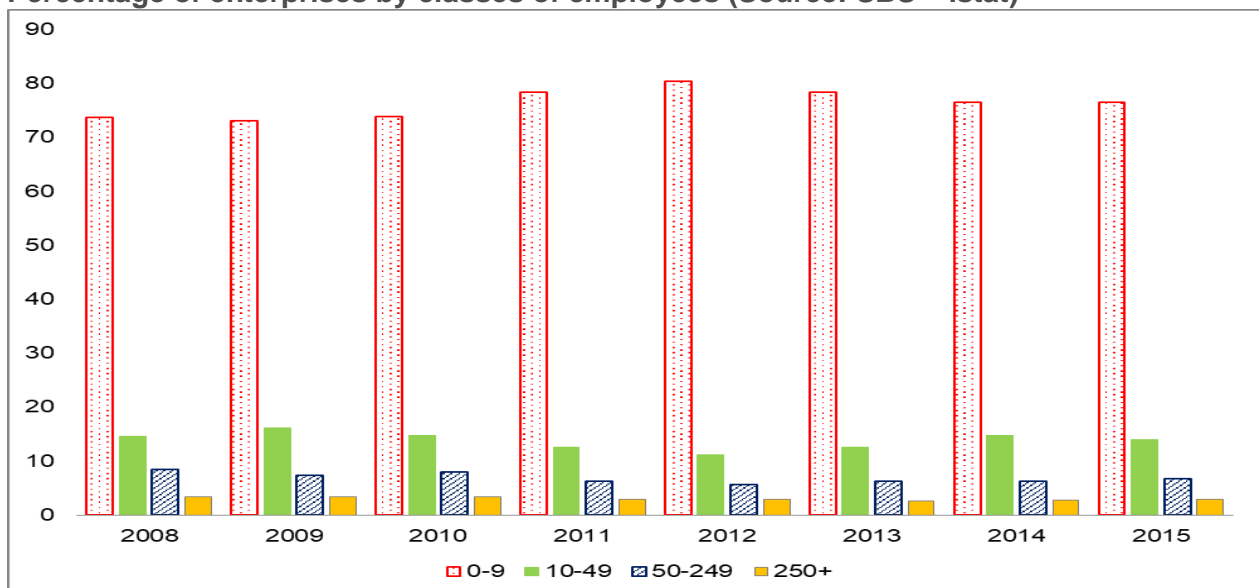
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<sup>2</sup> This division includes the transport of passengers or freight over water, whether scheduled or not. Also included are the operation of towing or pushing boats, excursion, cruise or sightseeing boats, ferries, water taxis etc. Although the location is an indicator for the separation between sea and inland water transport, the deciding factor is the type of vessel used. Transport on sea-going vessels is classified in groups 50.1 and 50.2, while transport using other vessels is classified in groups 50.3 and 50.4.

<sup>3</sup> Some SBS data classes have been estimated from a total.

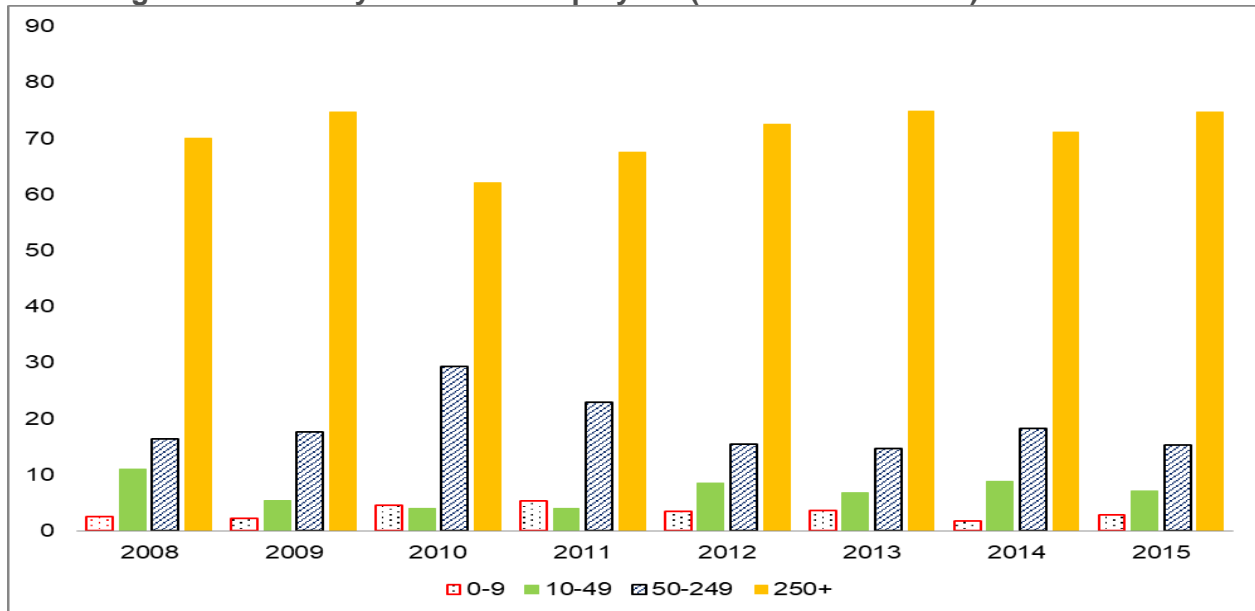
**FIGURE 1**
**Sea and coastal passenger and freight water transport (50.1+50.2)**
**Time series 2008-2015 - Enterprises, Employees, Turnover (Source: SBS – Istat)**


The sea sector is characterized by a large amount of companies with less than 9 employees that, however produces the least percentage of turnover (Figures 2 and 3). On the contrary, the biggest companies are very few but give the biggest percentage of turnover. For the entire period, the distributions of enterprises and turnover, by classes of employees, are inversely proportional dimensions.

**FIGURE 2**
**Sea and coastal passenger and freight water transport (50.1+50.2)**
**Percentage of enterprises by classes of employees (Source: SBS – Istat)**


**FIGURE 3**

**Sea and coastal passenger and freight water transport (50.1+50.2)**  
**Percentage of turnover by classes of employees (Source: SBS – Istat)**



The sea broker industry is included in the same section H of the sea transport industry but it is classified in division 52 - Warehousing and support activities for transportation, group 52.2<sup>4</sup> - Support activities for transportation, class 52.29<sup>5</sup> - Other transportation support activities which, among other activities, contains the voice *Brokerage for ship and aircraft space*. This class is very large and so it does not easily allow the identification of the companies that work in the sea brokerage field, due to missing information on it. Even if Ateco 2007, the Italian Classification of Economic Activities, splits up into a fifth code level 52.29.1 - Shippers and customs agencies and 52.29.2 - Transport intermediaries and logistics services, the problem persists because also these digit levels are wide and the activities of companies that they contain are heterogeneous. After all, official data for brokers companies allow only a non-detailed analysis of the phenomenon.

From 2008 to 2015, in the support activities for transportation industry, the annual percentage rate of the number of enterprises and employees has a small range of values (Figure 4) while turnover

<sup>4</sup> This group includes activities supporting the transport of passengers or freight, such as operation of parts of the transport infrastructure or activities related to handling freight immediately before or after transport or between transport segments. The operation and maintenance of all transport facilities is included

<sup>5</sup> This class includes: forwarding of freight; arranging or organising of transport operations by rail, road, sea or air; organisation of group and individual consignments (including pickup and delivery of goods and grouping of consignments); issue and procurement of transport documents and waybills; activities of customs agents; activities of sea-freight forwarders and air-cargo agents; brokerage for ship and aircraft space; goods-handling operations, e.g. temporary crating for the sole purpose of protecting the goods during transit, un-crating, sampling, weighing of goods

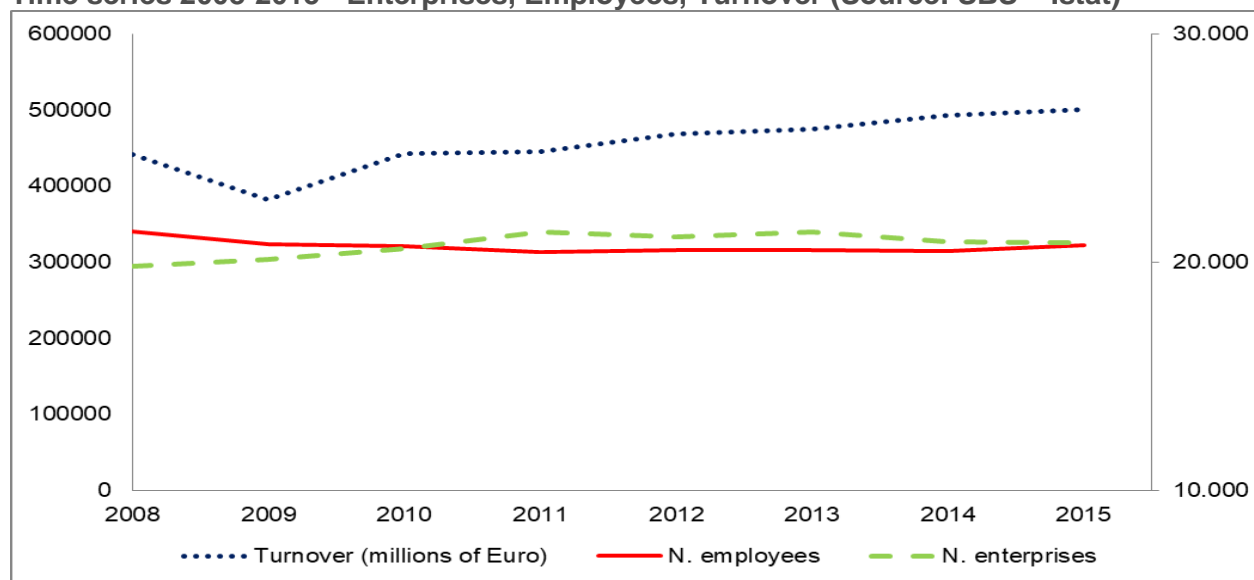
increases. However, these positive results come from an aggregated data analysis that gives a bias view of the broker recent market trend that, on the contrary, had a fall and some brokerage companies merged to survive to the crisis.

The sector is characterized by small enterprises in terms of classes of employees; the biggest companies are the fewest but produce the biggest percentage of turnover even if there is not the same heavy difference such as for the ship owners sector (Figures 5 and 6).

#### FIGURE 4

##### Support activities for transportation (52.22)

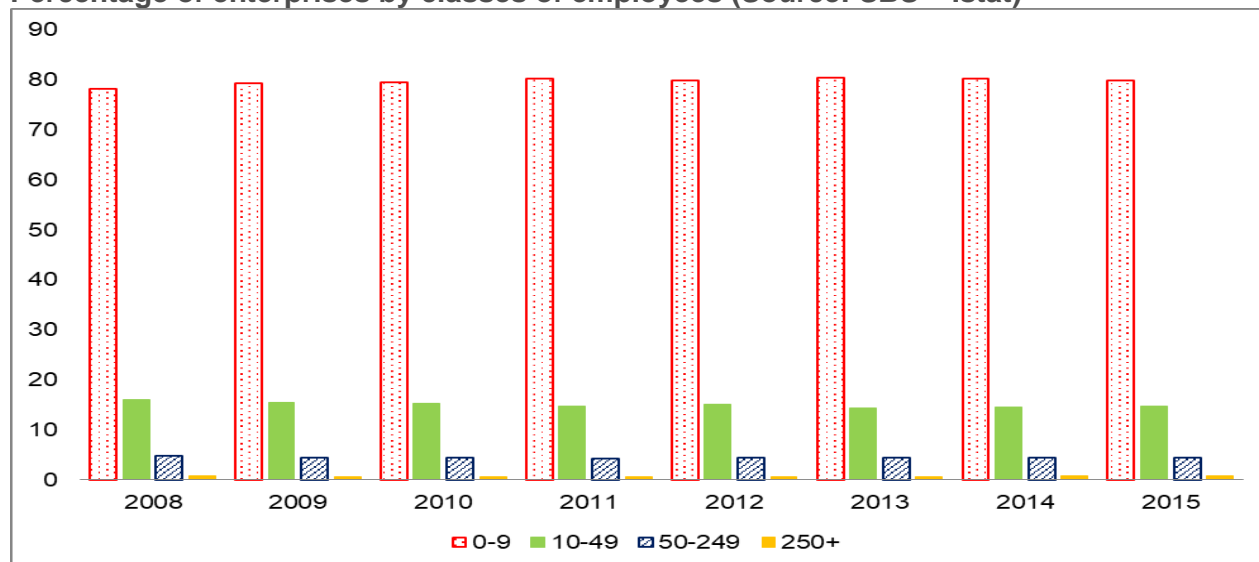
Time series 2008-2015 - Enterprises, Employees, Turnover (Source: SBS – Istat)



#### FIGURE 5

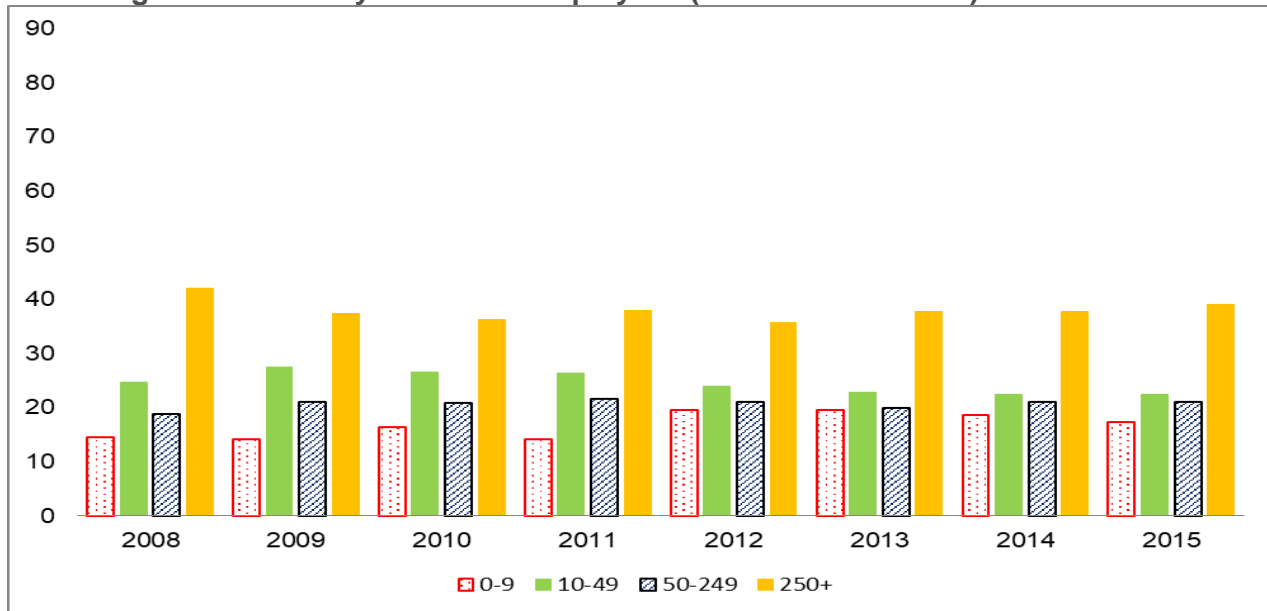
##### Support activities for transportation (52.22)

Percentage of enterprises by classes of employees (Source: SBS – Istat)



**FIGURE 6**
**Support activities for transportation (52.22)**

Percentage of turnover by classes of employees (Source: SBS – Istat)



### 3. The broker activity

#### 3.1 Brokers vs shipping agents

Brokers and shipping agents work in the sea transport market. In Italy, they are two different figures with different responsibilities and specificities. In some circumstances, they can work together but have different skills and different clients even if the same national wage agreement regulates their work. On the contrary, for example, in some big cities of Northern Europe the biggest shipping agencies, that deal with river transport, can have their own brokerage office too.

The shipping agent is a fixed mandatary, responsible for handling shipments and cargo in ports worldwide on behalf of ship owners or charterers. According to the type of transport, the owner or the ship's operator gives him a fee. The duties of a shipping agent are variable and depend mainly on the type of service he gives: for liner transport or for tramp transport.

There are several categories of shipping agents such as "port agents", "liner agents" and "agent with own agencies". For example, the position of the agent in a spot charter is the same as the one from the port agent: usually the charterer appoints the agent while the owner pays him a fee. In a time charter, the situation is different: the time charterer becomes a sort of acting owner, he



operates the ship and appoints and pays the agent. In fact, the time charterer decides what and when the ship load or discharge.

The responsibilities as well as the remuneration of the agent are explicitly included into a contract concluded between himself and the ship owner/charterer where the last authorizes the agent to work under his control and on his behalf. This practice is very common in the liner transport while in tramping the agent usually has a tacit competency to act in the owner's name. Consequently, there is almost never a written contract between the agent and the owner. In any case, the owner remains legally liable for the acts taken by the agent; when the vessel docks the agent represents the ship owner/charterer before the port authorities, about the rights and the duties. He ensures freight documentation, crew transfer and discharge declarations and, quite often, he provides the shipping company with reports on activities at the destination port, so that shipping companies have real-time information while goods are in transit.

In Italy, shipping agents are in the national register of shipping agents and have a bank guaranty as a guarantee for the ship owner for all the legal consequences that may come from their activity. The broker, unlike the shipping agent, is an intermediary whose activity consists in a "pure mediation" aimed at a contract agreement between two parties: the ship owner (who manages the ship) and the charterer (who manages the shipment), that can be a producer company or a retailer one.

The Italian law provides that broker companies enter the national register of sea intermediaries in order to conduct their own activities and they cannot range over other fields. On the contrary, abroad some big ship owners companies can have their own brokers to follow their fleet.

Like shipping agents, brokers have a bank guaranty too as a cover for their own trading mistakes. Many Italian brokers subscribe to trade associations but registration is not mandatory. Associations join forces, help members towards Authorities and terminal operators and give their support in finding skilled employees and in bringing brokers up to date on law changing.

Brokers are called *shipbrokers* when they work for ship owners and their main goal is finding an appropriate cargo for the owner's vessel, they take care of the hiring of ships either in time charter or in spot market tramp. Sometimes they can work for a liner company when it doesn't want to employ all its ships in the liner trade. The ship broker must ensure that ships are continuously employed. According to the position of the ship he looks for a suitable cargo and makes sure the ship never sails without a cargo. To reach these goals, the shipbroker needs perfectly to know the freight market and must rely mainly on his knowledge, experience and public relations.

Brokers are called *chartering brokers or freight brokers or cargo brokers* when they work for charterers (exporters) and their main aim is finding an appropriate ship for the goods that have to be transported. They are the counterparts of shipbrokers. Indeed, where shipbrokers receive one

or more ships for which they have to find cargo, chartering brokers try to find suitable ships for their clients that are the owners' goods.

For his work a broker receives a fee that is a percentage of the transport price and it can depend on the size of the chartered vessel or the type of shipment (liquid or dry). For example, to give an idea, up to 20,000 tons of capacity of the ship, the fee is equal to 2.5% of the transport price and above 20,000 tons of capacity it is 1.25%. Indifferently, ship owners or charterers have to provide for the broker's fee accordingly to their relationships with him; for example, sometimes when two brokers provide shipment to a single ship owner then their fee decreases and the total fee divides into two parts.

Usually a sea transport brokerage occurs between one charterer and one owner, only if the negotiation falls the broker asks to another owner.

### 3.2 Price determining criteria

The crisis of the sea transport market started in 2008 and it was caused by a global speculation due to sky-high prices. Many ship owners did not diversify their freight ton and their type of service, going bankrupt. Due to the crisis, brokers lost about 60% of the Italian customers and they survived only thanks to the diversification of both customers from a geographical point of view and companies' activities in various sectors such as vessels' sales, ro-ro or passengers' transportation. Some other brokerage companies tried to increase their productivity by means of both improving their technological level buying ad hoc software for a quick vessels' location and asking for market consultancies.

Competition among brokers is always high and the capability of finding the best and fastest solution for their own customers is a substantial feature of their activity.

In the sea transport, market trading is made by many steps: *(i)* the charterer asks the broker to find a ship according to the type of commodity he has to transport; *(ii)* the broker looks for the ship owners that have their own ships closest to the port of shipment and propose them a transport; *(iii)* with the broker's help, the ship owners fix their own prices according to the charterer requests; *(iv)* the broker proposes many offers to the charterer and the dealing begins having the goal of reaching the best agreement for both the parties. In this case, the client of the broker is the charterer and, vice versa, the client can be a ship owner asking the broker to find a shipment to be transported.

Sea transport brokerage refers to tankers or dry cargo involved in a spot market transport contract or a time charter one and for both type of contract trading is similar.

The difference is that time charter complexity is higher owing to the presence of more clauses accordingly to the life span of the contract. Moreover, in this case the charterer pays all the variable

expenses or costs of the ship such as fuel costs, port and light dues, tugs and pilot dues, canal dues, agency fees and handling costs. The fixed costs or running costs of the ship, such as the crew's wages, the ship's stores, the insurance of the ship, the costs for administration and others costs are paid by the ship owner, who has different legal responsibilities respect to a spot market transport.

For a spot market, trading competition is higher and the brokerage activity is more frenetic and faster. The spot market transport is based on the coincident needs of a ship owner and a charterer: respectively, the first needs to move the ship the second the shipment, since it is a single transport, from an origin to a destination, the broker has more chance of finding vessels for chartering.

The broker duty is looking for all the ships that, in a window of time, are in a specific geographic area managing to cover the charterer's requirements. Then he locates the nearest ships to the shipment port and identifies, among all the owners, the one that asks for the cheaper price. Negotiation starts with a firm offer: the charterer undertakes to treat only one ship because ethically the broker cannot simultaneously handle a deal with several clients. He tries to find an agreement that satisfies both the ship owner and the charterer.

A time charter transport strictly depends on the ship owner's availability to give his ship to a client for a fixed period. In fact, if the market dynamic is unfavourable, the owner may have no interest in hiring his ship for one or more years against a low income. For example, if a ship owner who has costs for \$ 10,000 a day, has no interest in chartering his ship for \$ 9,000 a day for the next three years because his company will surely show a loss for the next three years. As a result, time charter contracts are rarely used in some market situations, especially when the market is increasing. On the contrary, a ship owner is more willing to charter his vessel for a fixed period of time when the market is downhill to ensure a better transport price compared with a future changeable price. In this case, behind the time charter tramp there is a charterer who insures the ship for a certain number of transports, giving the ship owner a fixed income per day, lasting the whole period of the contract.

In general, prices levels for tramp sea transport are fixed according to some shipping and trade indices. Among them, for example, the Baltic Dry Index (BDI) is *a daily index created by the London-based Baltic Exchange<sup>6</sup> that measures change in the cost of transporting various raw materials. The index is a composite measure calculated by assessing multiple shipping rates across multiple routes for each of the sizes of dry bulk carriers or merchant ships (Capesize, Panamax and Supramax).* It is used all over the world as a proxy for dry bulk shipping stocks as well as a general

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<sup>6</sup> The Baltic Exchange is the only exchange in the world providing real-time maritime shipping information for traders to trade and settle shipping contracts.

shipping market bellwether and it is based on reports coming from contracts obtained by a panel of brokers around the world.

Several variables affect the indices just consider, for example, fuel prices, transport seasonality, international political events, weather, etc. The price level proposed by the broker, on behalf of the ship owner, takes into account these variables too; the charterer makes his own offer and so the negotiation begins.

#### 4. The Italian sea transport produce price index: ship owners and brokers

According to the sea transport market descriptions contained in the previous paragraphs, the Italian producer price index for sea freight transport is calculated taking account of both the liner shipping and the tramp shipping sub-markets (Figure 7).

For the liner shipping, the survey collects the most important origin/destination prices for the following stratification: two destination areas (domestic, international), two transport types (container, ro-ro) and five classes of services (TEU, FEU, car, industrial vehicle and semitrailer).

For the tramp shipping, the survey collects separately prices for spot market and time charter.

On one side, the spot market field takes account of the following stratification: type of good (crude oil, refined petroleum, dry bulk goods), vessel type (the most representatives), navigation areas (the most representatives) and the most important origin/destination in the navigation areas.

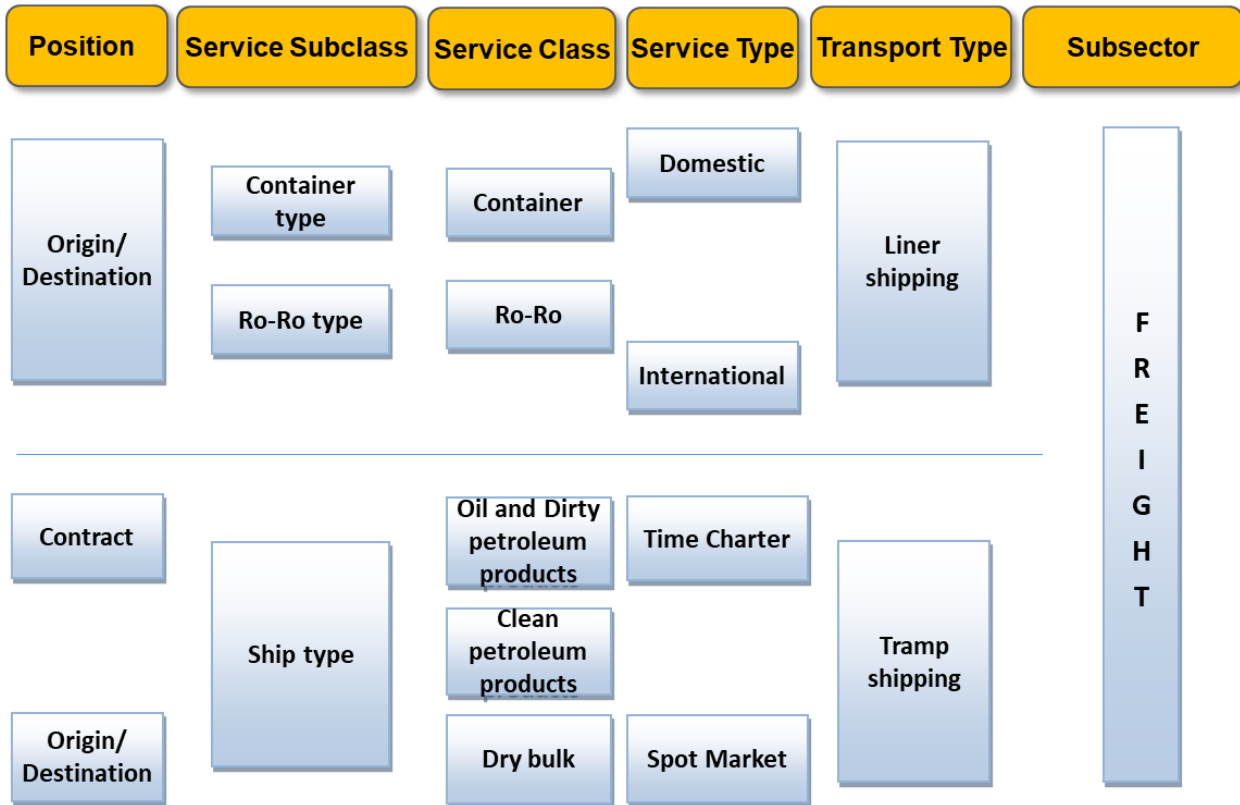
On the other side, the time charter refers to the following stratification: type of good (crude oil, refined petroleum, dry bulk goods), vessel type (the most representatives), contract life (1 year or 3 years).

The liner prices are collected, together with turnover, from the ship owners that operate in this field and they are used to calculate the liner price index.

The tramp prices are collected from the brokers, while tramp turnover is collected directly from ship owners that work in tramp shipping. A mix of these data compose the tramp shipping price index. (Figure 8).

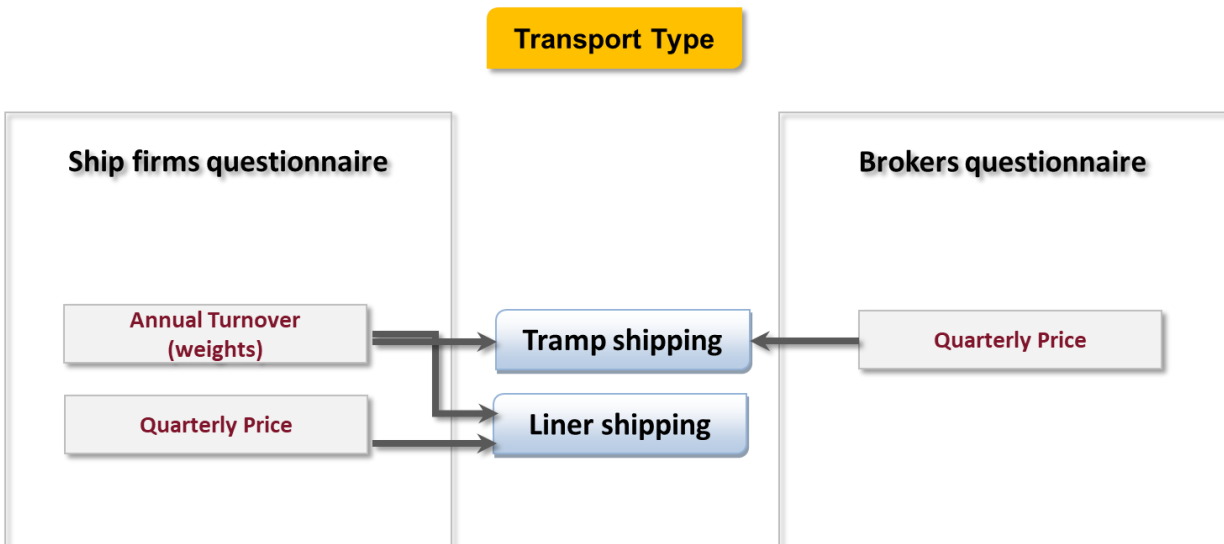
**FIGURE 7**

The structure of the basket for the Italian sea transport SPPI.



**FIGURE 8**

The sea transport SPPI survey in Italy



## 5. Conclusions

Collecting producer prices for the Italian sea transport market is a complicated task due both to its features and its different types of transportation mode. In this world intermediaries play an important and crucial leading role, without them tramp shipping would be even more complex.

In Italy, the choice of collecting the tramp shipping data directly from brokers has the goal of representing in the best way possible the sea market behaviour coming from the Italian ship owners that declare that they even do not know the trading price of their vessels.

Brokers give prices coming from chartering of Italian carrying vessels.

The broker survey began in 2010 and, as years went by, the sample became even smaller owing to the crisis of the Italian sea transport market. Some problems arose because of two main reasons: (i) the continuous burden on a very small sample of brokers produces impatience in answering the survey; (ii) the decreasing of information coming from the Italian ship owners at brokers' disposal due to their leaving the national market in the depths of crisis.

As a solution, some of the Italian brokers in the sample seem to be in favour if Istat decides to use international maritime indices instead of a direct survey. In fact, they state that these indices are reliable, reporting daily market trends and trading. The big quantity and variety of data is undoubtedly a great resource but, if information is not used in the right way, it could arise problems in the measurement of prices that need to be treated with appropriate quality adjustment methods. In particular, one of the broker gave us the following explanation, literally recorded, on the using of international indices: *"There is a stock exchange located in London called the Baltic Exchange that is a private independent body that provides a daily production index calculated with data given by an international group of brokers for both dry and liquid load. The index is calculated fixing a specific route of a specific type of vessel. For the dry tramp market, the considered vessels varies from a Handysize ship, ranging from 20,000 to 35,000 gross tons, to a Capesize ship over 200,000 gross tons. For the liquid tramp market, a similar index is calculated for the oil cargo. The Baltic Exchange index, for all the types of ships, is spread daily at 2:00 p.m.(Italian time). It provides the ship owner and the charterer with an idea of the supply and demand of a particular vessel, both in a specific geographical area and for a given route. For example, a ship owner who asks, for a specific route, about 20,000 dollars a day as a price for chartering his ship and knows that the Baltic has given more or less that value he is asking, then in his opinion he is asking a reasonable market price. The Baltic Exchange is simply a benchmark for all parties. Obviously when there is only one ship that*

*can be chartered and there are no competitors for the same freight, then the ship owner can raise the price and can ask even for \$ 4,000/\$ 5,000 more”.*

The solution of using international indices of the shipping industry could be interesting to apply from a NSO point of view because it could give a large amount of information that, however, could be at the same time less representative of the Italian ship owner market because these indices base on international contracts<sup>7</sup>. Moreover they have a not negligible cost too that could arise a budget problem for a public institute.

Holding in due consideration the previous remarks, an in-depth analysis of the international sea trading indices should be done to decide the opportunity to substitute totally the direct survey or partially integrating it.

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<sup>7</sup> The Swedish NSO already uses international sea transport indices.