

## Chapter 11

# EU Maritime Rules and Transport Sector Policy Reform in Turkey

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### I. INTRODUCTION

High transport costs resulting from inefficiencies in transport services and poor transportation conditions are an obstacle to trade. They impede the realization of gains from trade liberalization. On the other hand efficient transportation services contribute to a country's ability to participate in global trade. Hence, in order to enhance economic development the country has to eliminate the inefficiencies in transport services and improve the transportation infrastructure. Liberalization of transportation services is regarded to contribute to the achievement of efficient

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freight transportation systems and improve transportation infrastructure by giving the country a competitive edge in moving goods economically.

The World Trade Organization (WTO) General Agreement on Trade in Services (GATS) distinguishes between four modes of supplying services trade: (1) cross-border supply; (2) consumption abroad; (3) commercial presence; and (4) movement of individuals. Liberalization of trade in maritime transport sector involves the reduction of regulatory barriers to market access and discriminatory national treatment across all four modes of supply between the countries. The focus is to ensure that existing regulations do not discriminate against foreign participation in the market. Moving to a nondiscriminatory regulatory regime can require significant changes in how the sector is currently regulated. Another key policy area that comes under the spotlight in the liberalization of the sector is the treatment of foreign direct investment (FDI) and temporary movement of labor to provide services in another country, and thus Modes 3 and 4 of GATS.

Countries often have little interest in each other's regulatory regimes or have little confidence in their quality. As a result, they are reluctant to adapt their own regimes where necessary to facilitate cross-border activities. If each country has different regulations in place and does not recognize qualifications in a foreign firm's home country, then the national qualification costs become cumulative costs, as firms in the sector in order to enter the foreign markets will have to incur costs to comply with the qualification criteria of each country. As long as these costs are country-specific, they may become prohibitive in hampering trade and investment. Since maritime transport is inherently international in character, and on most voyages vessels have to operate under the regulatory requirements of many jurisdictions, qualification costs could be decreased if countries would accept some international norms as regulations.

In principle, countries can choose to liberalize a service sector unilaterally. But as emphasized by the World Bank, liberalization may be constrained by four types of issues.<sup>1</sup> First, there may be domestic opposition from those who benefit from protection. Second, a country cannot on its own gain improved access to larger foreign markets. Third, a country may face difficulty increasing competition. Finally, a country may lack the expertise and resources to devise and implement the appropriate domestic regulatory policies. Hence a country should in general seek multilateral or regional liberalization rather than achieve unilateral liberalization.

Multilateral engagement through negotiations under GATS could help. However, for these negotiations to be fruitful, the parties have to recognize mutual interests in reciprocal liberalization. Recognizing these potential mutual gains will allow reciprocal "concessions" that benefit both. But this will require global cooperation which is in general not easy to achieve. Although the achievement of multilateral liberalization of maritime transport sector may be possible in the long run, liberalization of the sector through regional agreements is feasible and both parties could in principle gain from such liberalization. But even here there is

1. See World Bank, *Global Economic Prospects and the Developing Countries: Making Trade Work for the World's Poor* (Washington, D.C., World Bank, 2002).

caution on both sides. In developed countries there is caution towards trade liberalization mainly because of the associated greater liberalization of the movement of individuals (Mode 4 of GATS), and also because of the effect of liberalization on safety and environment in the sector. On the other hand there is caution in the developing world towards liberalization of the sector reflecting the concern that any future regional liberalization of the sector will be largely one sided in the results it will yield. Their belief is that in regional liberalization developed country maritime service providers will gain significantly improved access to developing country service markets, but the converse will likely not happen. But developing country service providers have to realize that in order to achieve improved access to developed country service markets, they have to harmonize their regulatory frameworks to those of the developed countries, since the regulatory regimes in developed countries are more stringent than those in developing countries.

This paper has several objectives. The first objective is to study the international regulatory regime in the maritime transport sector, since most of these rules and regulations have to be observed by countries trying to liberalize their maritime transport sector. After studying the international regulatory regime in section 2, we turn in section 3 to the study of the regulatory regime in the European Union (EU), since Turkey is trying to liberalize the maritime transport sector by following the EU approach to liberalization. Here we note that the EU has adopted most of the international rules and regulations, and that the EU rules are much stricter than the international rules and regulations. Next, we discuss the Turkish maritime rules and regulations in section 4. Section 5 identifies and quantifies the current barriers to trade in the maritime transportation sector in Turkey. The tariff equivalents estimated are then used to study the economic effects of liberalization of trade in the Turkish maritime transport sector on the Turkish economy, when Turkey is assumed to adopt the EU rules and regulations in the maritime transportation sector. Finally, section 6 concludes.

## II. MARITIME TRANSPORT SERVICES

Maritime transport services consist of three types of activities: (i) international maritime transport, that is, the actual transportation service performed once the commodity is on board of a ship in a country until the moment when the vessel reaches the destination port of a different state; (ii) maritime auxiliary services, that is, any activities related to cargo manipulation in ports and on ships; and (iii) port services, that is, activities related solely to ship management in ports.<sup>2</sup>

Due to differences in commodity types as well as technological improvements in the shipping industry, international maritime freight transport has developed specialized branches. For instance, a clear distinction must be drawn between liner shipping and bulk shipping. Liner shipping is regular shipping with set schedules in

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2. See C. Fink, A. Mattoo and H. C. Neagu, "Trade in International Maritime Services: How Much Does Policy Matter?" (2002) 16 *World Bank Economic Review*, 81–108.

different harbours published in advance. The liner fleet includes container ships, reefers (refrigerated vessels), roll-on/roll-off (“ro-ro,” where trucks and trailers are driven into ships) and multipurpose vessels, and cargoes are transported for several shippers simultaneously. The capital-intensive character of liner shipping, particularly container shipping, has led to a substantial degree of concentration. Of the top 20 liner operators, 11 of whom are based in Asia, accounted for 67 per cent of the capacity in 2004.<sup>3</sup> On the other hand, non-liner shipping is performed irregularly and is provided on a demand basis predominantly by specialized bulk carriers. Vessels carry unpacked dry cargoes (iron, grain) or liquid cargoes (oil, gas), and bulk shipping operations are carried out for individual shippers. Compared to liner shipping there is less concentration in bulk shipping, and there are a substantial number of small owners with fleets of one or two vessels. While non-liner tankers and bulk carriers dominate in terms of trade volume, liner vessels are far more significant in value terms since they tend to carry relatively high-value and low-volume cargoes.<sup>4</sup>

A principle organizational feature of the liner sector is the ability of operators to enter into co-operative arrangements and agreements with the organization of “conferences.” Worldwide, there are according to OECD over 300 liner conferences.<sup>5</sup> As one of the oldest cartels in the world, shipping cartels commonly involve collusion to set prices and limit competition among members. Closed conferences not only set freight rates, which apply to all members, but also allocate cargo quotas and restrict membership, while open conferences merely set the freight rates on a specific route.<sup>6</sup> A recent development in the sector has been supplementation of conferences with verbal agreements and similar arrangements. Compared with independent shipping operations, conferences are expected to determine the fleet capacity, create scale economies, prevent unexpected fluctuations in freight rates, limit competition between members and generate higher profits. However, it is usually argued that even if conferences create cost savings, part of these savings is not necessarily passed on to shippers, consumers and producers of shipped commodities. Conferences usually cause increases in shipping rates and establish market power for their members, thereby restricting the entry of newcomers and delaying improvement in the quality of shipping services.

3. See United Nations Conference on Trade and Development (UNCTAD), “Review of Maritime Transport, 2006,” Report by UNCTAD Secretariat, United Nations (New York and Geneva, 2006).
4. J. Kang and C. Findlay, “Regulatory Reform in the Maritime Industry” in C. Findlay and T. Warren (eds), *Impediments to Trade in Services: Measurement and Policy Implications* (London, Routledge, 2000), pp. 152–171; World Trade Organization (WTO), “Maritime Transport Services: Background Note by the Secretariat,” S/C/W/62 (November 16, 1998); WTO, “Maritime Transport Services: Background Note by the Secretariat,” S/CSS/W/106 (October 4, 2001).
5. See Organization for Economic Co-operation and Development (OECD), *Regulatory Issues in International Maritime Transport* (Paris, Directorate for Science, Technology and Industry Division of Transport, 2001).
6. Closed conference regimes mean that the right of admission and withdrawal is prescribed, and certain specific and varying conditions must be met. On the other hand in open conferences newcomers cannot be denied entry.

The prevalence of conferences flows directly from the exemption they enjoy under the antitrust laws of the United States, European Union and many other countries.<sup>7</sup> Under these systems, shipping conferences are considered as necessary to ensure stability and certainty in the movement of freight. But in recent years, the power of conferences has eroded. Containerization has made it possible for outsiders to supply the same services as the conferences at lower cost to consumers. Non-conference lines offering independent, semi- or full container services at a frequency varying between weekly and fortnightly has emerged, based mainly in the newly industrializing economies of East Asia. WTO reports that the share of non-conference lines in the world liner shipping market is about 50 per cent.<sup>8</sup>

On the other hand the bulk traffic is organized as a spot market, and contracts are allocated on an extremely competitive basis. As pointed out by the WTO, business is won on the basis of freight rates a few cents per ton lower than the competitor.<sup>9</sup> Hence, bulk shipping services and related freight rates respond to market developments and to supply and demand pressures. Bulk shipping pools are occasionally created, but they fail to survive for long periods.<sup>10</sup> In addition, these pools are not generally exempted from competition policy laws, and therefore are dealt with by competition agencies in the same way as other commercial activities.

Another organizational feature of the maritime transport sector is the existence of classification societies. The classification societies make rules for ship construction and maintenance and issue a "class certificate" to reflect compliance. They arose from the efforts of insurers to establish that the vessels for which they were writing insurance were sound.<sup>11</sup> The classification societies have no legal authority. Today they mainly aim to enhance the safety of life and property at sea by securing high technical standards of design, manufacture, construction and maintenance of mercantile and non-mercantile ships. More than 50 organizations worldwide define their activities as providing marine classification. Ten of those organizations form the International Association of Classification Societies (IACS).<sup>12</sup> It is estimated that these ten societies, together with the additional society that has been accorded associate status by IACS, collectively class the

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7. See section 3 for further discussion of exemptions in the EU.

8. WTO (2001), *supra* note 4.

9. WTO (1998), *supra* note 4.

10. Some bulk companies do enter into pooling arrangements whereby they share the profits and losses made by their respective fleets.

11. Although a ship owner must class his vessel to obtain insurance and in some instances a government may require a ship to be classed, the importance of the classification certificate extends beyond insurance. It is, as stated by Stopford, the industry standard for establishing that a vessel is properly constructed and in good condition. M. Stopford, *Maritime Economics* (2nd edn, London, Routledge, 1997).

12. The ten member societies that form the IACS are: American Bureau of Shipping (USA), *Bureau Veritas* (France), China Classification Society (China), *Det Norske Veritas* (Norway), *Germanischer Lloyd* (Germany), Korean Register of Shipping (South Korea), Lloyd's Register (UK), *Nippon Kaiji Kyokai* (Japan), *Registro Italiano Navale* (Italy) and Russian Maritime Register of Shipping (Russian Federation).

ships dealing with more than 90 per cent of all commercial tonnage involved in international trade worldwide.<sup>13</sup> The voluntary nature of classification implies that classification societies compete with each other to offer attractive classification services to ship owners. In general, the services offered fall into two major categories, namely developing rules and implementing them. The societies continuously update the rules to reflect changes in maritime technology, and they are responsible for the application of the rules, which includes a technical inspection of the plans of the ship, surveys during construction, and periodic surveys for the maintenance of class.

Turning to consideration of maritime auxiliary and port services, we note that seaports offer many different services. According to Trujillo and Nombela, seaport activities can be divided into (i) infrastructure, (ii) services provided by ports which require the use of the infrastructure, and (iii) coordination between different activities performed at ports.<sup>14</sup> Infrastructure consists of the infrastructure within ports (berths, quays, docks and storage yards) and the superstructure (sheds, fuel tanks, office buildings, cranes, van carriers, trasteiners). Besides the provision of basic infrastructure for the transfer of goods between sea and land, ports provide numerous services, such as pilotage, towing, tying, cargo handling, freezing, administrative paperwork, permits, cleaning, refuse collection and repair facilities to ships. Since there are many different activities being performed simultaneously within the limited space of port areas, there is a need for an agent to act as coordinator to ensure the proper use of common facilities, and to oversee safety of port facilities. In most seaports, these functions are performed by the port authority, which are usually public, although in some cases private organizations.

There are mainly three organizational modes for seaports. Under the so-called “landlord ports” system, the port authority owns and manages port infrastructure, and private firms provide the rest of port and maritime auxiliary services. Private firms are able to own superstructures and operate assets pertaining to infrastructure by concession or licensing. Under a “tool ports” system, the port authority owns both infrastructure and superstructure, but private firms provide services by renting port assets through concessions or licenses. Finally, under the “service ports” regime, the port authority owns assets and supplies services by directly hiring employees.

International maritime laws are developed by the participation of flag and port states in treaties or conventions. International conventions set out agreed objectives for legislation on particular issues, such as maritime safety, pollution control and conditions of seafarers’ employment. They provide internationally accepted templates from which individual flag states can develop their own national maritime legislation. By so doing, it is hoped that most countries will have the same law on key maritime transport issues so that major inconsistencies between national maritime legislations are avoided. Consultation, drafting, adoption of

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13. See the IACS website at <[www.iacs.org.uk](http://www.iacs.org.uk)>.

14. L. Trujillo and G. Nombela, “Privatization and Regulation of the Seaport Industry,” Policy Research Working Paper No. 2181 (Washington, D.C., World Bank, 1999).

drafts, opening for signature by the governments and ratification by countries are major steps in making a maritime convention in which several United Nations (UN) agencies and the Organization for Economic Cooperation and Development (OECD) are involved. At the global level, the maritime industry is principally regulated by the International Maritime Organization (IMO), which is a small UN agency responsible for the safety of life at sea and the protection of the marine environment.<sup>15</sup> The International Labour Organization (ILO) is responsible for the development of labor standards applicable to seafarers worldwide.<sup>16</sup> The third UN agency that deals with international shipping conventions is the Shipping Committee of the UNCTAD. Finally, the GATT/WTO commitments, the ongoing services negotiations at the WTO, and the Maritime Transport Committee (MTC) of the OECD provide important forums for the liberalization of maritime services.<sup>17</sup>

The shipping industry is controlled by a web of national and international regulations and practices. Overall, these regulations and practices can be classified under two broad headings: (i) regulations related to commercial operations and practices, and (ii) regulations related to rights and obligations of states and to safety and environmental regulations.<sup>18</sup>

#### A. REGULATIONS RELATED TO COMMERCIAL OPERATIONS AND PRACTICES

Regulations related to commercial operations and practices include shipping-specific economic policy regulations, ship registration conditions, cargo reservation/cargo sharing provisions, cabotage laws, cargo liability regimes, national security measures, competition legislation, and seaport industry. These regulations reflect a more pragmatic rationale, aimed at giving effect to government policies, the achievement of economic or national objectives, and ensuring national participation or simply regulating commercial activities. While some regulations (such as competition or anti-trust laws) are intended to free up the market, the majority probably distort or interfere with the market to some degree.

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15. The Inter-governmental Maritime Consultative Organization (IMCO) was founded in 1958. Then, in 1982, IMCO changed its name to the IMO. As of the beginning of 2007, IMO has 167 Member States.

16. Regarding maritime transport, ILO's major interest is in working conditions on ships, such as provisions on manning, hours of work, pensions, vacation, sick pay and minimum wages. Between 1923 and 2005 a total of 41 maritime labor conventions concerning seafarers and dockworkers were adopted, in addition to 33 maritime labor recommendations.

17. The Maritime Transport Committee of the OECD is the only international forum that looks at this sector from both the policy and economic perspectives. Key activities of the Committee include the development of common shipping policies and exchange of information on shipping policy developments both within and outside the OECD, and combating substandard shipping to achieve better ship safety and the protection of the environment through the involvement of the entire maritime industry.

18. See OECD (2001), *supra* note 5.

In the case of liner shipping, the basic regulatory framework among OECD countries consists of “The Code of Liberalization of Current Invisible Operations” (the Code) and “The Common Shipping Principles.” The Code was formally adopted by the Council of the OECD in 1961. Under the Code, members are obliged to eliminate restrictions on current invisible transactions and transfers relating to maritime transport operations such as harbor services, repair, and chartering. According to Note 1 to Annex A of the Code, the provisions of maritime freights, including chartering, harbour expenses, and disbursements for fishing vessels, and all means of maritime transport including harbour services (bunkering and provisioning, maintenance, repairs, expenses for crews), and other items that have a direct or indirect bearing on international maritime transport, are intended to give residents of a Member State the unrestricted opportunity to avail themselves of, and pay for, all services in connection with international maritime transport which are offered by residents of any other Member State. As the shipping policy of the governments of the members is based on the principle of free circulation of shipping in international trade in free and fair competition, it follows that the freedom of transactions and transfers in connection with maritime transport should not be hampered by measures in exchange control, by legislative provisions in favour of the national flag, by arrangements made by governmental or semi-governmental organizations giving preferential treatment to national flag ships, by preferential shipping clauses in trade agreements, by the operation of import and export licensing systems so as to influence the flag of the carrying ship, or by discriminatory port regulations or taxation measures. The aim is to ensure that liberal and competitive commercial and shipping practices and procedures are followed in international trade, and normal commercial considerations alone will determine the method and flag of shipment. Thus, the Code generally obliges the OECD members to refrain from introducing and maintaining legislation or other measures in favour of national flag vessels within the OECD, and the OECD Member States, by having subscribed to the Code, are generally obliged to eliminate barriers to free trade in maritime transport services.

“The Common Shipping Principles,” adopted by the Council of OECD in 1987, lays down a common approach to international shipping policy and practices among OECD members based on the following principles: (i) the maintenance of open trades and free competitive access to international shipping operations, (ii) coordinated response to external pressure, based on full consultations among member countries, (iii) the role and recognition of governmental involvement by member countries to preserve free competitive access and the provision of choice to the shippers, and (iv) a common approach to application of competition policy to the liner shipping sector. These principles were reviewed in the late 1990s and a modified version extending and adding to the 13 principles was formally adopted by the OECD Council in September 2000.<sup>19</sup> Principle 14 deals with maritime

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19. See Organization for Economic Co-operation and Development (OECD), “Recommendations of the Council Concerning Common Principles of Shipping Policy for Member Countries,” OECD document number C(2000) 124/Final (September 28, 2000).



auxiliary services and provides that access to and use of these services shall be non-discriminatory. Principle 15 acknowledges the importance of international multi-modal transport services involving a sea leg, and stipulates non-discriminatory treatment in access to and use of those services, as well as a free and fair competitive environment with regard to their provision. Finally, Principle 16 deals with measures related to safety, the environment and the prevention of substandard shipping.

The OECD is also involved in liberalization of maritime services on a regional basis. OECD members signed an “understanding on common shipping policy principles” in 1993 with the Republics of the Former Soviet Union and Central and Eastern European Countries, largely modeled on the “common shipping policy principles” discussed *above*. OECD members have begun a dialogue with the Dynamic Non Member Economies (“DNME,” that is Argentina, Brazil, Chile, Hong Kong China, the Republic of Korea, Malaysia, Singapore, Chinese Taipei). This dialogue is aimed at the promotion of free access to international maritime trade, respect of the principle of free and fair competition on a commercial basis, the promotion of maritime safety, the protection of the marine environment, the need to prevent the operation of substandard vessels and to improve the training of sea-going personnel and the promotion of modern business technologies such as electronic data interchange.

An important category of barriers applied to international maritime transport has been the various cargo reservation schemes. These require that part of the cargo carried in trade with other states must be transported only by ships carrying the national-flag or interpreted as national by other criteria. These policies have typically been justified by either security or economic concerns. Cargo reservation can be imposed either unilaterally, if ships flying national flags are given the exclusive right to transport a specified share of the cargo passing through the country’s ports, through cargo sharing with trade partner countries on the basis of bilateral or multilateral agreements, or through a specific form of cargo reservation scheme. In the latter case the governments of two or more countries may decide to distribute cargo arising from their common trade, so that each national-flag fleet is granted a significant share. Ships belonging to other countries are allowed access to a small share, or, in some cases, no share at all.

It was mentioned *above* that a principle feature of the liner sector is the ability of operators to enter into co-operative arrangements and agreements. To counteract the anti-competitive actions of liner conferences at the multilateral level, the United Nations Convention on a Code of Conduct for Liner Conferences was adopted in 1974. The so-called UN Liner Code, which entered into force in 1983 by its ratification by more than 70 countries, applies only to liner conferences in trades between contracting states, and embraces a self-regulatory philosophy for “closed” conference shipping operations.

The Code establishes a framework within which conferences should operate in trades between contracting states, and grants certain rights to those conferences, but at the same time it imposes certain obligations upon them, thereby protecting shipper interests. The Liner Code is best known for its cargo sharing formula of

40:40:20, which suggests that cargo between member countries be divided, with 40 per cent of cargo being carried by vessels of the country of origin, 40 per cent by vessels of the country of destination and 20 per cent by cross-trading vessels. It should be noted that the 20 per cent figure, and therefore the “40:40” is recommended only. However, two important qualifications need to be made about this provision. First, the provisions concern conference trades only, and not the totality of the liner trade. Second, it is for conferences themselves, not governments, to determine the allocation of the cargo shares between conference members. Governments have no part to play in that allocation. Countries opposing the Convention do so for a variety of reasons. It is stated that cargo sharing leads to inefficiencies, reduced competition, reduction of shipper choice, and ultimately to higher freight rates. It is contended that shipper protection could be provided more efficiently through national legislation, and that ratification of this Convention would be inconsistent with OECD obligations and would run counter to existing competition legislation. Despite having been in force for more than 15 years, the Convention is of limited economic relevance, as the Convention has not been complied with by a large number of countries.

The primary legal authority governing the activities of merchant ships is the state in which the ship is registered, the flag state. It is responsible for regulating all aspects of the commercial and operational performance of the ship. By registering in a particular country, the ship and its owner become subject to the laws of this flag state. That is, registration makes the ship an extension of national territory while it is at sea. Therefore, for ship owners the choice of register is a major issue which may have important consequences in terms of the (a) tax, applicable company law and financial law, (b) compliance with maritime safety conventions, (c) crewing and terms of employment, and (d) naval protection. Beside national registers, however, there are also open, or international, registers. International registers aim to offer terms that are favourable to an international ship owner.<sup>20</sup> Furthermore, in some cases it is also possible for a ship owner to register a ship under two different flags. All of these alternatives to register a ship in one, or two, national registers or simply in an open register force ship owners to carefully weigh the relative advantages and disadvantages of each of the possibilities. In general, the restrictions that apply on ship registration set maximum allowable stakes in a ship permitted for foreign nationals/corporate bodies, or minimum levels that must be owned by domestic interest. Many also require that the person or organization owning that ship should have its principle place of business located within their country, or that certain senior management posts within the owning company be filled by nationals.

In an effort to reserve the largest possible share of the country’s seaborne trade, foreign firms are sometimes restricted from entering, or operating in, the domestic market. Ships engaged in cabotage, referring to transportation of

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20. Panamanian and Liberian registries have been among the most popular open registries since the early 1920s.

commodities between ports of the same country, have been required to be manned by the country's own citizens, either wholly or majority owned by domestic nationals, built at domestic shipyards, or registered under the national flag. In return, owners operating ships on cabotage routes have not had to compete with foreign flag vessels.

Finally, it should be noted that relevant negotiations at the WTO in Geneva with respect to the opening of maritime transport service markets are of significant relevance to shipping's fortunes.<sup>21</sup> These negotiations proved to be very difficult because of the complex and diverse nature of the sector. The first issue negotiators had to deal with during the Uruguay Round was to decide which sub-sectors and activities could be covered in the schedule for maritime transport services. It was decided that negotiations should cover the three pillars: (i) international maritime transport; (ii) maritime auxiliary services; and (iii) access to and use of port services. The first pillar, international maritime transport, was recognized as being relatively liberal, although there were still some important aspects that needed to be addressed, such as national cargo reservation and unilateral retaliatory measures. During the Uruguay Round, considerable attention was given to the second pillar, maritime auxiliary services including cargo handling and storage services, and providing services to ships while in their berths. It was recognized that this was a sector with considerable scope for liberalization. The third pillar, access to and use of port services, covered all other services provided to ships while accessing and berthing in ports, for example towage.

During the Uruguay Round of multilateral trade negotiations there was considerable discussion as to whether multimodal transport should be added to the negotiations as a "fourth pillar." During negotiations in the specialized Negotiations Group on Maritime Transport Services (NGMTS), it was stressed that door-to-door services would play an increasing role in international shipping. The aim was to ensure that a multimodal transport operator should be able to rent or lease lorries, railway trucks, barges and related equipment for inland cargo transport, and operators should have access to, and use of, these facilities on reasonable and non-discriminatory terms and conditions. Hence it was argued that multimodal transport should be considered a fourth pillar to the schedule. Other countries have pointed out, however, that multimodal transport involves regulatory regimes (such as road and rail transport) that go beyond the maritime transport sector, and as such it should not be incorporated into the schedules.

Negotiations on maritime transport services at the WTO aimed to improve commitments in international shipping, auxiliary services and access to and use of port facilities through elimination of restrictions within a fixed time scale. Although negotiations were scheduled to end in 1996, little progress has been achieved until now. Participants failed to agree on a package of commitments.

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21. See "Maritime Transport Services" in WTO Secretariat (ed.), *Guide to the GATS: An Overview of Issues for Further Liberalization of Trade in Services* (The Hague, Kluwer Law International, 2001).

Lately, the talks have resumed. As of 2007, some commitments exist in certain countries' schedules covering the three main areas of the maritime services.<sup>22</sup>

In the case of seaports, public budgets have been used until recently to finance the construction of most large infrastructure. Generally, public port authorities financed the costs of maintenance and repairs for infrastructure, and the port authority itself was financed with a combination of public funds and tariffs and fees exacted from private firms operating in the port. With the increase in private participation in the operation of seaports, the landlord port became the most desirable category, from an efficiency standpoint, for the operation of seaports, since it allows private enterprises and market forces to play a role in the supply of services while preventing monopolization of essential assets by private firms. Trujillo, Nombela and Clark et al. maintain that the type of economic regulation changes with the size of seaports.<sup>23</sup> For small and large local ports that do not require more than a general cargo terminal it is possible to consider the introduction of some form of competition among those firms that are willing to operate in the port. Once the single operator is chosen, it is necessary to have some regulation over the charges that this firm imposes on port users, since otherwise it would enjoy a monopoly position. The regulatory authority could mainly use price-cap systems, or a rate-of-return type of regulation. On the other hand, in cases of larger seaports, one could introduce competition within the port. If a large port is divided into several independent terminals, it is possible to induce competition between operators for the traffic that calls at the port. In such a case, regulation of prices is less of an issue. However, some form of supervision would be needed, since the parties could collude due their small numbers.

## B. REGULATIONS RELATED TO SAFETY AND ENVIRONMENT

The regulations on safety and environmental protection are generally based on U.N. conventions such as the UN Convention of the Law of the Sea of 1982 (UNCLOS). According to this convention, the flag state has primary legal responsibility for the ship in terms of regulating safety and environment, while the coastal state also has limited legal rights over any ship sailing in its waters. The limits of the rights of the coastal states to enforce their own laws are defined by dividing the sea into four "zones," each of which is treated differently from a legal point of view: (a) the territorial sea, which is the strip of water closest to the shore, (b) the contiguous zone, which is a strip of water to the seaward of the territorial sea, (c) the exclusive economic zone, which is a belt of sea extending up to 200 miles from the legally defined shoreline, and (d) the high sea, which nobody owns.

22. For an extensive discussion of maritime transport services in the WTO see B. Parameswaran, *The Liberalization of Maritime Transport Services* (Berlin, Springer, 2004).

23. L. Trujillo and G. Nombela, *supra* note 14 and X. Clark, D. Dollar, and A. Micco, "Maritime Transport Costs and Port Efficiency," World Bank Working Paper No. 2781 (Washington, D.C., World Bank, 2001).

On the high seas all vessels enjoy, in principle, freedom of navigation under the exclusive jurisdiction of their flag state (UNCLOS Articles 87, 89 and 92). While the high seas are free from sovereignty claims by individual nations, the intensity of state control over waters increases landwards. In the exclusive economic zone, the coastal state enjoys considerable sovereign exploration, exploitation, conservation and management rights, as stipulated in UNCLOS Articles 56 and 60. Despite the existence of sovereign exploitation and related jurisdictional rights of the coastal state in the exclusive economic zone, the freedom of navigation under Article 58 applies in this zone, albeit with a number of explicit and implicit restrictions. Article 3 stipulates that coastal states have the right to enforce international laws and their own laws on safe navigation and pollution in a territorial area which has a maximum width of 12 nautical miles. The coastal states have limited powers to enforce customs, fiscal and immigration laws in the contiguous zone, and in the exclusive economic zone they have the power to enforce only the oil pollution regulations.

Since an international maritime transport service involves the movement of goods by vessel from the port of one country to the port of another country, access to ports is an indispensable element of any international shipping service. Access includes the loading and unloading of cargo, the embarking and disembarking of passengers, the taking on board of fuel and supplies and even the possibility of conducting trade. As emphasized by Parameswaran, it is a basic condition for the smooth operation of the international maritime transport industry that merchant vessels from all nations are permitted unhampered access to and efficient use of ports.<sup>24</sup> The 1923 Geneva Ports Convention and the Statute annexed thereto secures freedom of communications by guaranteeing in the maritime ports, under the sovereignty and authority of the parties and for purposes of international trade, equality of treatment among the ships of all Contracting States, their cargoes and passengers.

The “Paris Memorandum of Understanding on Port State Control” (MOU), adopted in 1982, aims at eliminating the operation of substandard ships through a harmonized system of port state control. Ships are selected for inspection according to the Paris MOU targeting system. Only internationally accepted conventions are enforced during port state control inspections. When serious deficiencies are found, the ship is detained. The captain is instructed to rectify the deficiencies before departure. On the other hand, flag states which are not a party to conventions receive no more favourable treatment. The results of each inspection are recorded in the central database, which is located in Saint Malo, France. Their periodically updated black-grey-white lists, which show the degree of riskiness of individual ships from different flag states, became one of the major indicators of safeness and environment-friendliness of national shipping fleets within the last decade.

IMO has adopted a comprehensive framework of detailed technical regulations, in the form of international conventions, which govern the safety of ships and

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24. B. Parameswaran, *supra* note 22.

protection of the marine environment. National governments, which form the membership of IMO, are required to implement and enforce these international rules, and ensure that the ships which are registered under their national flags comply. The majority of IMO conventions fall into three main categories. The first group is concerned with maritime safety, the second with the prevention of marine pollution, and the third with liability and compensation, especially in relation to damage caused by pollution. Outside these major groupings are a number of other conventions dealing with facilitation, tonnage measurement, unlawful acts against shipping and salvage.

The level of ratification and enforcement of IMO Conventions is generally very high in comparison with international rules adopted for shore-based industries. The principal responsibility for enforcing IMO regulations concerning ship safety and environmental protection rests with the flag states. Flag states enforce IMO requirements through inspections of ships conducted by a network of international surveyors. Much of this work is delegated to classification societies. However, flag state enforcement is supplemented by what is known as Port State Control, whereby officials in any country which a ship may visit can inspect foreign flag ships to ensure that they comply with international requirements.

Among the IMO conventions, the “International Convention for the Safety of Life at Sea” (SOLAS), which entered into force in 1980, covers a wide range of measures to improve the safety of shipping. The provisions of the convention cover the design and stability of passenger and cargo ships, machinery and electrical installations, life protection, life-saving appliances, navigational safety, and the carriage of dangerous goods. In 1990, the “International Safety Management Code” was incorporated into SOLAS Regulations. The Code requires shipping companies to develop, implement and maintain a Safety Management System which includes company safety, environmental policy and written procedures to ensure safe operation of ships and protection of the environment. The Code has been effectively enforced, as the violation of the Code could result in detention of the vessel by port authorities, denial of permission for the ship to enter its intended port of call, as well as fines.

The IMO has recently adopted comprehensive maritime security measures at the “Conference of Contracting Governments to the International Convention for the Safety of Life at Sea.” The Conference, held at the end of 2002, adopted a number of amendments to the 1974 SOLAS, the most far-reaching of which enshrines the new “International Ship and Port Facility Security Code” (ISPS Code). The Code contains detailed security-related requirements for Governments, port authorities and shipping companies in a mandatory section, together with a series of guidelines about how to meet these requirements in a second, non-mandatory section. The Conference also adopted a series of resolutions designed to add weight to the amendments, encourage the application of the measures to ships and port facilities not covered by the Code and to pave the way for future work on the subject.

The “International Convention for the Prevention of Pollution from Ships” (MARPOL), adopted in 1973, deals with all forms of marine pollution except the disposal of land generated waste. It covers such matters as the definition of

violation, special rules on the inspection of ships, enforcement, and reports on incidents involving harmful substances. It should be noted that most oil tankers are currently of “single hull” design. In such vessels, oil in the cargo tanks is separated from the seawater only by a bottom and a side plate. Should this plate be damaged as a result of collision or stranding, the contents of the cargo tanks risk spilling into the sea and causing serious pollution. An effective way of avoiding this risk is to surround the cargo tanks with a second internal plate at a sufficient distance from the external plate. This design, known as a “double hull,” protects cargo tanks against damage and thus reduces the risk of pollution. Following the *Exxon Valdez* accident in 1989, the United States unilaterally imposed double hull requirements on both new and existing oil tankers, set according to vessel age limits and according to deadlines for the phasing out of single-hull oil tankers. Faced with unilateral action on the part of the Americans to impose double hull requirements on both new and existing oil tankers during the 1990s, the IMO established double hull standards in 1992 through the International Convention for the Prevention of Pollution from Ships (MARPOL). This Convention requires all oil tankers with a deadweight tonnage (DWT) of 600 tonnes or more, delivered as from July 1996, to be constructed with a double hull or an equivalent design. Therefore, no single hull tankers of this size have been constructed since this date. The International Convention requires that single hull tankers with a deadweight tonnage of 20,000 tonnes or more, and delivered before July 6, 1996, comply with the double-hull standards at the latest by the time they are 25 or 30 years old, depending on whether or not they have segregated ballast tanks.

It has long been recognized that limitations on the draught to which a ship may be loaded make a significant contribution to her safety. These limits are set in the form of freeboards. In the 1966 “International Convention on Load Lines,” adopted by IMO in 1966, provisions are made determining the freeboard of tankers by subdivision and damage stability calculations. The regulations take into account the potential hazards present in different zones and different seasons. The technical annex contains several additional safety measures concerning doors, freeing ports, hatchways and other items. The main purpose of these measures is to ensure the watertight integrity of ships’ hulls below the freeboard deck. All assigned load lines must be marked midship on each side of the ship, together with the deck line.

The 1978 “International Convention on Standards of Training, Certification and Watchkeeping for Seafarers” was the first to establish basic requirements on training, certification and watch keeping for seafarers on an international level. The Convention prescribes minimum standards relating to training, certification and watch keeping for seafarers which countries are obliged to meet or exceed.

Because of the unique character of seafaring, most maritime countries have special laws and regulations on seafarers. On the other hand, the ILO has adopted over 60 maritime labor standards during the past 75 years. The standards adopted specifically on seafarers cover a multitude of questions including minimum age of entry to employment, recruitment and replacement, medical examination, articles of agreement, repatriation, holidays with pay, social security, hours of work and rest periods, crew accommodation, identity documents, occupational safety and

health, welfare at sea and in ports, continuity of employment, vocational training and certificates of competency. Among the ILO conventions, one of the most important international labor agreements is ILO Convention N. 147. According to this Convention, board ships must be similar to those required by ILO standards regarding safety and health, social security, and living and working conditions of seafarers. Additionally, ILO Convention 180, adopted in 1996, aims to promote the health and safety of workers, improve maritime safety and protect the marine environment. The Convention establishes limits on seafarers' hours of work or rest on board ship, requiring a maximum of 14 hours work per day and 72 hours per week for seafarers on board ship, with minimum rest periods of 10 hours daily and 77 hours weekly.

### III. EU RULES AND REGULATIONS ON THE MARITIME SECTOR

Europe is a large peninsula with thousands of kilometres of coastline. It is surrounded by a number of islands, including island-states. The European Union, surrounded by five seas and one ocean, has the world's largest maritime territory, while the maritime regions of Europe account today for nearly half of the EU's population and GDP. Twenty-two out of twenty-seven EU members are coastal states. After Romania and Bulgaria joined the EU, EU borders extend to the Black Sea. Within the enlarged European Union there are now more than 1,000 ports situated near industrial and population centers, representing the largest concentration of ports in the world. Because over 90 per cent of EU external trade travels by sea, and more than 1 billion tonnes of freight a year are loaded and unloaded in EU ports, maritime transport is of fundamental importance to Europe. Shipping is the most important mode of transport in terms of volume.

EU maritime transport legislation aims to apply the EC Treaty's principle of free movement of services to the EU's sea transport industry and its compliance with competition rules. Thus, it aims to improve the functioning of the internal market in maritime services by promoting safe, efficient, environmentally sound and user-friendly maritime transport services. The maritime transport *acquis* relates to market liberalization, technical and safety standards, security, social standards, and state aid control in the context of the internal maritime transport market.

The main international rules that regulate commercial operations and practices, and safety at sea have been transposed into the Community law, ensuring that they have legal force and uniform application throughout the Member States.<sup>25</sup> In this context we note that almost all EU-15 Member States subscribe to OECD's

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25. See Commission of the European Communities, "Background Paper No. 9 on Multilateral and EC Instruments related with the Seas and the Oceans," background documents for the green paper "Towards A Future Maritime Policy for the Union: European Vision for the Oceans and Seas," SEC (2006) 689.



“Code of Liberalization of Current Invisible Operations” and “Common Shipping Principles.”<sup>26</sup> Regarding the United Nations Convention on a Code of Conduct for Liner Conferences we note that the Community is not a party to the Code, since the Code by providing for the allotment of freight on the basis of national shares was held to be contrary to the Treaty of Rome. In 1979, Regulation (EEC) No 954/79 was adopted, requiring Member States to enter a reservation while ratifying the Convention, according to which Member States had to open the national share granted under the Code to all ship owners established in the Community. On September 25, 2006 the Council adopted Regulation (EC) No. 1419/2006 repealing Regulation (EEC) No. 4056/86 laying down detailed rules for the application of Articles 85 and 86 of the EC Treaty to maritime transport. With the adoption of this regulation, shipping conferences will become unlawful on trades to/from ports of the Community at the end of a transitional period expiring on October 18, 2008. This implies that at that time Member States which are party to the Code will no longer be able to fulfil their obligations thereof, namely the one to ensure that their national shipping lines have the right to be members of conferences serving their foreign trade. Those Member States will therefore have to withdraw from the Code of Conduct, and Member States which are not party to the Code will no longer be able to ratify it or to accede to it. Furthermore, we note that the EU countries have ratified the UN Convention on the Law of the Sea (UNCLOS), and they have joined the 1973 MARPOL Convention, amended in 1978, the 1974 SOLAS Convention, and the LOAD LINES conventions. The EU-15 countries have also subscribed to “Paris Memorandum of Understanding on Port State Control,” “International Convention on Standards of Training, Certification and Watchkeeping for Seafarers,” and the ILO conventions including Convention No.147 and Convention 180. Finally, it should be emphasized that most of the EU-15 countries are party to the 1923 Geneva Ports Convention and the Statue annexed thereto.

When considering the EU rules and regulations on maritime transport services we note that real progress toward the realization of a common maritime transport services and a market free of restrictions was achieved in the EU during 1980s and 1990s. The 1986 maritime package consisting of a bundle of four EC Regulations enabled the freedom to provide services to the maritime transport sector. These four regulations are the basic regulations related to commercial operations and practices in the EU. Council Regulation (EEC) No. 4055/86 gives Member State nationals (and non-Community shipping companies using ships registered in a Member State and controlled by Member State nationals) the right to carry passengers or goods by sea between any port of a Member State and any port or off-shore installation of another Member State or of a non-Community country.

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26. France has lodged reservations to OECD’s “Code of Liberalization of Current Invisible Operations” regarding liberalization of maritime freights, including chartering, harbour expenses, and disbursements for fishing vessels. On the other hand, regarding the “Common Shipping Principles,” we note that Greece did not commit itself to accepting Principles 14 and 15 regarding auxiliary services and international multimodal transport.

On the other hand Regulation 4056/86, which has been repealed by Regulation (EC) No 1419/2006, implements the EC competition rules within certain fields of maritime transport. Council Regulation (EEC) No. 4057/86, which entered into force on June 1, 1987, enables the EC to apply compensatory duties in order to protect ship owners in Member States from unfair pricing practices on the part of non-Community ship owners. Concerned with anti-dumping in maritime transport, 4057/86 was adopted in order to respond to unfair pricing practices by non-Member State ship owners engaged in international cargo liner shipping. Finally, we note that in cases where a non-Member State seeks to impose cargo sharing arrangements on Member States in liquid or dry bulk trades, the Council shall take the appropriate action, in accordance with Regulation (EEC) No. 4058/86, to safeguard free access to cargoes in ocean trades for shipping companies of Member States or by ships registered in a Member State.

It has been a common practice in the majority of nations around the world to reserve at least a major part of the transport of goods and passengers between national ports to domestic fleets. In the EC, the southern Member States have been reluctant to open up this sector to service suppliers from other EC Member States. On the other hand northern Member States have insisted on easing national cabotage laws. A milestone in the process of liberalizing cabotage trades within EC Member States has been achieved through adoption of the Council Regulation (EEC) No. 3577/92. It implements the freedom to provide services to the national maritime transport of EU Member States, and provides for the progressive liberalization of cabotage restrictions. The Regulation liberalizes maritime cabotage in the countries where that economic sector was reserved for nationals. Accordingly, freedom to operate between two ports in the same Member State is offered to all Community ship owners, not only to national ship owners.

Regarding ship registration conditions, we note that the conditions vary among the EU countries. In Germany, registration in the German Ship Register is reserved to vessels that are owned by nationals of an EU Member State or by companies having their place of business in an EU Member State, and the registration is a precondition for the right to fly the German flag. In Sweden, however, a ship is entitled to fly the Swedish flag if it is more than half-owned by a Swedish national or a Swedish legal entity. The Swedish national maritime administration may grant the right to fly the Swedish flag to other ships whose operation is essentially under Swedish control, and whose owner has his permanent residence in Sweden.

It is noteworthy that the Commission has taken steps regarding port policy as well. In 2001, the Commission adopted the Communication "Reinforcing Quality Service in Sea Ports: A Key for European Transport." The cornerstone of this Communication was a proposal for a directive concerning market access to port services the principles and objectives of which were confirmed by the "White Paper on Transport." After almost three years of inter-institutional legislative process, at the end of the Conciliation procedure, the European Parliament rejected the compromise text. The Commission, believing it necessary in the interests of operators, authorities and consumers to introduce specific and clear rules on access

to the port services market, decided to bring forward a new proposal. The objective of the proposal is to ensure freedom to provide port services or carry out “self-handling” at sea ports for EU providers of port services, subject to certain objective and relevant constraints such as space or capacity available at the ports; the development policy of the port; maritime traffic security or safety requirements at certain ports; protection of the environment; and public service requirements.<sup>27</sup>

Turning to EU regulations on safety at sea we note that the EU has authorized twelve classification societies to carry out inspection, survey and certification of ships via Commission Decision 2002/221/EC. On the other hand Council Directive 95/21/EC, passed in June 1995, aims to improve maritime safety in Community waters by banning substandard shipping. The Directive applies to all merchant shipping and crews using a seaport of a Member State, an offshore terminal or anchored off such a port or installation. Member States are obliged to establish and maintain national maritime administrations for the inspection of ships in their ports and in the waters under their jurisdiction. Each Member State is obliged to inspect at least 25 per cent of the ships flying other countries’ flags which enter its ports. Vessels which have already been inspected within the previous six months are exempt. Additionally, enhanced controls must be carried out on all oil tankers scheduled for phasing out within five years, all bulk carriers older than 12 years of age, passenger ships, gas and chemical tankers over ten years old (counting from the date of construction represented on the ship’s safety certificates). An obligation is placed on the Member States to ensure that any deficiencies revealed in the course of the inspection are rectified, and conditions warranting detention of the ship are laid down.

On the other hand Council Directive 93/75, signed on September 13, 1993, establishes minimum requirements for vessels bound for or leaving Community ports and carrying dangerous or polluting goods. Carriers must declare the loading of such goods in accordance with international regulations. This directive defines the information which the operator must supply to the relevant authorities of the Member States for which the vessel is bound or which it is leaving, and the action to be taken in the event of an accident. That Directive was repealed, however, by Directive 2002/59/EC, which establishes a Community vessel traffic monitoring and information system. The main objective of the new system is to enhance the safety and efficiency of maritime traffic, to improve the response of authorities to incidents, accidents or potentially dangerous situations at sea, including search and rescue operations, and to contribute to a better prevention and detection of pollution by ships. Applicable to ships of 300 gross tonnage and upwards, the directive

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27. Self-handling refers to a situation in which an undertaking (a self-handler), which normally could buy port services, provides for itself, using its own land-based personnel (or its seafaring crew for cargo handling operations and passenger services for an authorized regular shipping service carried out in the context of short sea shipping and motorways of the seas operations) and its own equipment, one or more categories of port services in accordance with the criteria set out in the Directive. On the other hand public service requirement refers to a requirement adopted by a competent authority in order to secure adequate provision of certain categories of port services.

lists the information to be provided by operators, agents or masters of ship seeking to use Community ports. It also requires that all ships calling at a Member State port be fitted, in accordance with a set timetable, with an AIS (identification of ships system) meeting International Maritime Organization standards, and a voyage data recorder system. In addition, the directive sets out rules on the notification of dangerous or polluting goods onboard ships, on the monitoring of hazardous ships and intervention in the event of incidents and accidents at sea. When conducting any marine casualty or incident investigation, Member States are required to comply with the provisions of the relevant IMO code.

Regarding the regulations on environment we note that Council Regulation (EC) No. 2978/94 of November 1994 governs the implementation of IMO Resolution A.747(18) on the application of tonnage measurement of ballast spaces in segregated ballast oil tankers. The regulation aims to encourage the use of oil tankers fitted with segregated ballast capacity by requiring the Community's port and pilotage authorities either to apply the recommendations of Resolution A.747(18) or to permit a system of rebates on dues, such as that provided for therein. Resolution A.747(18) invites governments to advise port authorities to apply, to all tankers with segregated ballast tanks, the recommendation of deducting the segregated ballast tank tonnage from the gross tonnage wherever their dues are based on the latter, and to advise pilotage authorities to act in accordance with the same recommendation. Recent environmental catastrophes caused by oil spills in European waters have put the oil tanker sector under intense scrutiny. After the November 2002 sinking of the single hull oil tanker *Prestige*, the EU adopted straightforward measures such as banning from entry into EU ports, and offshore terminals under the jurisdiction of the EU Member States, single hull tankers carrying heavy grades of oil, and accelerating the phasing out of single hull oil tankers calling at EU ports altogether. Regulation (EC) No 417/2002 aims to reduce the risk of accidental oil pollution in European waters by speeding up the phasing-in of double hulls. The Regulation applies to all tankers of 5,000 tonnes deadweight or above entering or leaving a port or offshore terminal or anchoring in an area under the jurisdiction of a Member State, irrespective of their flag.

Directive 2000/59/EC on port reception facilities for ship-generated waste and cargo residues seeks to reduce the discharges from ships using ports in the Community of ship-generated waste and cargo residues into the sea especially illegal discharges. By improving the availability and use of port reception facilities for ship-generated waste and cargo residues, the Community hopes to enhance the protection of the marine environment. Member States must ensure the availability of port reception facilities adequate to meet the needs of ships using the port. Costs will be born by ships, and the system must provide no incentive for ships to discharge at sea. On the other hand, the purpose of Directive 2005/35/EC on ship-source pollution and on the introduction of penalties for infringements is to incorporate international standards for ship-source pollution into Community law and to ensure that persons responsible for discharges are subject to adequate penalties, in order to improve maritime safety and to enhance protection of the marine environment from pollution by ships.

Regulation (EC) 782/2003 prohibits organotin compounds on ships flying the flag, or operating under the authority, of a Member State and on ships sailing to or from Member State ports. The purpose of the regulation is to reduce or eliminate the adverse effects of organotin compounds on the marine environment and human health in general.

Finally, we note that Council Directive 1999/63/EC of June 1999, concerning the agreement on the organization of working time of seafarers, was largely inspired by ILO Convention 180. The current directive is intended to put into effect the European Agreement, concluded in 1998 between the trade-union and employers' organizations of the maritime transport sector, concerning the working time of seafarers. The agreement, comprised in an annex to the directive, applies to seafarers on board every seagoing ship, whether publicly or privately owned, which is registered in the territory of a Member State and is ordinarily engaged in commercial maritime operations. Hours of work and rest are laid down as follows: (i) the maximum hours of work must not exceed 14 hours in any 24-hour period or 72 hours in any seven-day period, and the minimum hours of rest must not be less than 10 hours in any 24-hour period or 77 hours in any seven-day period. Hours of rest may not be divided into more than two periods, one of which must be at least six hours in length, and the interval between consecutive periods of rest must not exceed 14 hours. Musters, fire-fighting and lifeboat drills, and drills prescribed by national laws and international instruments must be conducted in a manner that minimizes the disturbance of rest periods. Provision is to be made for a compensatory rest period if a seafarer's normal period of rest is disturbed by call-outs. Seafarers are entitled to paid annual leave of at least four weeks, or a proportion thereof for periods of employment of less than one year. The minimum period of paid leave may not be replaced by an allowance in lieu. Seafarers under the age of 18 are not permitted to work at night. In addition, no person under 16 years of age is allowed to work on a ship. All seafarers must possess a certificate attesting to their fitness for the work for which they are employed, and have regular health assessments.

Lately, the EU, in order to guarantee safe, secure and clean maritime goods transport, has set up, under Regulation (EC) No. 1406/2002 of June 2002, the "European Maritime Safety Agency." Its main objective is to provide technical and scientific assistance to the European Commission and Member States with the proper development and implementation of EU legislation on maritime safety, pollution by ships and security on board ships.

#### IV. TURKISH MARITIME RULES AND REGULATIONS

Turkey is a peninsula country surrounded by the Black Sea in the north, the Aegean Sea in the west and the Mediterranean in the south. It sits on important transport routes through the strategic waterways of the Istanbul (Bosporus) and Çanakkale (Dardanelles) Straits, connecting the Black Sea and other northern countries

to southern seas. Turkey's coastline is 8300 km long, and the country's major industrial centers are on or near the sea. It is thus not surprising that 86 per cent of the quantity and more than 50 per cent of the value of goods traded by Turkey are transported over water. In 2005, the total freight handled in Turkish ports (excluding transit and cabotage cargo) was 182 million tonnes (55 million tonnes of exports, and 127 million tonnes of imports), and container handling reached about 1 million TEU.<sup>28</sup> The share of Turkish flag vessels in total freight handled amounted to 24 per cent, and the share of foreign flag vessels 76 per cent.

In Turkey, all maritime-related decision- and policymaking activities, including signing international maritime conventions, are carried out by the "Undersecretariat for Maritime Affairs." Maritime activities in Turkey are mainly subject to Turkish Commercial Law No. 6762, Cabotage Law No. 815, Law on Turkish International Ship Registry No 4490, and Ports Law No. 618.

Regarding regulations on commercial operations and practices, we note that Turkey does not associate itself with the OECD Common Shipping Principles, and has a reservation on Note 1 of the OECD Code of Liberalization of Current Invisible Operations. Turkey has signed the UN Liner Code but has not ratified it yet. Turkey has no laws and regulations governing the operation of liner conferences.

Until 1983, Turkish regulations required that all imports of public enterprises and public entities be transported by Turkish-flag vessels. This restrictive policy was liberalized in 1983 by Decree 152, which stipulates that all imports for the account of public entities are to be carried on board Turkish-flag vessels if the freight rate is not more than 10 per cent higher than that quoted by foreign operators. On the other hand, according to the Cabotage Act, cabotage is reserved to national flag carriers, and maritime transport among Turkish ports is assigned to Turkish ships only. Furthermore, towage, pilotage and other services related to ports are executed only by Turkish ships.

According to the Law on Turkish International Flag Registration, enacted in 2000, there are two different types of ships registry: National Ship Registry (NSR) and Turkish International Ship Registry (TISR). In order to fly the Turkish flag, on the NSR, shipping companies must be 51 per cent owned by Turkish nationals, and first mates and masters of ships must be of Turkish nationality, while up to 40 per cent of the officers of ships engaged in international seaborne transportation, excluding cabotage, can be foreign nationals. Ships registered in NSR benefit from cabotage rights. Ships that belong to legal persons, such as bodies, institutions, associations, and foundations set up in accordance with Turkish law, the majority of whose Board of Directors are of Turkish nationality, and ships that belong to trading companies, the majority of whose managerial staff and representatives are of Turkish nationality and are registered on the Turkish Trade Register, are considered as Turkish. On the other hand, the TISRs are open for foreign ships with foreign seafarers for seaborne transport, excluding cabotage.

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28. "TEU" means "20-foot equivalent unit."

On Turkish flagged ships registered to TISR, 49 per cent of the crew can be employed from foreign seafarers, provided that the first captain is a Turkish citizen. Ships registered to TISR benefit from cabotage rights, if ship owner is a Turkish citizen, majority of shares belong to Turkish citizens, and majority of partners are Turkish citizens. Finally, vessels rented by foreigners can not operate inside Turkish coastal waters, and vessels rented by Turkish nationals are considered as foreign vessels and may not fly the Turkish flag.

Regarding regulations on safety and the environment, Turkey is one of 38 states which has not signed the “The United Nations Convention on the Law of the Sea” (UNCLOS). The Turkish flag is on the black list of the Secretariat of the Paris Memorandum of Understanding on Port State Control. According to the Commission of the European Communities, the percentage of Turkish flag vessels detained following Port State Control has decreased from 24.59 per cent in 2001 to 7.85 per cent in 2005.<sup>29</sup> However, the country is still on the medium to high risk category of the black list of the Paris MOU. Turkey is a signatory to many of the IMO rules and regulations. Although Turkey has ratified the MARPOL (Mandatory Annexes I and II, and also Annex V) and SOLAS conventions and acceded some of the amending protocols, it has not ratified SOLAS Protocol 78, SOLAS Protocol 88 (International Convention for the Safety of Life at Sea), MARPOL Annexes III and IV (International Convention for the Prevention of Pollution from Ships), and Load Line 88. According to Law on Environment No. 2872 discharge of pollutants from ships, ports and other coastal installations are prohibited, and fines for discharge from ships depend on the kind of pollutant. The Law regulates obligations to establish port reception facilities and imposes penalties for violation of these obligations. Furthermore, Part A and parts of Part B of “International Ship and Port Facility Security Code” (ISPS Code) are applicable in Turkey, and technical studies to prepare a By-Law on Implementation of ISPS Code are underway. Finally, it should be emphasized that Turkey has fulfilled its international obligations under the SOLAS Convention/Chapter XI/2.

Turkey signed only 12 of the ILO conventions concerning seafarers and dockworkers. According to Law on Maritime Labour No. 854 working time of seafarers is 8 hours in a day and 48 hours in a week. Working time is the time of work and watch keeping. By-Law, Seafarers No. 24832 requires that minimum hours of rest shall not be less than 10 hours in a day and 72 hours in a week. Daily hours of rest may be shortened due to musters and emergency cases. In that case, rest time shall not be less than 6 hours and this implementation shall not continue more than 2 days. Turkey has ratified the 1978 International Convention on Standards of Training, Certification and Watch keeping for Seafarers, and the Code is applicable. Finally, we note that Turkey has authorized ten classification societies (nine IACS members together with the Turkish Lloyd) to carry out inspection, survey and certification of ships. But Turkish Lloyd has not been recognized by the EC.

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29. See Commission of the European Communities “Turkey 2006 Progress Report” COM(2006) 649 final, Brussels.

As a result ships classed by Turkish Lloyd are subject to more inspection in Paris MOU ports due to targeting factors.<sup>30</sup>

In December 2003, Turkey adopted an ambitious five year Maritime Transport Action Plan for the enhancement of maritime safety. This action plan sets out a road map for legislative alignment with the *acquis* on maritime safety, measures aimed at strengthening administrative structures (in the area of flag State and port State control) and training and equipment needs. Since January 2004, the Turkish Undersecretariat of Maritime Affairs has been conducting a broad legal and institutional harmonization project with the participation of Spain, as an EU partner country (the so-called “twinning project”), to strengthen the Turkish institutional infrastructure on maritime transport in advance of Turkey’s accession into the EU.

Turkey’s major ports are owned by two state institutions: the Turkish State Railways (TCDD) and Turkish Maritime Organization (TDI). TCDD owns and operates seven ports that have direct railway connections. The capacity of these ports is around 30 million tonnes per year, and about 90 per cent of all cargo passing through state-owned ports is handled by TCDD. Three ports operated by TCDD (Haydarpaşa/Istanbul, Izmir and Mersin) can also handle container cargo (total container capacity of about 750,000 TEU per year). The Turkish Maritime Organization (TDI) owns twenty ports all around Turkey. TCDD ports offer a full range of services (pilotage and towage, stevedoring services, water supply, waste removal, handling services, equipment rental, etc.). TCDD sets tariffs, which may differ slightly among various ports. Akarsu and Kumar mention that “the bulk of the income of TCDD ports is generated through stevedoring and storage services. Turkish ports are relatively expensive with close to 60 per cent of the cost of port operation being attributable to port labor while the world average is only 30 per cent.”<sup>31</sup>

TCDD is one of the largest public sector enterprises in Turkey. In addition to the seven largest ports in Turkey, it manages rail transport and operates locomotive, wagon and coach manufacturing plants, and repair workshops. Many researchers claim that TCDD cross-subsidizes its main activity, rail transport, by the revenue it generates from port operations.<sup>32</sup> As stated by the World Bank,

cross-subsidization of the railways by the ports’ excess profits within TCCD suggests pervasive overcharging by the Port Authorities, or inadequate depreciation and maintenance schedules, or maybe both. Whatever the case, it is

30. The Target Factor is in use within the Paris MOU as a tool for selecting ships eligible for an inspection only. The calculation of the Target Factor is divided in two parts. While the generic factor is based on elements of the ships profile, history factor is based on the ships inspection history in the Paris MOU. The generic factor is updated when the particulars of the ship change or the status of its existing flag or class change. The history factor is updated at the end of each day.

31. M. Akarsu and M. Kumar, *Turkish Container Ports: An Analysis of Problems and Potential Opportunities*, unpublished paper, Maine Maritime Academy (<bell.mma.edu/~skumar/TurkContPorts.pdf>), 2002.

32. *Ibid.*



more than likely to result in non-optimal cost-efficiency in the delivery of port services. If overpricing is a reality, then it is at the expense of the country's external trade competitiveness and increased costs of imports. If inadequate depreciation and maintenance is occurring, then it will shortly result in decreasing service quality because of infrastructure wear and tear, which in turn will translate into additional costs for port customers in time, cargo losses, etc.<sup>33</sup>

According to Turkish Ports Law No. 618, dated April 20, 1925, only Turkish citizens, and companies which are majority owned, managed and controlled by Turkish citizens, may exercise the rights related to the ports. Again, foreign ownership in companies involved in port undertakings is restricted to 49 per cent. All services, access to ports, pilotage, towing, tug assistance, provisioning, fueling, watering, and navigation aids are available to all users of port services. However, pilotage and all other port services can be provided only by Turkish flag ships. In the last few years, 13 public ports, operated by the General Directorate of the Turkish Maritime Organization (TDI), have been privatized, but the main ports were operated until recently by the Turkish State Railways (TCDD). Recently, the Mersin and Izmir ports, two of the main ports in Turkey, have also been privatized.

## V. WELFARE EFFECTS OF INTEGRATION

Starting from a restricted trade situation economists believe that resources under free trade are allocated to their most productive use in the economy, expanding outputs in the sectors of comparative advantage. Trade increases the extent of competition in the market, lowering the market power of existing firms and bringing down their price-cost markups. As trade expands the scale of the market increases, permitting under economies of scale in production greater number of differentiated commodities to exist. Furthermore, an expanding market increases the incentive for research and development, enhancing long-run growth rates. There are, however, many complications with these lines of arguments. Types and forms of liberalization of services are quite different from those of liberalization in goods trade. Barriers to the flow of goods typically arise as customs, and other physical restraints on trade are administered at national borders. Thus, for goods trade, most discussion of liberalization focuses on tariffs and on non-tariff barriers of trade. On the other hand, barriers to trade in services are typically regulatory in nature, and outcomes of services liberalization depend heavily on the regulatory environments.

GATS distinguishes between four modes of supplying services: (1) cross-border supply, (2) consumption abroad, (3) commercial presence, and (4) movement of individuals. Liberalization of trade in maritime transport services involves

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33. World Bank, *Transport Sector Overview*, available at <[Inweb18.worldbank.org/ECA/Transport.nsf/Countries/Turkey?Opendocument](http://web18.worldbank.org/ECA/Transport.nsf/Countries/Turkey?Opendocument)>, 2004.

as emphasized in section 1 the reduction of regulatory barriers to market access and discriminatory national treatment across all four modes of supply. Since maritime transport is inherently international in character, and on most voyages vessels have to operate under the regulatory requirements of many jurisdictions, a country wishing to liberalize the sector has to harmonize its regulatory framework to international rules and regulations and to those prevailing in the major trading partners.

Since Turkey is trying to liberalize the maritime transport sector by following the EU approach to liberalization, we consider the case where Turkey will align its regulatory framework in the sector to that prevailing in the EU. Here, we abstract from explicit consideration of problems of implementation, and assume that once the *acquis* is adopted liberalization of the sector will be achieved. This is a simplification, but permits the analysis of the problem in two steps. First, we study the links between regulatory regimes and performance indicators. We then turn to an analysis of the effects of integration of the maritime transportation sector on the Turkish economy.

To assess the economic effects of the change in the regulatory regime on the Turkish economy, we first calculate restrictiveness index values, following the approach of McGuire et al. and Kimura et al.<sup>34</sup> Table 1 shows, with respect to maritime transportation services, the restriction categories, weights for them, and scoring for each category.<sup>35</sup> The weights reveal the importance of the category in terms of how significantly the restriction of the category would limit service suppliers from entering or operating in the market. The sum of weights for all categories shown in column one is unity. For each restrictiveness category, a score with a range from 0 (least restrictive) to 1 (most restrictive) is assigned, according to the degree of restrictiveness, so that the score reflects the degree of restriction imposed by the economy.

34. G. McGuire, M. Schuele and T. Smith, "Restrictiveness of International Trade in Maritime Services," in C. Findlay and T. Warren (eds), *Impediments to Trade in Services: Measurement and Policy Implications*, (London, Routledge, 2000), pp. 172–188; F. Kimura, M. Ando and T. Fujii, "Estimating the Ad Valorem Equivalent of Barriers to Foreign Direct Investment in the Maritime and Air Transportation Service Sectors in Russia," World Bank working paper (Washington, D.C., World Bank, 2004).

35. The author is grateful to Serdinç Yılmaz of the State Planning Organization and M. Mehdi Gönülalçak and Özkan Poyraz of the Undersecretariat for Maritime Affairs for providing information on restrictions on maritime services in Turkey.

Table 1. Restrictions on Maritime Services in Turkey

<i>Weight</i>	<i>Scoring</i>	<i>Score Chosen in this Paper</i>	<i>Category</i>
<b>Restrictions on Commercial Presence and Cross Border Trade</b>			
0.15	0.40	0.40	Conditions on the right to fly the national flag
			Commercial presence is required in the domestic economy
	0.30	0.30	50 per cent or more of equity participation must be domestic
	0.20	0.20	50 per cent or more of the crew are required to be domestic
	0.10	0.10	Ships must be registered
0.10	1.00		Form of commercial presence
			Measures which restrict or require a specific type of legal entity or joint venture arrangement
	0.50	0.50	Shipping service suppliers must be represented by an agent
	0.00		No restriction on establishment
0.10		0.51	Direct investment in shipping service suppliers
			The score is inversely proportional to the maximum equity participation permitted in an existing shipping service supplier
0.10		0.51	Direct investment in onshore maritime service suppliers
			The score is inversely proportional to the maximum equity participation permitted in an existing onshore maritime service supplier
0.02	1.00	1.00	Permanent movement of people
			No entry of executives, senior managers and/or specialists
	0.80		Executives, specialists and/or senior managers can stay a period of up to 1 year
	0.60		Executives, specialists and/or senior managers can stay a period of up to 2 years
	0.40		Executives, specialists and/or senior managers can stay a period of up to 3 years

Table 1. (Continued)

<i>Weight</i>	<i>Scoring</i>	<i>Score Chosen in this Paper</i>	<i>Category</i>
	0.20		Executives, specialists and/or senior managers can stay a period of up to 4 years
	0.00		Executives, specialists and/or senior managers can stay a period of up to 5 years or more
0.10			Cabotage
	1.00	1.00	Foreigners generally cannot provide domestic maritime services
	0.75		Foreigners that fly the national flag can provide domestic maritime services
	0.50		Restrictions on type and length of time cargoes can be carried
	0.00		No cabotage restrictions
0.10			Transportation of non-commercial cargoes
	1.00		Private shipping service suppliers cannot carry non-commercial cargoes
	0.50		National flag shipping service suppliers can carry non-commercial cargoes
	0.00	0.00	No restriction on access to non-commercial cargoes
			<b>Other Restrictions</b>
0.10			Port Services
	0.30		Some restrictions on access to ports
	0.20	0.20	Mandatory use of pilotage
	0.15	0.15	Mandatory use of towing
	0.10	0.10	Mandatory use of tug assistance
	0.05	0.05	Mandatory use of navigation aids
	0.05	0.05	Mandatory use of berthing services
	0.05	0.05	Mandatory use of waste disposal
	0.05	0.05	Mandatory use of anchorage
	0.05	0.05	Mandatory use of casting off
0.05			Discretionary imposition of restrictions, including for retaliatory purposes

Table 1. (Continued)

<i>Weight</i>	<i>Scoring</i>	<i>Score Chosen in this Paper</i>	<i>Category</i>
	1.00	0.50	Governments are able to impose selective restrictions
	0.00		Governments are unable to impose selective restrictions
0.05			United Nations Liner Code
	1.00		Economy is party to the code and applies article 2 of the code
	0.75		Economy is party to the code but does not apply article 2 of the code
	0.00	0.00	Economy is not party to the code
0.05			Government permits conference
	1.00		Government permits the operation of conferences
	0.00	0.00	Conferences are subject to effective competition
0.05			Bilateral maritime services agreements on cargo sharing
		0.79	The score for an economy is taken from the 35 by 35 matrix of bilateral agreements on cargo sharing
0.02			Composition of board of directors
		0.51	The score is inversely proportional to the percentage of the board that can comprise foreigners
0.01			Temporary movement of people
	1.00		No temporary entry of executives, senior managers and/or specialists
	0.75		Temporary entry of executives, senior managers and/or specialists up to 30 days
	0.50		Temporary entry of executives, senior managers and/or specialists up to 60 days
	0.25		Temporary entry of executives, senior managers and/or specialists up to 90 days
	0.00	0.00	Temporary entry of executives, senior managers and/or specialists over 90 days

In Table 1, the restriction categories are classified as “restrictions on commercial presence and /cross-border trade” and “other restrictions.” “Restrictions on commercial presence and cross-border trade” include “conditions on the right to fly national flag,” “form of commercial presence,” “direct investment in shipping service suppliers,” “direct investment in onshore maritime service suppliers,” “permanent movement of people,” “cabotage,” and “transportation of non-commercial cargoes.” The broad category of “other restrictions” includes port services, “discretionary imposition of restrictions, including for retaliatory purposes,” “United Nations Liner Code,” “government permits conferences,” “bilateral maritime services agreements on cargo sharing,” “composition of board of directors,” and “temporary movement of people.”

Table 2 reveals that the foreign restrictiveness index value for Turkish maritime transportation services equals 0.5667. The corresponding restrictiveness index values for the EU countries, as estimated by McGuire et al. for the period 1994–98, are shown in Table 3.<sup>36</sup>

*Table 2. Restrictions on Maritime Services in Turkey*

<i>Weight</i>	<i>Score Chosen in this Paper</i>	<i>Restrictiveness Index</i>	<i>Category</i>
<b>Restrictions on Commercial Presence and Cross Border Trade</b>			
0.15	1.00	0.15	Conditions on the right to fly the national flag On the national ship registry (NSR) shipping companies must be 51 per cent owned by Turkish nationals, and masters of ships must be of Turkish nationality, while up to 30 per cent of officers of ships engaged in international seaborne transportation excluding cabotage can be foreign nationals. Turkish International Ships Registries (TISR) are open to foreign seafarers except for cabotage. In the Turkish flagged ships registered to TISR, 30 per cent of the crew can be employed from foreign seafarers provided that first captain is Turkish
0.10	0.50	0.05	Form of commercial presence Those who could obtain national flag according to NSR are either companies

36. G. McGuire, M. Schuele and T. Smith, *supra* note 34.

Table 2. (Continued)

<i>Weight</i>	<i>Score Chosen in this Paper</i>	<i>Restrictiveness Index</i>	<i>Category</i>
			<p>51 per cent owned by Turkish nationals, or ships must belong to legal persons set up in accordance with Turkish law, the majority of whose Board of Directors are of Turkish nationality.</p> <p>Furthermore ships that belong to trading companies, the majority of whose managerial staff and representatives are of Turkish nationality and are registered on the Turkish Trade Register are considered as Turkish.</p> <p>Turkish International Ships Registries (TISR) are open to foreign seafarers except for cabotage.</p> <p>Since these considerations apply mainly to cabotage, a score of 0.5 is assigned rather than 1.00.</p>
0.10	0.51	0.05	<p>Direct investment in shipping service suppliers</p> <p>To fly the national flag on NSR, 51 per cent of equity must be owned by Turkish nationals.</p>
0.10	0.51	0.05	<p>Direct investment in onshore maritime service suppliers</p> <p>According to the Ports Law No. 618, only Turkish citizens and companies that are majority owned by Turkish citizens, which are managed and represented by Turkish citizens with a majority, and majority voting is held by Turkish citizens may exercise the rights related to ports.</p>
0.02	1.00	0.02	<p>Permanent movement of people</p> <p>Shipping companies on NSR must have masters of ships of Turkish nationality, while up to 70 per cent of officers of ships engaged in international seaborne transportation must be of Turkish nationality.</p>

Table 2. (Continued)

<i>Weight</i>	<i>Score Chosen in this Paper</i>	<i>Restrictiveness Index</i>	<i>Category</i>
			Shipping companies on TISR can employ up to 30 per cent of the crew from foreign seafarers provided first captain is Turkish.
0.10	1.00	0.10	Cabotage Cabotage is reserved to national flag carriers.
0.10	0.00	0.00	Transportation of non-commercial cargoes No restriction on access to non-commercial cargoes
<b>Other Restrictions</b>			
0.10	0.70	0.07	Port Services Mandatory use of pilotage, towing, tug assistance, navigation, berthing services, waste disposal, anchorage and casting off.
0.05	0.50	0.03	Discretionary imposition of restrictions, including for retaliatory purposes There are various restrictions governments could impose against foreign suppliers. Since such system may result in discriminatory restrictions against foreign suppliers but may not, a score of 0.5 is assigned to this category instead of 1.
0.05	0.00	0.00	United Nations Liner Code Economy is not a party to the Code
0.05	0.00	0.00	Government permits conference Conferences are subject to effective competition
0.05	0.79	0.04	Bilateral maritime services agreements on cargo sharing McGuire et al. (2000) consider 20 economies to obtain the score for this category: EU (15 countries), Argentina, Brazil, Canada, Chile, Colombia, Mexico, US, Australia, Hong Kong, India,



Table 2. (Continued)

Weight	Score Chosen in this Paper	Restric- tiveness Index	Category
			Indonesia, Japan, Korea, Malaysia, New Zealand, Philippines, Singapore, Thailand, and Turkey. The procedure is as follows: each country is assigned 0 if it has bilateral agreement with a certain country, say Argentina, and 1 otherwise. Then, the sum of the score (max 19 and min 0) is divided by 19 (the number of the rest of economies) to obtain the score for Argentina. This paper basically follows the same procedure and calculates the score by adding Russia to the 20 economies. Turkey has bilateral agreements with 5 EU countries and 2 of the remaining countries. Considering the EU countries as 15 separate countries we have a total of 34 countries excluding Turkey. Hence the score is $27/34 = 0.79$ .
0.02	0.51	0.01	Composition of board of directors Those who could obtain national flag according to NSR are either companies 51 per cent owned by Turkish nationals, or ships must belong to legal persons set up in accordance with Turkish law, the majority of whose Board of Directors are of Turkish nationality.
0.01	0.00	0.00	Temporary movement of people Temporary entry of executives, senior managers and/or specialists over 90 days.
Score		0.5667	

To convert these index values into tariff equivalents we use the method employed by Kang.<sup>37</sup> Using shipping margins as a proxy of shipping price, he estimates shipping margins econometrically as a function of bilateral restrictions,

37. J. Kang "Price Impact of Restrictions on Maritime Transport Services" in C. Findlay and T. Warren (eds), *Impediments to Trade in Services: Measurement and Policy Implications* (London, Routledge, 2000), pp. 189–200.

Table 3. Restrictiveness Index Scores for Maritime Services

	<i>Austria</i>	<i>Belgium</i>	<i>Denmark</i>	<i>Finland</i>	<i>France</i>	<i>Germany</i>	<i>Greece</i>	<i>Ireland</i>	<i>Italy</i>	<i>Luxembourg</i>	<i>Netherlands</i>
<b>Domestic index</b>											
<i>Restrictions on establishment</i>											
Conditions on the right to fly the national flag	0.1283	0.0998	0.0143	0.0428	0.0570	0.0998	0.0428	0.0855	0.1283	0.0570	0.0998
Form of commercial presence	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Direct investment in shipping service suppliers	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Direct investment in onshore maritime service suppliers	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Restrictions on establishment total	0.1283	0.0998	0.0143	0.0428	0.0570	0.0998	0.0428	0.0855	0.1283	0.0570	0.0998
<i>Restrictions on ongoing operations</i>											
Transportation of non-commercial cargoes	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Port services	0.0000	0.0000	0.0190	0.0238	0.0238	0.0428	0.0428	0.0190	0.0000	0.0000	0.0000
Government permits conferences	0.0000	0.0475	0.0475	0.0475	0.0475	0.0475	0.0475	0.0475	0.0475	0.0475	0.0475
Restrictions on ongoing operations total	0.0000	0.0475	0.0665	0.0713	0.0713	0.0903	0.0903	0.0665	0.0475	0.0475	0.0475
Domestic index total	0.1283	0.1473	0.0808	0.1140	0.1283	0.1900	0.1330	0.1520	0.1758	0.1045	0.1473
<b>Foreign index</b>											
<i>Restrictions on establishment</i>											
Conditions on the right to fly the national flag	0.1358	0.1073	0.0218	0.0503	0.0645	0.1073	0.0503	0.1500	0.1358	0.0645	0.1073
Form of commercial presence	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050
Direct investment in shipping service suppliers	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050
Direct investment in onshore maritime service suppliers	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050
Permanent movement of people	0.0009	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085	0.0085
Restrictions on establishment total	0.1517	0.1308	0.0453	0.0738	0.0880	0.1308	0.0738	0.1735	0.1593	0.0880	0.1308

<i>Restrictions on ongoing operations</i>											
Cabotage	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050
Transportation of non-commercial cargoes	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050	0.0050
Port services	0.0050	0.0050	0.0240	0.0288	0.0288	0.0478	0.0478	0.0240	0.0050	0.0050	0.0050
Discretionary imposition of restrictions including for retaliatory purposes	0.0263	0.0500	0.0500	0.0500	0.0500	0.0500	0.0263	0.0263	0.0500	0.0263	0.0500
United Nations Liner Code	0.0381	0.0381	0.0381	0.0381	0.0381	0.0381	0.0025	0.0025	0.0381	0.0025	0.0381
Government permits conferences	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500	0.0500
Bilateral maritime services agreements on cargo sharing	0.0500	0.0471	0.0500	0.0500	0.0500	0.0485	0.0500	0.0500	0.0500	0.0485	0.0500
Composition of the board of directors	0.0119	0.0119	0.0119	0.0119	0.0119	0.0119	0.0119	0.0119	0.0119	0.0119	0.0119
Temporary movement of people	0.0028	0.0028	0.0043	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028	0.0028
Restrictions on ongoing operations total	0.1942	0.2150	0.2383	0.2417	0.2417	0.2592	0.2013	0.1775	0.2179	0.1571	0.2179
Foreign index total	0.3458	0.3457	0.2836	0.3154	0.3297	0.3899	0.2750	0.3510	0.3772	0.2451	0.3487

Source: McGuire, G., Schuele, M. and Smith, T. 2000, "Restrictiveness of international trade in maritime services," in Findlay, C. and Warren, T. (eds) 2000, *Impediments to Trade in Services: Measurement and Policy Implications*, Routledge, London and New York.

Notes: The domestic and foreign restrictiveness index scores range from 0 to 1. The higher the score, the greater are the restrictions for an economy.

distance between countries, and the scale of bilateral trade.<sup>38</sup>

To study the effects of EU integration, we consider a situation where the degree of existing restrictions in Turkey is lowered to the level in Germany, calculated from data provided by McGuire, et al.<sup>39</sup> The *ad valorem* equivalents of restrictions in Turkey are then obtained using the approach of Kimura et al.<sup>40</sup> Based on this, we calculate *ad valorem* tariff equivalents of restrictions in the Turkish maritime transportation sector to be 193.5 per cent. This figure reveals that, as a result of restrictions in the maritime transport sector, the price of maritime services in Turkey increases by 193.5 per cent relative to the average price in Germany.<sup>41</sup>

38. Kang defines shipping margins from country  $i$  (exporter) to country  $j$  (importer),  $M_{ij}$ , as  $M_{ij} = (IM_{ji}/EX_{ij})$  where  $IM_{ji}$  represents the CIF value of imports of country  $j$ , which are imported from country  $i$ , and  $EX_{ij}$  the observed FOB value of exports of country  $i$ , which are exported to country  $j$ . Shipping margins,  $M_{ij}$ , are assumed to be a function of bilateral restrictions ( $R_{ij}$ ), distance between countries ( $D_{ij}$ ), and the scale of bilateral trade ( $SC_{ij}$ ). Since  $R_{ij}$  includes the information on restrictions in both sides, i.e., exporter's and importer's, the equation determining shipping margins can be rewritten as follows

$$\ln(M_{ij}) = C + \alpha_{11} \ln(R_{io}) + \alpha_{12} \ln(R_{ic}) + \alpha_{21} \ln(R_{jo}) + \alpha_{22} \ln(R_{jc}) + \beta \ln(D_{ij}) + \gamma \ln(SC_{ij})$$

where  $R_i$  and  $R_j$ , the restrictiveness indexes in country  $i$  and  $j$  respectively, are divided into restrictions on commercial presence ( $R_{ic}$  and  $R_{jc}$ ) and those on other restrictions ( $R_{io}$  and  $R_{jo}$ ). Based on this equation Kang estimates the price impact of restrictions on shipping margins for the case of developing economies as follows

$$\ln(M_{ij}) = 0.3388 + 0.14161 \ln(R_{ic}) + 0.0443 \ln(R_{jo}) + 0.0011 \ln(D_{ij}) - 0.0049 \ln(SC_{ij}).$$

See J. Kang, *supra* note 37.

39. G. McGuire, M. Schuele and T. Smith, as note 34 above.
40. To obtain *ad valorem* equivalents of restriction in Turkey shipping margins with existing restrictions,  $M_{Turkey}$ , and shipping margins with restrictions at German level,  $M_{Turkey}^*$ , are first calculated based on the following equations:

$$\ln(M_{Turkey}) = \ln(M_{Average}) - 0.1416 [\ln R_{Average}^c - \ln R_{Turkey}^c] - 0.0443 [\ln R_{Average}^o - \ln R_{Turkey}^o]$$

$$\ln(M_{Turkey}^*) = \ln(M_{Turkey}) - 0.1416 [\ln R_{Turkey}^c - \ln R_{Germany}^c] - 0.0443 [\ln R_{Turkey}^o - \ln R_{Germany}^o]$$

where  $M_{Average}$ ,  $R_{Average}^c$  and  $R_{Average}^o$  denote the average of shipping margins, average value of restrictiveness index on commercial presence, and average value of restrictiveness index on other restrictions over the countries reported in McGuire, et al. (2000) respectively. Similarly  $R_{Turkey}^c$ ,  $R_{Turkey}^o$ ,  $R_{Germany}^c$ , and  $R_{Germany}^o$  denote restrictiveness index value on commercial presence and other restrictions in Turkey and Germany. The *ad valorem* equivalent is then calculated by the formula

$$\left[ \frac{(M_{Turkey} - 1) - (M_{Turkey}^* - 1)}{(M_{Turkey}^* - 1)} \right] 100;$$

See F. Kimura, M. Ando and T. Fujii, *supra* note 34.

Given the change in the price of maritime transportation services resulting from the change in Turkey’s regulatory regime, one can compute the change in Turkish consumer surplus as a measure of the welfare effect of EU integration from information on the consumer demand schedule for maritime transportation services.<sup>42</sup> But maritime transportation services are intermediate goods for business users that are used in the production of other commodities. Therefore, prices of other commodities in the economy will change as a result of the change in the price of maritime transportation services. To study the welfare effects of EU integration, one has to consider not only the change in consumer surplus due to changes in price of maritime transportation services but also the changes in consumer surpluses due to the changes in the prices of other commodities.

To analyze the effect of the change in the price of maritime transportation services on the prices of other commodities we consider the Input-Output Table of the Turkish economy, derive the equilibrium prices of other commodities produced in the economy, and use these prices to obtain the effect on consumer welfare.<sup>43</sup> We note that this measure of the change in consumer welfare gives a downward biased estimate of the welfare effect, since we do not consider the increases in consumer demands for the different commodities with the decreases in the prices of these commodities. Such an estimate would require the use of price elasticities of

41. The results are very sensitive to the benchmark price. If we take as the benchmark the average restrictiveness value prevailing in EU countries, then the tariff equivalent increases considerably.
42. Consumer surplus measures the amount consumers gain from a purchase by the difference between the price he actually pays and the price he would have been willing to pay.
43. In the Turkish 1996 input-output table there are 97 sectors where maritime transportation services is sector 80. Let  $A$  be the  $97 \times 97$  matrix of input coefficients. Given  $A$ , form the  $96 \times 96$  input matrix  $B$  by deleting the 80th column and 80th row referring to the maritime transportation sector. Denote the 80th row where the 80th column element has been deleted by  $e$ . Let  $p$  be the  $1 \times 96$  price vector of the 96 commodities excluding the maritime transportation services sector and  $va$  the corresponding  $1 \times 96$  unit gross value added vector. The price equation can be written as  $p = p B + p_t e + va$ , where  $p_t$  denotes the price of the maritime transportation services. Hence we have  $p = p_t e (I-B)^{-1} + va (I-B)^{-1}$ . Thus, given the price of maritime transportation services that will prevail in Turkey after it adopts and implements the EU rules and regulations,  $p_t$ , we determine the equilibrium prices of the other 96 commodities from the above equation, assuming that there is no change in the unit gross value added vector,  $va$ . Given the equilibrium price vector  $p$  form the  $1 \times 97$  price vector as  $\pi = (p \ p_t)$ . Let  $CON$  be the  $96 \times 1$  consumption expenditure vector obtained from the 1996 input-output table by deleting the value of consumption of maritime transportation services sector and  $con_t$  the value of consumption of maritime transportation services. Form the  $97 \times 1$  consumption vector as

$$CONS = \begin{bmatrix} CON \\ con_t \end{bmatrix}.$$

Noting that initially all base year prices equal unity we can express the value of total consumption expenditure evaluated at base prices as  $C = u \text{ } CONS$ , where  $u$  denotes the  $1 \times 97$  unit vector. The value of total consumption expenditure evaluated at the prices that will prevail after Turkey adopts and implements the EU rules and regulations in the maritime transportation services sector is then given by  $C^* = \pi \text{ } CONS$ . The effect on consumer welfare can now be calculated as  $(C - C^*) \times 100/C^*$ .

demand for all the commodities considered in the input-output table, which we did not have at our disposal. Thus, the welfare gain will be necessarily higher than the figure given by the estimate presented in this paper.

By construction, prices in 1996, the year the input-output table has been constructed for, are all unity in the input-output table. We assume that with the adoption of the EU rules and regulations in the maritime transportation services sector, the price of maritime transportation services will decrease by 193.5 per cent. Hence, with the new price of maritime transportation services, we observe that the welfare of the Turkish society will increase by 0.687 per cent. Given that consumption formed 72.95 per cent of the 1996 GDP, the percentage change in welfare of the society is equivalent to 0.5012 per cent increase in real GDP.

## VI. CONCLUDING REMARKS

This chapter has discussed international rules and conventions applicable to maritime transportation. Relevant EU rules and Turkish legal framework are also discussed and compared. Elements of the current Turkish rules inhibit competition in maritime transportation sector thereby resulting in high cost and low efficiency. High cost in maritime transportation in turn drives up cost for the economy. Thus this chapter makes a case for changing the current Turkish rules by integrating them into the EU framework and liberalizing maritime transportation sector.

This chapter argues in favour of the liberalization of the maritime transportation sector in Turkey since it presents a tremendous opportunity for Turkish economy. In particular, adoption and implementation of the legislative, regulatory and institutional framework of the EU maritime transport sector in Turkey will result in an increase in competition in the maritime transport sector and decrease in the price of maritime transportation services, which in turn will lead to an increase in the GDP, generating considerable benefits for the Turkish economy.

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