

NATIONAL TECHNICAL UNIVERSITY OF ATHENS



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«Protectionism vs Liberalization policies in World Shipping Industry»

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ABSTRACT

This specific study focused on the characteristics of different system policies applied on the maritime market, the advantages and disadvantages and how they shape the world trading system. In recent years, the domestic transportations have become a major issue of political value. The legislation about the short sea shipping industry affects the shipping companies in order to protect the domestic companies from the uneven competition with global colossal companies keeping them intact while helping the economy at the same time by exporting goods and improving the shipping lines.

For these specific reasons in order to protect the good of the shipping industry: a) the protectionism policies and b) the liberalization policies in maritime industry. The protectionism policies through different means (tariffs, quotas, non-tariff barriers etc.) aim to reduce the number of imports coming into a country. In this way, there is noticeable growth of the domestic shipping industry, new job opportunities, protection of infant shipping industries etc. Although it is natural that disadvantages occur along the way as the shipping companies are restricted by the laws, free market cannot be fully developed under those circumstances. Also the monopoly owned by the domestic companies concerning the shipping fare is still. The liberalized policies in maritime are applied more and more through the years especially in developed countries as they promote a global network of product exchange. Although the liberalized system policies face difficulties as it quite complicated to achieve agreements between global scale companies of different class in order to operate under a common legal framework

It is reasonable that these two different systems of policies that are applied conflict with one another because of contradictions stemming from the basic ideas on which supported each one. Despite the fact that the liberalized market policies represent a whole and intangible system it is not wise to ignore the advantages. The free market system requires the development of liberalization policies in order to create an international trading network and the improvement of the global.

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1. Introduction

In the modern era the shipping industry plays a vital role in our lives even if we don't acknowledge it sometimes. The technological innovations we use, the food we eat, the clothes we wear wouldn't be the same if the shipping industry didn't exist. If we want to reach ourselves a remote destination or acquire something from another part of the world is now possible with the help of the shipping industry. The maritime trade routes are expanded in such a level that every place of the world is connected.

Nowadays, the shipping industry has as its main purpose the improvement of our living conditions and the service of our daily needs. However, in order to be able to enjoy the comforts and services offered by the shipping industry in our lives to the maximum, we have to overcome all the obstacles that arise in the way (political, economic etc.). One of the main issues is finding the correct set of laws that will be applied on the maritime market. This set of laws defines the relations between nations, the industries' wellbeing, the employment rates and the final form of the maritime market.

The most common form of the maritime market is the liberalized system. This system allows countries to perform free trading without any barriers imposed by the governments. Liberalized markets contribute in increasing the revenues, opening new job positions and offer new opportunities to the shipping industry in order to expand. Of course these benefits do not come without a cost as the uncontrollable amount of imports may downgrade local products and create difficulties for the domestic industries.

Despite the advantages of liberalized market many countries have not yet embrace this system and prefer to keep their markets domestic and under control. This may happen for various reasons, mainly political and strategic. The interests that derive from trading may differ from one country to the other and each government must choose wisely which kind of policies is best for the good of their own citizens and the improvement of its financial condition. This restricted form of maritime market is characterized by protectionism policies.

Of course finding the right set of trading laws is not an easy task as many times industries object and conflicts occur between them and the governments. Not everyone can be absolutely satisfied as sacrifices must be made in order to serve the most important factors, the citizens and the environment.

In the beginning of this thesis, the basic principles of ship transport are introduced in order to understand better the way maritime market works and the significance that has the system that is applied.

On the main body of the thesis we will focus on the characteristics of both policy systems and we will try to distinguish the differences between them in order to understand which one works better in the modern world. Each of the two systems will be thoroughly examined based on numerous variables to reach a conclusion.

Their effects on various parts of the industry will also be demonstrated to comprehend the gravity of ship transport in major parts of our everyday life.

Based on all the above we will make our suggestions considering which policy line should be followed and which measures should be taken by the governments to establish their position in the maritime market.

2. SHIP TRANSPORT

2.1 Introduction

In the first segment the value of ship transport is examined and more specifically the branch of short sea shipping. The basic principles of these two concepts are analyzed thoroughly in order to comprehend the impact they have on the maritime market. Moreover, the role of short sea shipping in Europe is demonstrated along with the European fleet each country possesses. Finally the differences between the two major sectors of short sea shipping –linear shipping and tramp shipping- are presented.

2.2 The significance of ship transport

Throughout history ship transportation has played a major role in the shaping of the modern civilization as we know it. Ship transport opened the way to great explorations such as the discovery of America by Christopher Columbus as well as to conquests like the Vikings' invasion to the British Isles. Since the ancient times that the first boats were built from simple materials until now the era of luxurious cruise ships, advanced destroyers, maritime industry has progressed along with every technological innovation. Despite the fact that maritime transportation has declined since the introduction of the aviation, it still remains a reliable and also low cost way of transport of goods and passengers. Commercial shipping especially is vital for the world economy, as the 90% of international trade depends on it. Technologically advanced harbors are established throughout the world and there are about 102.200 commercial ships performing routes. The main disadvantage of ship transportation is the time factor, as compared to aviation ships may take weeks or months to reach their final destination. However the time factor is counterbalanced by the practicality ship transport offers as anything can be delivered at any place on the planet with safety.



Picture 2.1 *Density of shipping routes in the world's oceans.*

2.3 Short sea shipping

The term short sea shipping or coastal shipping refers to the transfer of goods or passengers over short distances without crossing an ocean. According to this definition short sea shipping may include domestic and international transportation and also feeder services along the coastline (**Sambrakos E.Athens,2013**).

Short sea shipping is usually performed by small vessels which have been modified in order to maximize the amount of cargo they are able to carry. The vessels may vary from 3.000 dwt to 10.000 dwt. The dwt depends usually on the cargo as some of those vessels may carry more than one type in order for the voyage to be as much profitable as possible. These voyages are not always standard as they may depend on seasonal effects (e.g. in the Mediterranean during grain season the trips are increased) and also on the weather conditions as the smaller vessels may cancel their voyages as they are more vulnerable. Short sea shipping is highly dependable on the economy of the area that is applied while it remains unaffected by the global economy conditions. Short sea shipping may be performed entirely by domestic maritime companies or foreign shipping companies may occasionally intermeddle (**Sambrakos E.Athens,2013**).

The promotion of short sea shipping demands a constant effort that consists of short-term, mid-term and long-term actions in compliance with maritime cabotage in order to reach its highest potential (**Sambrakos E.Athens,2013**).

In order to overcome the obstacles that short sea shipping faces and find practical solutions, the European Union especially claims that the combined effort of the WTO and the European nations is needed. More specifically:

- Improvement of efficiency at the points of loading and unloading (ports, terminals etc.) by organizing better the managing procedures and the development of services and infrastructure.
- Promotion of combined transportations and improving standard procedures via the comparative evaluation (benchmarking) by collecting information and data of the short sea shipping until recently.
- Creation and control of new investing opportunities at technical matters using the advancement of technology in order to improve the vessels and land-based facilities.
- Equal terms under which every company is competing by allowing infant, healthy companies to enter the shipping market and offering them a time credit to establish themselves.

2.4 Short sea shipping in Europe

Short sea shipping in Europe has flourished over the last 25 years. During the time period from 1990 to 1997 short sea shipping increased by 17% in tons and 23% in ton-kilometers. In 1996 the total amount of tons that was transported was 757.000.000.

European Union holds a great portion of the short sea shipping market globally, with 69%. The transport of containers helped a lot the expansion of short sea shipping as during the period from 1990 to 1996 increased noticeably with 70% in tons (**Sambrakos E.Athens,2013**).

Today the European short sea shipping fleet, including the countries outside the European Union holds the 40% of the global market.

Country	Fleet		Fleet consistence (%)		
	Number of vessels	%	Liquid Cargo	Dry cargo	Rest
USSR	1735	17,1	14	61	25
Greece	1206	11,9	23	45	32
Germany	1086	10,7	10	71	19
Norway	1076	10,6	9	54	37
Italy	698	6,9	32	29	39
United Kingdom	688	6,8	26	49	25
Turkey	642	6,3	14	66	20
Denmark	544	5,4	17	60	23
The Netherlands	482	4,8	10	70	20
Spain	360	3,6	10	53	37
Sweden	341	3,4	18	47	35
Yugoslavia	203	2,0	7	43	50
France	150	1,5	23	37	40
Finland	131	1,3	8	58	34
Romania	116	1,1	7	84	9
Rest countries of E.U	194	1,9	18	52	30
Rest countries	481	4,7	20	71	9
Total	10133	100	16	56	28

Table 2.1 *Depiction of the biggest European short sea shipping fleets*

It is clear that short sea shipping in Europe the last few years has increased dramatically. Thanks to the long history of European merchant shipping, navigation and exploration, short sea shipping has expanded and the European harbors have advanced technologically belong amongst the most visited all around the world. The European Union acknowledges that short sea shipping is very important for the sustainable mobility, the improvement of the infrastructure and the protection of the environment (https://www.shortsea.be/images/kenniscentrum-rapporten-promotiebureau-downloads/ECSA_SSS_Download1.pdf) .

2.5 Liner shipping as a part of short sea shipping

One major part of Short Sea Shipping is liner shipping. The vessels that belong in this category are mainly involved in the transport of general cargo and occasionally they carry small amounts of bulk cargo.

General cargos are mainly industrial products of high value and the quantities that are transported are small compared to the bulk cargo. Sometimes they are not enough to complete the vessels' full capacity (**Sambrakos E.Athens,2013**).

In liner shipping, the transporter is responsible to perform regular routes to specified ports according to a predetermined schedule. The timetables of liner shipping are often modified depending on the customers' demand. If the demand is high liner shipping industries make the routes more frequent, especially during the tourist period. The regular routes must be performed regardless the customers' demand especially from larger prestigious companies.

The general cargo shipments must be performed regularly and on time by vessels with specific technical features and the cargos have to be loaded and unloaded at ports that possess the necessary mechanical equipment and trained staff to perform this actions swiftly without causing damages or delays. If the cargo is delayed and has to stay on board for a long time it may cause financial loss to both the customers and the company.

The variety of general cargo is great from clothing to cars. It is logical that some of them may need to be managed carefully due to their extensive volume or due to their dangerous nature. These differences make compulsive to have every kind of cargo separated from the other to avoid accidents. In every case the cargo should be labeled according to its content.

The general cargo in liner shipping can be divided to the following categories :

1. **Deep freeze products.** Those are mainly food products such as meat and fish. It is important to transport them under low temperatures in order to conserve. Low temperatures can be achieved by the correct thermal insulation at the storages.
2. **Controlled temperature products.** In this category belong products such as fruits, vegetables and dairy products. These products can be easily spoiled due to the release of carbon dioxide (CO₂) during their transportation. In order to avoid this, the vessel should have a sufficient ventilation system.
3. **Unitization cargo.** The last few years a new way of transportation has appeared, the unitization. The most common form of unitization is transferring the cargo in containers. Containers offer practicality and faster loading/unloading process which decreases the time ships stay at the ports and therefore reduces the costs. Moreover the delays at the terminals are avoided during the transshipment process at others means of transport in order to reach their final destination. The loading of containers is completed with the use of cranes which are on board. The most common form of unitization cargo except from containers are considered to be the pallets.
4. **Special Cargo.** As special cargo are considered those that during their process the need extra caution and careful handling. Those can be labeled as toxic, flammable etc., or those that carry animals.

In liner shipping we come across two different types of vessel, the usual general cargo ships and the newest container ships. Container ships tend to replace slowly the general cargo vessels mainly for cost reduction.

Except from the vessels that carry exclusively containers in liner shipping very common are those that transfer cars at the same time, known as «Ro-Ro» (Roll-on, Roll-off). Their special features are that they are equipped with inclined ramps and they travel at high speed (**Benson D., Whitehead G., London, 1985**).

2.6 Tramp shipping in short sea shipping

The second major sector of short sea shipping is tramp shipping. The main differences between tramp and liner shipping lie in matters of organizing and functioning. Tramp and liner shipping are so different that they are considered to be two separate industries.

The two main distinctive features of tramp shipping are the following:

- The molding of the market is based on competition and the prices are formatted by the supply and demand ratio.
- The cargo transferred via tramp shipping is mainly bulk cargo (dry or liquid).

The bulk cargo shipments are consisted of products such as grain, sugar, metals etc. These kinds of cargo are transferred in large quantities capable of filling up the vessel's full capacity. The main export points are located all around the globe and they are imported mainly in Western Europe, the U.S.A and Japan (**G.P Vlachos, 2003**).

The demand of capacity for bulk carriers doesn't affect the price of fares because the majority of the products transferred are essential. As a result the demand is high but many times there are fluctuations to the distribution of the products due to political and economic conjunctions. The most characteristic example is the oil demand, which is one of the most important bulk cargoes and faces constant fluctuations at its price.

The bulk cargoes are usually transferred at shipments of 2.000-3.000 tons and are divided to dry bulk cargo and liquid bulk cargo.

The liquid bulks can be transferred at 1.000 tons shipments up to 500.000 tons. Liquid bulk cargoes are stored in tanks and flow through pumps and pipes. Crude oil and its products have the highest demand for capacity compared to the rest liquid bulk cargoes but their handling is easy.

The five major bulks in tramp shipping are iron ores, grains, carbon, phosphates and bauxite. These cargoes have stacking coefficient up to 55 cubic feet per ton.

As it was previously stated tramp shipping industry takes place under competition regime which practically means that the demand/supply ratio sets the prices and creates balance to the market (**Sambrakos E.Athens,2013**).

Ship owners can choose between chartering the vessels according to the levels of the freight market or decommissioning them waiting for the market to recover. The supply of products depends directly on the capacity of the bulk vessels. As the market depends on

competition -as stated above- we reach the following conclusions regarding the capacity of bulk carriers:

- Most bulk cargoes do not require special handling during their loading/unloading processes, so the demand for capacity depends on other variables such as speed.
- The price of the fares undergoes many fluctuations in order to achieve balance between supply and demand.
- The freight rates which form the demand for capacity, depend on global economy and the trading politics of each government.

2.7 Combined transportation as part of the trade market

The formation of an efficient transportation system is a definitive requirement for a nation in order to excel in the trading sector. Nowadays that trade has been liberalized in most countries and products can reach even the most distant countries the existence of such a system is more important than ever.

Achieving environmental and socio-economic development making use of the already established transportation system has turned into a considerable challenge for each nation.

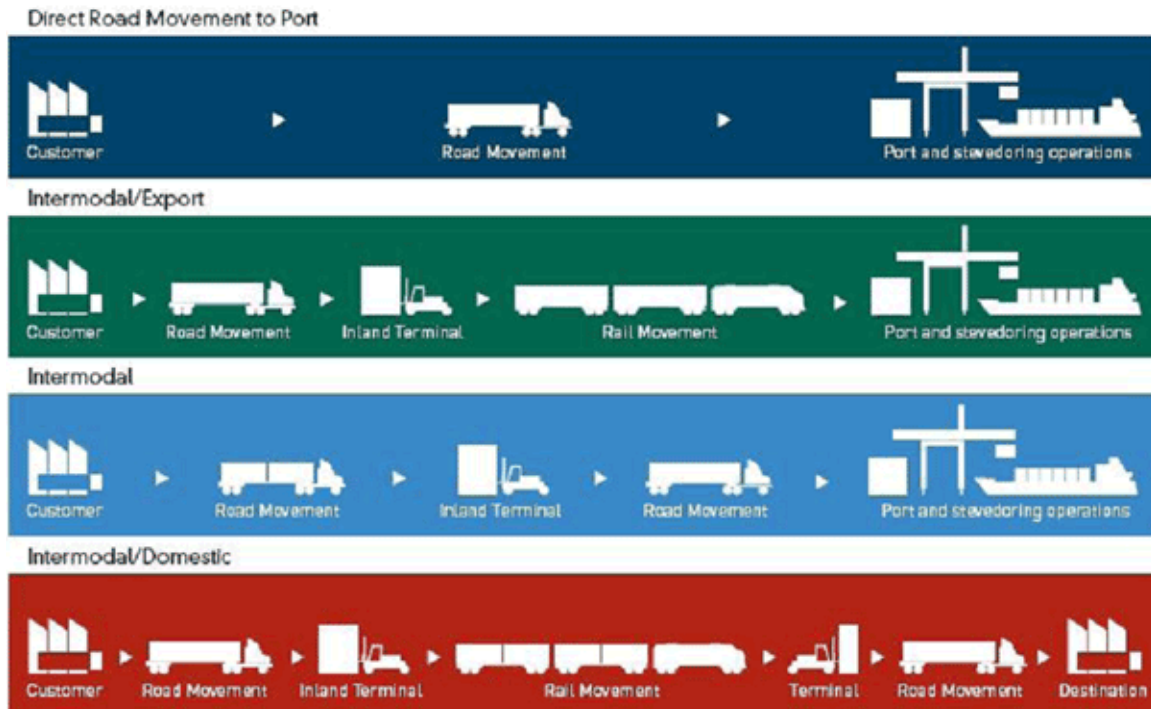
A new overall systems approach has been introduced by combining the advantages on each transportation system and overcoming the disadvantages each one presents. The promotion of a combined transportation system aims to the balanced and efficient usage of the transport capacity (infrastructure, equipment, management).

2.7.1 Definition of intermodal transport

Intermodal transport represents a system that consists of the combination of at least two means of transport. This combination forms a transport chain that allows goods to travel anywhere. Intermodal transport divides into three categories:

- Multimodal transport: The transport of cargo using at least two different means.
- Intermodal transport: The transport of cargo using only one transportation unit or vehicle progressively making use of different means of transport while the cargo is not subject to any manipulation during transport.
- Combined transport: Intermodal transport in which during the longest part of the trip the cargo is transported via sea or railway and at the start or the ending of the trip the cargo is transported with road vehicle as less as possible.

Mainly intermodal transports work us quality indicators that depict the efficiency of the system and how well the combined means of transport work together. Each mean of transport presents its own economic and functional advantages which can be combined as stated before in order to form a transport chain door to door in order to improve the efficiency of the transport system. The most effective combination can be achieved through infrastructure, services and equipment.



Picture 1.2 *Intermodal transport chain depiction*

The policies considering combined transportations should take seriously under consideration the customers' needs. The customer should be able to choose which kind of transport serves his needs better in matters of price and time. Short sea shipping and the rail transport are very popular ways of transport but each one presents its disadvantages. Combined transportation fills in the gaps and provides a complete unified system that covers the customers' needs.

2.7.2 Advantages of combined transport

Due to differences in capacity and efficiency of the transport means (ship, railroad, road vehicles) the combined transport system presents the best features of each one. Meanwhile it is the most effective way to reduce the transportation cost. The main advantages are the following:

- Reduction of the terminals and loading cost.
- Complete transport.
- Less handling, less damage to the cargo.
- Quicker, reliable transportation time.
- Environmental friendly transportation.
- Check in every stage of the transportation during import and export
- Capacity of payload up to 28 tons.
- Competitive prices and door to door services
- Just in time services
- Reduction at the handling time of cargo

It is logical that the increasing rates of the cargo can lead to further problems in the already established transport system. Following the common trend that wants the biggest part of the transportations to be covered by road transport, the pollution of the environment is uncontrollable and the traffic accidents tend to increase. Therefore the overcoming of these problems is considered essential and the best solution is investing on combined transport methods.

2.7.3 Ship transport in the combined transport chain

The transportation of the cargo by the sea as part of the combined transport is managed and organized by the shipping companies. The procedures before and after the ship transport are carried out in terminals which usually belong to private companies in which

the shipping companies have to pay fares. The rest part of the transport is managed by the railway and road transport companies.

Combined transport using the shipping network is relatively cheaper but slower than using road transport exclusively. Additional costs that may appear during sea transport are the following:

- Higher costs during loading/unloading process.
- Additional handling during the terminal.
- Relatively expensive the last part of the road transport.
- High managing cost of the combined transport chain due to its complexity.

The costs that correspond to each part of the transport chain are the following:

Loading in port	Ship transport	Loading in land terminal	Final road transport
15%	40%	10%	35%

Table 2.2 *Depiction of the cost percentages of the transport chain*

The cost of loading in the port (15% of total) is high due to various reasons:

- Many times the containers that are used during the transport have to stay many days at the ports because there are no delivery instructions yet. Better organizing and information infrastructure may solve this problem.
- In order for the cargos to leave the port and travel to their destination, a great deal of time and paperwork is usually needed.
- At the ports vessels which travel offshore are priority compared to containerships which leads to further delays and extra costs.

As stated previously ship transportation, despite that it may be cheap, it is relatively slow compared to road transport. The difference in time from one mean of transport to another is not important except the cargo that demands quick transport (about 10%). For that reasons efforts are made constantly in matters of technology to improve those times.

In order to reduce short sea shipping costs companies try to increase the vessels' capacity. In the 90's the average capacity was about 190 TEU. Nowadays the cargo is packed the one above the other increasing the capacity of the vessel if the suitable equipment for the handling of the cargo is provided at the terminals.

The reloading process of the cargo from the ship transport network to the road transport network is about the 10% of the total transportation cost. Possible factors of cost increase is the absence of competition between terminals so there is no place for negotiations and the defining of the fares, the distinction of prices especially in the case that the terminals are controlled by shipping companies that are at the same time clients etc.

3. Cabotage in short sea shipping industry

3.1 Introduction

In the following chapter we are introduced to the context of cabotage in maritime market and how it affects directly the wellbeing of the citizens and the progress of short sea shipping. Afterwards, the cabotage laws are defined in different parts of the world and at the end of the chapter the characteristics and the factors that form the short sea shipping market are indicated.

3.2 Cabotage definition

Through the years, maritime cabotage has been a sensitive political subject of significant importance. Cabotage is the transport of goods or passengers between two places in the same country by a transport operator from another country, and also includes in a legal context mainland cabotage, off-shore supply services and island cabotage. It originally applied to shipping along coastal routes, port to port, but now applies to aviation, railways and road transport as well.

Cabotage laws affect merchant ships in most countries that have a coastline so as to protect the domestic shipping industry from foreign competition, preserve domestically owned shipping infrastructure for national security purposes, and ensure safety in congested territorial waters. Host states often wish to ensure that sensitive national maritime services are conducted in a safe and socially responsible way (**Bryng and Jonassen, 2014**).

A matter that constantly interferes with the development of the short sea shipping is the policies that are applied. Each country supports a different form of policies which serve its own interests and benefits. The policies are divided into two main categories: The liberalization and the protectionism policies.

3.3 Cabotage laws in short sea shipping globally

Cabotage laws may differ around the globe depending on each country's financial state, economic aspirations, political status, neighbor relations, national fleet and geographical position. This set of laws is formed in order to protect the domestic shipping industries by exogenous threats such as multinational corporations and at the same time keeping the regional infrastructure safe from foreign exploitation.

- **Cabotage laws in the United States:** The policies concerning cabotage in the U.S have remained almost the same since 1920. According to the U.S Jones Act transportation of products in the United States must be performed a vessel that is U.S.-built, U.S.-owned, U.S.-flagged, and U.S.-crewed in order for the proper growth of the foreign domestic commerce. Especially U.S.-flag vessels involved in coastwise trade are obliged to have U.S. citizens or residents as officers and pilots and be constructed in U.S. ship yards. Short sea shipping signifies the economic growth and a lot of working positions for the U.S citizens (http://www.commercialdiplomacy.org/ma_projects/magee2.htm).

The Jones Act industry more specifically accounts for:

1. \$14.0 Billion in annual economic output and 84,000 jobs in U.S. shipyards
2. 70,000 jobs working on or with Jones Act vessels
3. Over 39,000 vessels of all sizes representing an investment of \$30 billion

As it is quite reasonable in order to construct a vessel, crew it and flag it a in the U.S is a very long, demanding and complex procedure. A company must fulfill all the necessary requirements in order to construct a vessel which include the hull and the majority of materials that are going to be used.

- **Cabotage laws in South America:** The cabotage laws in South America remain restrictive and combined with bilateral trade regulations (e.g., flag restrictions for bilateral services between Argentina and Brazil, Argentina and Chile, and Chile and Brazil) keep short sea shipping underdeveloped. Instead of taking advantage of the complete absence of railroad and the long coastlines in order for short sea shipping to flourish shipping lines are forced to find an alternative to access these markets (M. R. Brooks, R.J. Sanchez, G.Wilmsmeier, Canada, 2015).
- **Cabotage laws in the European Union:** The European Union has made decent efforts in order to clarify maritime regulations regarding cabotage within a Member State as maritime transport is directly linked with the quality of life and prosperity of maritime regions. Almost all cabotage services in the EU have been liberalized from 1 January 1999. The Greek market, which was among the last to be partly protected, has been opened up to competition since 1 November 2002. Regarding market developments, the Commission has reported that until 2007, the maritime cabotage market in the EU recorded a continuous increase in volumes of goods and numbers of passengers transported in several countries. Since 2008 it has experienced a considerable decline, due to the impact of the economic crisis.
- **Cabotage laws in Africa:** Since the 1950's the cabotage laws in Africa have remained almost unchanged. The African Union (AU) is currently planning a cabotage legislation that will be imposed on all the African nations. The new legislations aim to form a strong bond within the entire continent that will remain unaffected by the foreign shipping industries. The African Union (AU) follows the example of the United States as it tends to allow only African-owned vessels perform trading activities. The total estimated value of the African shipping industry is estimated in total around 1 trillion per year among its 38 African countries that are surrounded by the sea. It is clear that maritime industry is vital for the entire continent as Africa aspires to create a strong independent economy. The main problem that the African Union (AU) faces is that the African shipping industry cannot fully operate on its own as the African nations lack in infrastructure, experienced staff and organizing. As a result the coastlines remain unprotected, piracy levels are high, African countries are vulnerable to foreign ships and cannot put in action their cabotage laws who could put an end to all these disadvantages.

Cabotage laws can help Africa form its own economy and ultimately unite all these nations in order to reach their highest potential. With careful planning and the will to move forward, Africa can become one of the greatest industries in the shipping industry due to its geographical position and long coastlines (<https://www.deliveryquotecompare.com/news/cabotage-law-in-africa>).

- **Cabotage laws in South East Asia:** South East Asian countries as stated in the previous cases of the United States and Africa aim to strengthen the domestic marine industries by restricting the activities of foreign industries at South-East Asian ports. Until now the governments' efforts have flourished and South-East Asian companies have developed to powerful competitors in the global maritime market. The governments are aiming to support the domestic economy by allowing only south eastern flagged vessels perform trading activities which will be manned by locals. Until now, cabotage has had progress also in the offshore industry, as projects and contracts are in the hands of local investors who are will to help financially with their activities the local industry.
- **Cabotage laws in Australia:** In May 2015, Australia's coalition government announced its intention to introduce a coastal shipping reform by rewriting Australia's maritime cabotage laws, claiming that the legislation, that was introduced by Labour in 2012, was a disaster for the shipping industry. The reform, commonly known as the Shipping Legislation Bill 2015 aimed to grant access to foreign ships to Australia's coastal shipping market by allowing them to access and engage in unlimited transport of passengers and goods between Australia's domestic ports over a year long period. The new legislation would also include ships carrying petroleum from Australian offshore facilities to the mainland. With the new bill the fairly strict cabotage until that time would be abolished and domestic ships would no longer enjoy priority status in many areas of operation. As it was expected the new reform was not welcomed from the industry and political bodies alike. The new legislation was claimed to endanger Australian seafaring jobs and put the remaining crews at risk of serious workplace violations, dismantling the Australian shipping industry by the country's main unions and maritime associations. Despite that the coalition government praised the move and insisted the law would bring numerous economic benefits to Australia, many opposed it in fear that it would mean the downfall of the country's seafaring industry. Opponents claimed that the consequences would be disastrous for the industry as that the policy change could enable the loss of 1,089 Australian seafarer jobs, or

93% of the current workforce as well as the dissolving of domestic skills in the industry and a dangerous exposure to unfair wages and unlawful practices aboard foreign ships.

A main issue in the legislation is that would not require foreign ships, many of them criticized for poor onboard working conditions, to perform according to local regulations and manning requirements as long as their transactions in Australian waters are limited to less than 183 days of the year.

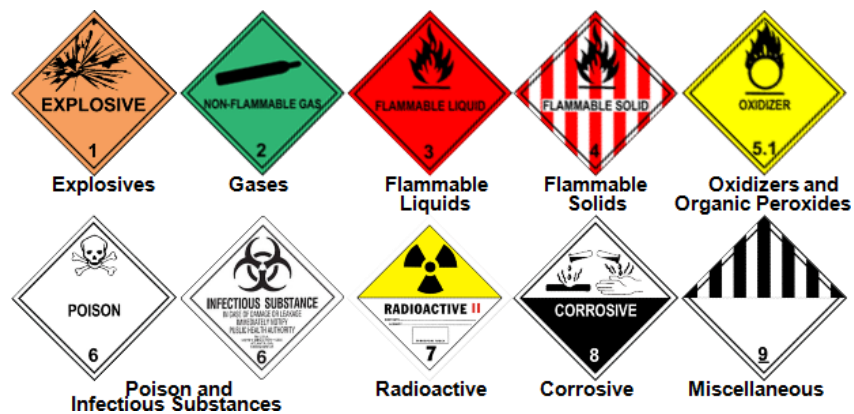
Considering that Australia enjoys the world's fifth largest shipping task positioned across a long coast, a shipping reform is undoubtedly needed as the industry should be faring better. However, suggestions have been made to come up with a more moderate proposal to improve the system rather than abolish it completely (<http://www.ship-technology.com/features/featureaustralias-great-loss-the-end-of-maritime-cabotage-4715738>).

3.4 Factors that define the demand for short sea shipping

In general, the demand for short sea shipping is defined by the same factors that affect the demand in other means of transport as well (**Sambrakos E., Athens, 2013**).

- The price of the fares influences the demand for transportation capacity and vice versa. The higher the prices are, the lower the demand for transportation will drop. The last few years many shipping companies have introduced special offers for students, elder people, families with many children or those who want to travel with their car or motorcycle, to make short sea shipping services more attracting and affordable (**Sambrakos E., Athens, 2013**).
- The fares of alternative means of transport also define the demand for short sea shipping. Islands which have airports are very appealing to the public, especially to tourists from foreign countries. If those fares remain high and time is not an issue more people choose short sea shipping services.
- The increase of population is a major factor for the future of short sea shipping. The bigger the population the higher is the demand for the increase of production and the transportation of products (**Sambrakos E., Athens, 2013**).

- The distance that needs to be covered affects the demand for short sea shipping transportation. It is logical that long distances create a higher demand for short sea shipping transportation. In many cases tourists may also need to use a combination of means of transport in order to reach their destination. This should be taken under serious consideration from the short shipping industry as they can increase their revenue by introducing more shipping routes.
- One more major factor that should be extremely considered is the volume of the cargo. Also known as stacking coefficient, the size/weight ratio indicates the transport capacity of the vessels. Cargos with high volume can only be transported from large vessels. Short sea shipping has the advantage in comparison with other means of transport which are considerably more expensive depending on the volume of the cargo.
- The demand of short sea shipping is also defined by the features of the cargo. Some kinds of cargo create difficulties as they need to be carefully handled, their loading/unloading process takes time and that may cause problems at circumstances in which time is a great issue.



Picture 2.1 Signs used for products which are considered dangerous



Picture 3.2 *Dangerous goods are handled safely by experts.*

- An additional factor is the frequency of the routes which depends on the time period, the geographical position and the tariff policy of each company. Depending on the uniqueness of each case the customer may feel encouraged or discouraged to make use of short sea shipping services. For example Mediterranean countries during summer and spring period, need short sea shipping companies to perform more regular trips as they have to carry agricultural products to the main land or to neighboring more often. The whole economy of the country depends on short sea shipping industry as these products have to be delivered on time to the customers.
- The final factor that determines the progress of short sea shipping industry is the preferences of the passengers. Luxury, comforts, additional offered services on board and low fares make short sea shipping more appealing to the passengers.

While the factors that were presented above define the demand of short sea shipping, there is another series of factors that influence the type of demand (**Sambrakos E., Athens, 2013**). The most important are the following listed below:

- The natural state of the cargo plays a major role at the type of the demand. The cargo can be divided to three subcategories: dry cargo, liquid cargo and LPG. Each one of these three categories has to be transported in specialized vessels and be handled accordingly. If not handled correctly there is a high chance that the cargo will get damaged during the transport which will eventually cost money to the customers and to the company as well. Therefore, each of these subcategories can form the demand for a specific type of vessel.
- An additional criterion of the cargo categorization is their processing level. The cargo is divided into: the primary products and the processed products. Primary products are considered the agricultural products, crude minerals (oil, carbon, iron ore etc.), forest products and raw materials. At the second category belong semi-processed and processed products. The transport of the above is performed by specialized vessels that have the necessary capacity (**Sambrakos E. Athens, 2008**).
- The packaging methods (bulk or container) and the stacking methods are very important. The short sea shipping demand is affected by the loading/unloading time, the internal structure of the vessels and the arrangement of the cargo and the equipment available for the handling of the cargo.



Picture 3.3 *Depiction of container vessel carrying cargo*



Picture 3.4 *Depiction of the loading process on container vessel*

- A key coefficient that defines the short sea shipping demand is the modern trend of the customers to travel with their car. That has led to the building of the RO/RO vessels which offer the customers the option to bring their car or motorcycle with them.



Picture 3.5 *Depiction of the loading process on RO/RO vessel*

In each of the above factors that were stated it is obvious that there is a great demand at certain specialized types of vessel which is directly linked to the capacity demand.

3.5 Characteristics of maritime market

The shipping market presents its own uniqueness and particularities. The shipping market constitutes of different parts that are defined by the nature and the type of the cargo, the type of the vessel, the geographical position where the trading takes place but most importantly on global trading and economic opportunities (**Sambrakos E., Athens, 2013**). Despite that merchant shipping can be examined based on different criteria every time -mainly economic-, it can still be identified as a unified maritime transport service. As an example we can take under consideration liner shipping and tramp shipping which despite their differences their basic structure and principals remain the same. Thanks to the radical technological progress, it has been noticed especially at times of economic crisis that ship owners change the usage of their vessels from liner to tramp and vice versa as modern vessels are designed to have more than one function.

Maritime market is affected also by the social and political status around the globe. In nations where cabotage laws exist, the shipping market is restricted and the trading options are limited. As a result products and services cannot enter in certain countries, having direct consequences on the global economy (**Sambrakos E., Athens, 2013**).

4. Liberalized maritime policies

4.1 Introduction

In recent years due to the market globalization, the developing nations that demonstrate an advanced industry have lean towards liberalization policies in order to reduce the consumer prices. Whenever a system based on liberalized policies is applied, along with its benefits its unintended drawbacks come to the surface.

This chapter focuses on the system of liberalized policies that are applied on the maritime market by the governments. The advantages and the disadvantages of the liberalized methods are examined thoroughly with regards to their effects on the national capital, the citizens, the environment, the working conditions and the protection of domestic industries.

4.2 The liberalized maritime trading system

The liberalized market aims to free up world trade and break down the barriers to international trade through sea. Basic philosophy rests on the principle of comparative advantage. Talks to achieve trade liberalization have been ongoing for many years (<http://www.oecd.org/tad/tradeliberalisation.htm>).

All countries that have had sustained growth and prosperity have opened up their markets to trade and investment. This includes the removal or reduction of tariff obstacles, such as duties and surcharges, and nontariff obstacles, such as licensing rules, quotas and other requirements. The easing or eradication of these restrictions is often referred to as promoting "free trade". Free trade allows goods and services from other countries to compete with domestic products increasing the variety of products the consumers can choose from, helping the money flow according to supply and demand (**Theodoropoulos S., Lekakou M., Pallis A., 2006**). This helps the developing countries get wealthier by offering their products to the consumers across the globe while at the same time creating new job opportunities. Free trade is meant to improve the economy of all participating nations. The World Trade Organization (WTO) regulates free trade agreements among member nations.

By liberalizing trade and capitalizing on areas of comparative advantage, the shipping industries can benefit financially, contribute to the nations revenues and eventually expand (**Theodoropoulos S., Lekakou M., Pallis A., 2006**). Additionally, a liberalized

market enhances tourism and improves the life of the local residents as multinational shipping industries have introduced routes which include new destinations and provide their services to remote islands. Market liberalization marks the advance on sectors such as employment, labor, working environment and education policies, so that the benefits of trade can be equally shared (Theodoropoulos S., Lekakou M., Pallis A., 2006).

4.3 Advantages of liberalized maritime market policies

Liberalized market policies in shipping industry are mostly appreciated in a lot of countries nowadays as they exchange goods and services without the government intervening using various restrictive borders such as tariffs, quotas, barriers etc., and of course progressively dragging many other countries to suddenly reduce protectionism and click in favor of free trade. The main reasons that most First World countries eliminate protectionism through free trade policies enforced by international treaties and organizations are:

- **Promotion of an international network:** This allows goods to cross international lines without any regulatory barriers or their associated costs. Passengers and cargo can get to their destination economically, in time and efficiently. As it was mentioned the best way to expand the transportation network is by combining different means of transport (railroad, air transportation, ship transport etc.) so that door to door delivery depending on each customer's needs.
- **Creation of new job opportunities:** Multinational companies with a global network that constantly expand and set their bases on foreign countries hire natives to cover critical job positions, helping this way to reduce the numbers of unemployment. At the same time these companies become more appealing to the consumers because of their multicultural image.
- **Delivery charges are lowered:** Due to a global competitive market, many companies lower the prices on transportation and delivery of goods to attract customers in using their services. Customers are now able to choose between a wide range of companies that serve their needs and their budget. The domestic companies in order to be competitive against the foreign drop the prices in order to appeal more to the costumers. In that way this can make it more cost effective for those looking to import or export goods with other nations and, ultimately, may result in lower costs to consumers due to lower fees and additional competition.

- **Liberalization aims to free economic activity from binding rules from the state:** As a basis of free trade amongst nations, the idea is to allow competition in maritime industry to ensure the most efficient practices prevail, which should average out and benefit everyone. Domestic shipping companies are no longer obliged by the law to reach remote destinations.
- **Export of local products:** It provides a mechanism by which a nation can specialize in the production of a particular good in which it has an advantage. This is called comparative advantage. Comparative advantage is the economic theory that countries can produce a certain type of good better than other countries. This can lead to lower production costs, which may also translate into savings for consumers. This theory often lies in the fact that nations can have more natural resources than another country. Creating highly desirable goods allows nations to generate high profits from exporting these items through the use of free trade agreements with other countries.
- **Improved Quality of Life:** The quality of life of a nation can be improved through free trade by allowing the import of goods that were not accessible previously in lower costs instead of trying to produce them locally. This exchange of goods between nations can help keep the prices low offering at the same time a wide variety for the public to choose.
- **Reduction of Production Costs:** Liberalization policies in maritime makes cheaper raw materials more accessible for local industries. The production rates are increased, the production cost is lowered and the economy of the country is uplifted. The latest innovations in technology and mechanical advancements are now shared globally allowing companies to enhance their production line and become more competitive. The goods produced by local industries can be distributed to foreign nations and companies that were previously limited to perform inside the nation's borders can make their products well known globally and improve their financial situation. International companies also invest their capitals into foreign economies in order to produce goods at a lower cost.

- **Increase in Purchasing Power:** Even though companies can be self-sufficient by producing certain goods domestically they can increase their value and purchasing power by taking advantage of the fluctuating currency rates. In that way it may be more beneficial for businesses to acquire certain goods from foreign companies helping at the same time themselves and the seller.
- **Economic Growth:** One of the main advantages as a result of the free trade market is that nations can improve their business opportunities by dealing their goods or services without boundaries to a wide network of customers. Instead of relying on the limited number of consumers in their domestic country, countries that are rich in resources but their economy is degraded can achieve economic growth through free market.



Picture 4.1 *Cabotage laws prohibit container carrier with foreign flag to access port in India*

- **The beneficial role of liberalized policies in developing countries:** Developing countries can use in their favor free trade to increase their economic resources and improve the standards of living for their residents (**Button K.J and Pearman, 1993**). Based on their good relations with their neighbors they can import products which are unavailable inside their border either because the industrial level is low or because they don't have the required production processes. Free trade allows developing countries to obtain knowledge to become more efficient,

more productive and make better use of their natural resources. A lot of people travel abroad to acquire education and experience regarding business methods which will later help them set up their own businesses and improve their nation's economy. Moreover developing countries can obtain necessary economic resources such as land and labor in order to upgrade their manufacturing processes as smaller nations usually have the fewest natural resources. Additionally the flow of goods between nations maintains good relations as developing countries are often subject to international threats. More powerful countries offer their protection to developing countries in exchange for free trade agreements.

4.4 Disadvantages of liberalized maritime market policies

Free trade is meant to eliminate unfair barriers to global commerce and raise the economy in developed and developing nations alike. But both apparent and feared repercussions can create a grave mistrust on the part of workers who believe their country is giving foreign producers an unfair advantage and costing domestic jobs. Taking advantage of the free market policies and high demand of products many industries especially in developing countries neglect the issues of worker's rights such as workplace abuse and child labor. Many first world countries avoid getting involved with those matters, on the contrary they encourage them by investing money and establishing themselves on developing countries where the labor cost is low (**Irwin, Douglas A., 2009**).

In order to improve these conditions and ensure the worker's rights the World Trade Organization (WTO) was established as the main instrument in advocating and enforcing free trade.

However despite the efforts that have been made, it has been noted that in the recent years the World Trade Organization (WTO) alone cannot fully eliminate the negative outcomes of the liberalized market. There are several reasons that the liberalized market policies sometimes fail, such as:

- **World agreements are very difficult to achieve:** Considering the maritime laws, it requires a great amount of time and debates in order to accomplish an agreement to the terms that domestic and foreign shipping industries will perform. The economic and political interests of one country may differ and often conflict with the interests of another. It is very hard and time consuming to conclude in an agreement that can keep everyone satisfied.

- **Free trade doesn't work in a global setting:** Where capital is mobile, and trading partners are asymmetrical it is harder to have them cooperate. Each company is concerned about increasing their profits and establishing a good financial state. In many cases the welfare of one company may lead to another's decrement.
- **Infant shipping industries must be protected:** Trade liberalization can cause damage to certain businesses within a nation. In order to be able to compete with the larger mature industries the shipping industries must grow in size to a point domestically. There may also be higher risks to certain environments if items or raw materials are gathered from countries with lower environmental standards.
- **Locations that rely on shipping of goods and passengers may not get sufficient service:** If the organizing and formation of the shipping industry is left in the less predictable hands of the free market it is harder to be controlled and synchronized. The timetables and the routes would be formed in order to increase the companies' profits and not to serve the needs of the public.
- **A possible threat to the nation's economy:** Trade liberalization may also pose a particular threat to developing nations or economies as they likely cannot effectively compete against more established economies or nations. This can lower local industrial diversity or may result in the failure of certain newly developed industries within a particular economy.
- **Extreme Working Conditions:** In order to reduce costs, third world countries condemn many adult workers and children to work under unbearable conditions, paying them very little in exchange for their work. In order to improve these conditions many committees and organisations have been formed protecting human rights. Unfortunately the working conditions are not enough of a reason to ban a supplier's imported goods. Recently efforts have been made so as that developing countries include decent working conditions in trade agreements in order to end their cost advantage in the world market.

- **Environmental Damage:** According to recent studies, the increase of shipping industries in many countries due to free trade increases pollution and energy use creating a huge problem to the environment. Despite the fact that short sea shipping is, compared to the rest means of transport, more environmental friendly it still affects the environment. As an aftermath of the increased number of ships arriving daily at the ports, the air contamination is increased especially at the cities located near the ports. Also, except from the air pollutants released at the air from the ships and the shipyards, noise pollution is also increased due to the massive arrival of travellers, cargo and cars.
- **Increase of Unemployment:** In some case free trade agreements policies may lead to increase of the unemployment rate. Many shipping companies choose to establish themselves on countries with lower working costs. It should be pointed out that it is unclear whether free trade affects employment levels positively or negatively as in some cases creates new job opportunities while at others may cause many people to lose their jobs. It is safe to say that the character and the policy of the companies determines the outcome of multinational's company establishment on a new region and how important the human factor is considered to be.

4.5 Economic Efficiency Effects of Free Trade

The efficiency of free trade is measured by the positive production and consumption efficiency effects. In every model of trade, there is a distinctive improvement in production and consumption efficiency when an economy transcends from a protection policy system to free trade policy system and the increase of the national welfare is a natural outcome. The results can be demonstrated if there are differences in demand between countries which depict the great national output and superior choices available in consumption as a result of free trade.

4.5.1 Production Efficiency of Free Trade

The increase of the production efficiency translates into production increase in goods and services using the same amount of resources. The achieving of the production efficiency improvements requires the shift of resources between industries within the economy which means that expansion of some industries and the contractions of others. These expansions and contractions that may occur at the industries depend on the different underlying stimulus or basis for trade such as technological differences between countries or differences in endowments, and so on. Each of these stimuli plays some role in inducing the trade patterns that are observed.

Each country specializes in the production of different products and uses its comparative technological advantage to benefit from the current trading market flow. A country can increase its profits in the trading market by practising one of the following moves:

- By shifting the production to industries that make the best use of country's relatively abundant factors.
- By shifting the production to products in which the country has relatively less demand compared with the rest of the world.
- By shifting the production to products that exhibit economies of scale in production.

One of these production shifts occur, or for a combination of them, may increase the total production and eventually to a rise of the country's gross domestic product (GDP). This translates into an increase in the level of the country's national income.

4.5.2 Consumption Efficiency of Free Trade

The fluctuations of the consumption efficiency depend mainly on the relative prices of goods and services which define the consumers' choice based on the options offered to him. Since the reduction in prices alters the choices a consumer has in matters of quality and quantity, it is safe to say that consumption efficiency improvements imply that more satisfying choices become available. Nowadays that the trading market has involved so radically the customer can choose among a wide variety of options that serve his needs closer to his ideal.

Despite the fact that improvements in consumption efficiency are easy to describe for an individual consumer, it is much more difficult to describe consumption efficiency in terms of aggregate economy. It is difficult to make distinctions among customer's needs as all consumers have different preferences and there is no redistribution of income as a

result of the changes in the economy. In most trade models income redistribution will occur as an economy moves to free trade, and it may be impossible to redistribute afterward. The uniqueness and singularity of each customer's demand can only be served by the free trade market and is the natural evolution of the previous state that protectionism policies were applied in the vast majority of the world. Nowadays that our society is based so much on technology and communication each customer should have the option to enjoy products and services from all around the world. There is no room for restricting old-fashioned protectionism policies which don't allow our world to make a step forward, instead they create an environment alienated in which customers have unequal rights and choices.

4.6 Developed vs. Developing Countries and International Trade Liberalization

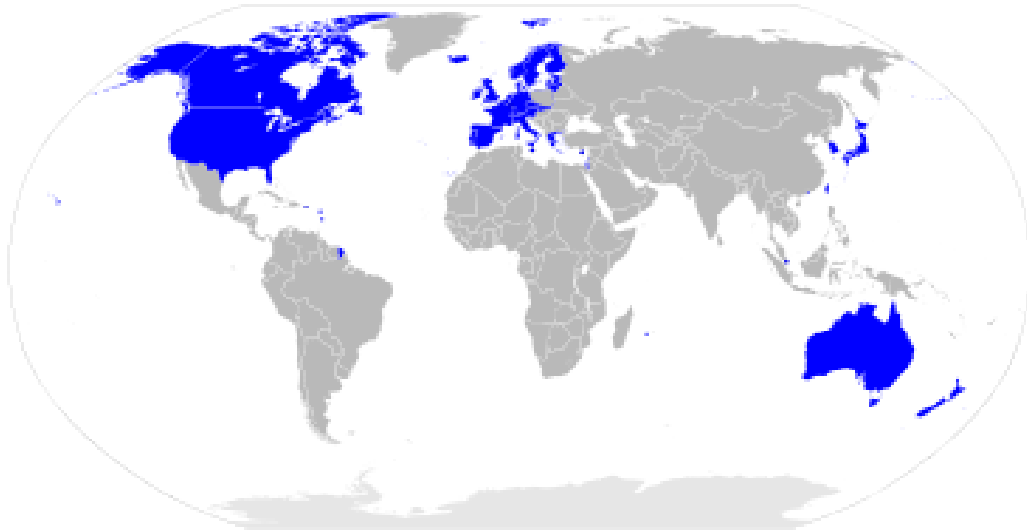
The last fifty years there have been many changes regarding the importance of trade in the world economy. Trade has expanded rapidly and most of the countries that have grown the fastest have done so with rapid increases in their participation in world trade. This very rapid growth in the globalization of world economies is the result of a number of factors, including the following: reductions in trade barriers, reductions in transport costs and reductions in the costs of communications.

The main feature of the process of openness of world economies has been a radical tightening in the trading relations between developed and developing countries. This major shift, from reliance on exports of necessary products, to much greater dependence on exports of products and services, signals a new approach to viewing trade and development. It has also placed major pressures for change on the multilateral trading system as developing countries have become much more active participants.

4.6.1 Developed countries trading policies

Developed countries are by definition those which have higher average incomes, slower population growth, diverse industrial economies and stronger support systems. They mainly include the United States, Canada, Japan and the countries of Western Europe. Developed countries have established themselves in trading, manufacturing and industry and they are responsible for the major shifts and decisions in the global economy status. Developed countries mainly control the trading routes as well as the products which will

be promoted to the market. They have the power to help a developing country evolve and come forward or completely alienate them depending on their interests.



Picture 4.2 *Developed countries on the world Map*

In an effort to expand the world trade globally and establish themselves at the world market, the developed countries reduced their tariffs. The developed countries used the concessions that were made by developing countries on products of interest to them. The developing countries used in their favor the tariff reductions as an opportunity to expand and have a piece of the trading business pie. Most of the manufactured goods that were imported during the early 1960s' from the developing countries were massively declined due to a tariff appliance higher than the developed countries' overall tariff average on manufactured goods. At the same time, these tariffs showed a tendency towards escalation from lower to higher levels of fabrication, thereby discriminating against processing activities in the developing countries.

As a result of many rounds of negotiations, tariffs were considerably reduced across the board, with the exceptions of sensitive items that developed countries are interested in such as steel as well as those that developing countries are interested in such as textiles. There has been noticed a greater frequency of high tariffs on the developed countries' imports from the developing countries than on their overall manufactured imports. For example, in the United States, tariffs of 10% or higher apply to 20% of imports from developing countries and 9% of overall manufactured imports. In comparison for the

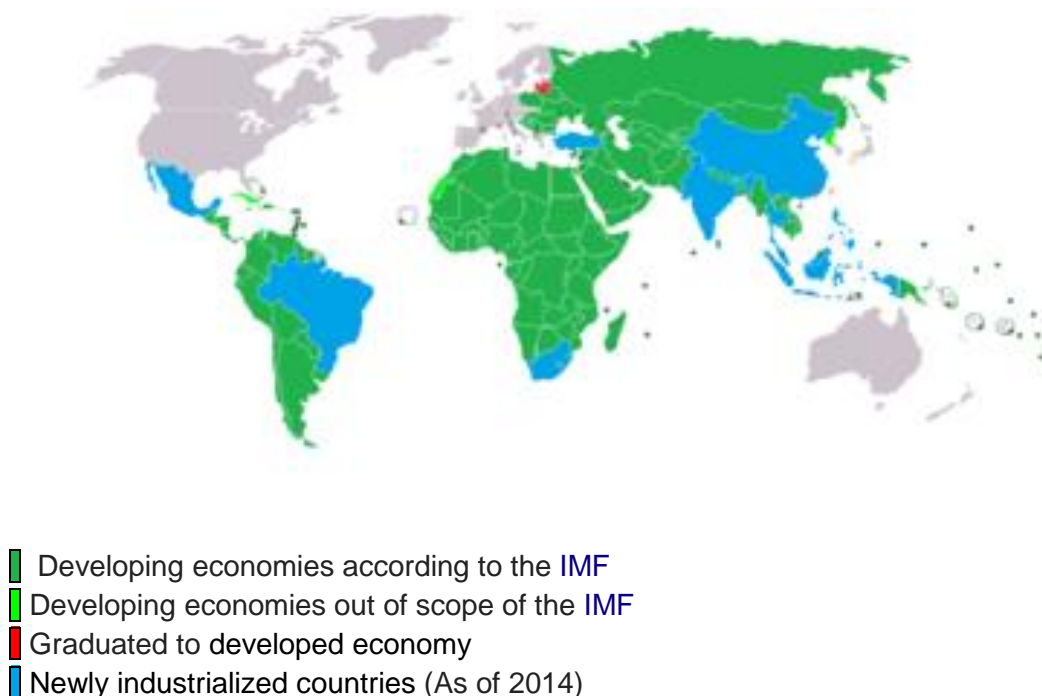
EEC the figures are 12% and 6% and 18% and 13% for Japan. Additionally, despite the fact that tariff escalation has been reduced, the tariffs are basically zero on unprocessed goods but rise along with the degree of fabrication on processed goods. Whenever the nominal rate of tariff is higher than the tariff on the inputs and the effective rate of tariff on the output exceeds, relatively low output tariffs may contribute to rise of high effective rates of protection on the processing activity.

Recently there has been noted a great increase in the restrictions of imports that represent non-tariff barriers to trade in the developed countries. During the long recession the years 1980-82 protectionist measures have risen the United States and in the European Economic Community. However, these restrictions have not been repeated since the 1930s. The reduction in the number of manufactured imports from the developing countries is mainly caused due to the decline in GNP growth rates in the developed countries rather than to increased protection. In fact, the number of manufactured goods imported from the developing countries (the ratio of the rate of growth of these imports to that of GNP) continued to increase. Similar conclusions arise if we take under consideration the share of imports from the developing countries in the apparent consumption of manufactured goods (production plus imports minus exports) in the developed countries. This ratio increased from 0.9% in 1973 to 1.5% in 1978, and again to 2.0% in 1981, with incremental shares (the ratio of increases in imports to increases in apparent consumption) rising from 2.4% in 1973-78 to 3.8% in 1978-1981. Nowadays, the developing countries have succeeded in entering the developed country markets in textiles and clothing. This success has occurred by upgrading the shift of exports to products, and by moving production to countries which are not subject to restrictions. The process of diversification has permitted developing countries to increase their shares in developed country markets for manufactured goods in a hostile world environment despite existing import restrictions. The success of the developing countries in developed country markets has been determined by the policies applied by the developing countries themselves and have affected their ability to export primary commodities. However developed country policies have also had important effects as foods produced in developing countries encounter barriers in developed countries compared to domestic production foods in the developed countries and often have to compete with their subsidized exports. Those restrictions usually affect foods such as sugar, cereals, vegetable oils and oilseed, beef and veal, wine, and tobacco. Studies have shown that a 50 % reduction in the developed countries' trade barriers on foods may lead to an 11% increase in the exports of these commodities from the developing countries. These numbers, by excluding the effects of export subsidies undermine the impact of the developed countries' agricultural policies on developing country food exports. However, subsidies to food exports have increased over time, in particular in the European Economic Community, contributing to a decline in the world market shares of the

developing countries. The policies that developed countries apply have reduced the number of food exports from the developing countries, which did not surpass the 1973 level in 1981 while the exports of raw materials declined slightly as the recession in the developed countries affected developing country exporters. However while an increasing number of developing countries promote the exports of manufactured goods, the export of primary commodities has been undermined by the policies applied by the developing countries.

4.6.2 Developing countries trade policies

Developing countries as depicted on the picture below are those who have lower average income, simple and agricultural level economies and rapid population growth. These characteristics are considered critical for the development of trading routes with developed countries and are constantly changing based on the applied economy status at the time.



Picture 4.3 *Developing countries on the world Map according to the IMF*

The past 15 years there has been noticed a critical liberalization of all trade barriers in developing countries as tariff rates have been dramatically reduced, as well as the coverage of nontariff barriers.

The market liberalization has been vital for the stabilization of the developing countries' economy. The key points that free trade strengthens are the following:

- **Increased Resources:** Countries usually have limited economic resources such as land, labor and capital. Especially smaller developing nations have the lowest amounts of natural resources. In order to increase their natural resources and improve their economic condition, developing nations through free trade agreements aim to secure the economic resources needed to produce consumer goods or services.
- **Improved Quality of Life:** Another benefit that comes along with free trade agreements is that the quality of life in developing nations is improved. The quantity of imported goods is increased and citizens can enjoy products and services that were previously unavailable to them due to the lack of production procedures in their country. Good relations between neighbouring nations provides a constant flow of goods ready for consumption which cost less than trying to produce them domestically.
- **Better Foreign Relations:** A natural outcome of trade between nations is the development of better relations among them. Developing nations are more vulnerable to international threats. In order to protect themselves developing nations aim to ensure free trade agreements with powerful allies to improve their internal infrastructure and their financial state. These agreements benefit both developing and developed countries to as they ensure powerful alliances and free trade within the nations' borders.
- **Production Efficiency:** Free trade regulations allow citizens of developing nations to visit foreign countries to educate themselves and bring back home experience and new methods to improve the production efficiency. Free trade allows developing countries to fill in the gaps regarding their production processes as most nations are not capable of producing all type of goods or service due to restricted knowledge and resources. This knowledge helps the improvement of the

production system and providing a country with a wider range of products which would not be available otherwise (<http://smallbusiness.chron.com/benefits-trade-developing-countries-3834.html>).

4.6 The effects of free trade on the environment

The recent years, many efforts have been made by governments from all around the world to come to an agreement in order to protect the natural resources of our planet. One of the main problems caused by free trade policies is the uncontrollable access to new territories granted to multinational shipping companies. The radical increase of the number of ships in the sea the two last decades marks the increase of demand for industrial products. Especially since 2011 the increase has reached 10% per year. In order to take advantage of this opportunity, corporations have established themselves worldwide creating new industrial areas. Despite improving the employment rate on industrial regions, this continuous demand for supplies has led to the increase of natural resource exploitation, the degradation of sites environmental value and the situation of the earth has reached to an irreversible point making very hard for future generations to survive (https://ec.europa.eu/clima/change/causes_en).

- **Huge amounts of ships' toxic waste end up to the sea:** The harm is caused as ships can drop limitlessly their toxic wastes at national waters causing huge problems to the global biodiversity. The numbers of fish in the oceans are dropping radically, beautiful reefs and large marine ecosystems are destroyed and finally people cannot enjoy the coastal lands as the recent researches have shown the dramatic increase of bacteria and other contaminants.



Picture 4.4 *Depiction of sewage dumped into waters by cruise ship*

- Air pollutants released by ships:** The rise of demand for supplies, increased the frequency of the routes performed by ships and as a result the atmosphere near the coastal areas has become unbearable for the locals who face health problems because of the constantly released air pollutants. The environmental cost that our planet has paid is great as the emissions from international shipping are estimated to 2.18 million tonnes CO₂ per day. Despite the fact that short sea shipping compared to the other means of transport doesn't cause so much emission of CO₂ in the atmosphere as seen at the below table, the cumulative amount of CO₂ remains high (https://ec.europa.eu/clima/change/causes_en).

Means of transport	Grams./ton. klm
Road transport	190
Railroad	30
Short sea shipping	30
Intra community shipping	20

Table 4.1 *Carbon dioxide (CO₂) emissions by means of transport*

A solution must be found as the increased concentration of CO₂ in the atmosphere is the main cause for the creation of the greenhouse effect and has led the planet to suffer by an abnormal climate change. This environmental phenomenon threatens the fauna and flora, causes floods and completely changes the landscape of the poles. At the same time the shipping companies are extremely favoured as the rapidly melting sea ice has opened new trade routes between the Atlantic and the Pacific oceans.



Picture 4.5 *Thick black smoke billows from the funnels of a container ship*

- **Increased oil consumption:** One more major problem created by the multiple routes performed each year by ships is that oil consumption has increased radically leading to a human-induced temperature increase. According to recent studies the trading demand has led to quadruple the number of ships since 1992. The irrational consumption of oil has led us to drain the earth from its natural resources and is the main cause behind wars between western countries and Middle-East.
- **Urbanization:** Near the harbours more and more shipping companies build their offices and docks replacing trees and parks with cement turning those once

beautiful ecosystems to industrial areas. Additionally, shipyards occupy a lot of space around the ports as vessels arrive daily there to get repaired and as a result the atmosphere around the area is sultry making the conditions for the locals unbearable.



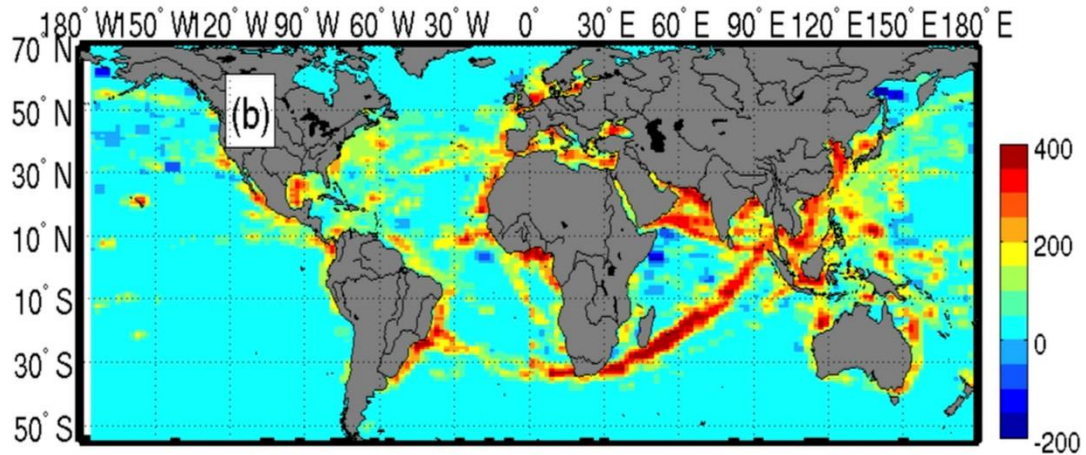
Picture 4.6 *The urban area around the port of Piraeus*

4.7 The contribution of technology in Ship Tracking

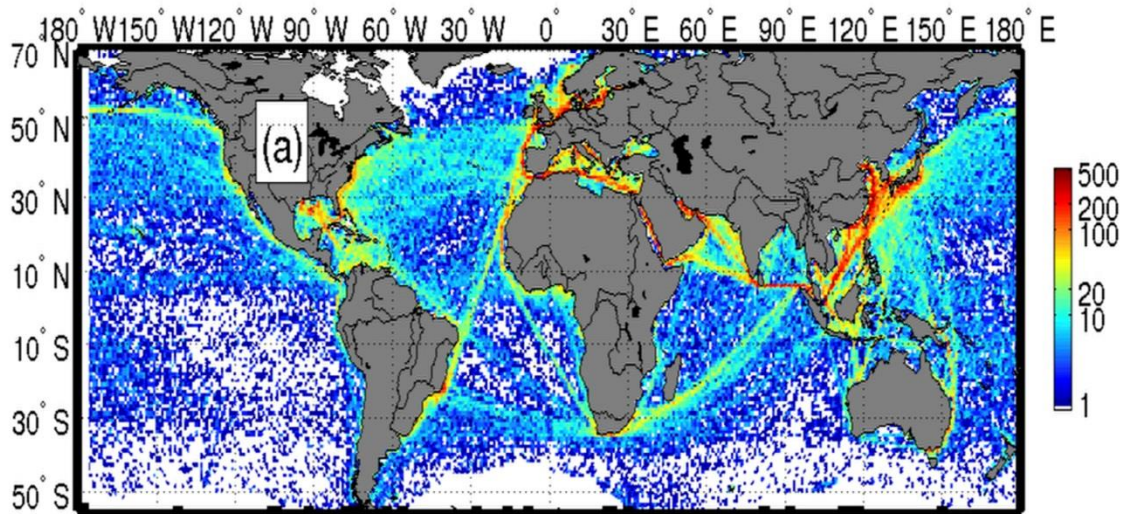
Thanks to the progress of technology in the maritime sector during the last two decades, we are now able to track even the smaller vessels with the combined help of the Global Positioning System (GPS), instruments and satellites. The vessels make use of GPS to transmit and receive points using the VHF radio channels. We have a clear picture of the number of the vessels in the sea, the most popular sea routes and the most visited ports globally. Based on the new retrieved data we can reach to safe conclusions considering the impact of the increase of ships on marine ecosystems and also companies that violate the laws constantly and enter prohibited international waters or even perform illegal

trading activities (<http://www.livescience.com/48788-ocean-shipping-big-increase-satellites.html>).

In today's world of technological advancements vessel tracking plays a major role. With the help of Global Positioning System (GPS) the location and the position of the vessel can be tracked and that may result to avoiding collisions with other vessel or physical obstacles and change their route in case of emergency. However the beneficial role of vessel tracking system may be intercepted by satellite transmission problems or long distances. If those problems are eliminated in the next few years, we will have in our hands a vast amount of information daily about the marine traffic and its impact on the environment (<http://www.livescience.com/48788-ocean-shipping-big-increase-satellites.html>).



Picture 4.7 Growth in shipping traffic between 1992 and 2012. Credit: Jean Tournadre/GRL



Picture 4.8 *Satellite data highlights a marked increase in global shipping, especially along popular trade routes.*

The increase of the number of the ships in sea is one of the most damaging activities that humans have done against the marine environment. In order to overcome this problem and to decrease the marine traffic the shipping companies should not allow the vessels perform the scheduled routes unless they have filled their full capacity except for the essentials. Also in order to save fuels they should travel through the fastest route and not with maximum speed but instead keep a steady velocity throughout the whole trip. Finally using the technology of ship tracking vessels can avoid unnecessary detours and make the fastest route using as less fuels as possible.

5. Protectionism policies

5.1 Introduction

Free trade has had a great impact on the environment and working conditions over the last few years. Although measures to control and prevent from the threats that come along with free trade have been taken it is impossible to create a law system capable of pleasing all the nations that are part of the free trade market. That is the main reason in some places protectionism policies are still applied instead of going with the flow and follow the example of first world nations and embrace the free market policies.

In the following segments the principles and the measures that protectionism policies can engage are introduced. Moreover, the advantages and the disadvantages of the liberalized policies are presented in order to acknowledge the reasons that many countries still apply this system.

5.2 Protectionism policies in maritime market

Protectionism is considered a barrier to global free trade. The world seems to create negative images of isolationism and subsidizing industries that could otherwise not compete fairly against others (<http://www.globalissues.org/article/43/deregulation-or-protectionism>). Protectionism policies constitute the means by which maritime trade between countries is restricted by the government usually through measures to reduce the number or to increase the price of the imported goods coming into a country in order to protect its domestic industries from foreign competition. Typical measures of protectionism are the following:

- **Tariffs**
- **Quotas**
- **Non-Tariff Barriers**

The opinions considering the positive or negative role of protectionism are split. On the long term, the effects of protectionism may turn against the groups they were designed to protect. However, protectionism policies are still applied in some places as they are considered to create jobs and protect domestic maritime industries.

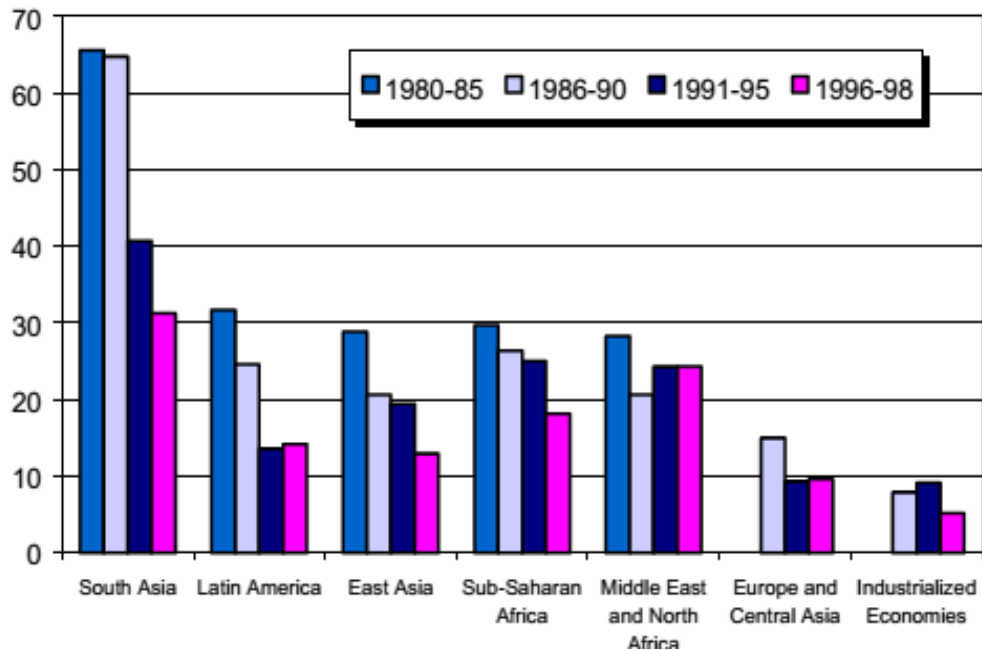
In the following chapters these terms are explained thoroughly and their effects considering the global maritime industry are depicted.

5.2.1 Tariffs

Tariffs are taxes imposed by the government which are added on imported goods and services in order to limit trade by making the prices of imported goods and services higher and less affordable to the consumers. Tariffs are based on the value and the type of the designated item that are surcharged on and may differ to each nation. Tariffs are considered to be a major revenue for governments at the expense of consumers and foreign producers many times making the cost of specific goods unbearable forcing the consumers to buy local products.

The governments by adding tariffs on specific imported goods which may be considerably cheaper or more qualitant, increase the prices of these products and force consumers to buy domestic goods.

In this way the government favours domestically produced goods instead of urging the industries to lower their prices or improve the quality to become more competitive. Tariffs are a measure imposed against the principals of free trade, narrowing the options of the consumers and at the same time reducing their purchasing power.



Graph 5.1 Changes in tariff rates since the early 1980s, Source: World Bank (2001)

The main reasons governments apply tariffs on imported goods are:

- **Establishment of a strong local market.** One of the positive outcomes of importing tariffs is that by making imported products and services less appealing to the public is the strengthening of the local market. The consumers that have previously focused only on imported products and services for various reasons, have started to trust again the local goods. As a result an improvement in terms of quality and efficiency is notable.
- **Protection of domestic jobs.** Governments make foreign products less appealing to the public by increasing their prices. Domestic industries improve their financial state, improve the production processes and expand. As a result, working conditions are improved and more people are hired reducing this way the rate of unemployment.

- **Protection of infant industries.** As it was mentioned before by increasing the price of specific imported goods and making them less affordable, the consumers are forced to buy from their local market. In that way domestic industries are protected from foreign competition and can improve their financial situation by selling their products to the market.
- **Retaliation against unfair competition.** Tariffs are a measure to preserve good relations between trading countries. Trade between nations is based on good correlation and respect on each other's economic and political interests. By imposing tariffs on a company's products is like applying a form of punishment in case the company doesn't abide by the imposed trading laws making the designated products unappealing to the public.
- **Protection of the economy.** Many times an imported product is considered to be damaging for the economy of the country mainly because it puts out of the competition similar domestic products. That is mainly caused due to better quality, lower prices or more effective marketing ways of the imported goods. The governments in order to stop this from happening sometimes use tariffs as a way to prevent the public from buying it.

5.2.2 Quotas

A quota is by definition a physical measure imposed by the government in order to control the quantity of goods that can be imported or exported during a particular time period. Governments aim to reduce the quantity on specified imported products and services in order to strengthen the local market by protecting domestic production (<http://www.investopedia.com/terms/q/quota.asp#ixzz4apiP8lGb>).

The main difference between quotas and tariffs is that quotas are imposed by the government by reducing the quantities of a specific good that is imported, while on the other hand tariffs are added as an extra fee on those products.

The fees associated with tariffs are designed to raise the overall cost to the producer, or supplier, seeking to sell goods within the United States and serves as a way to encourage outside goods to be priced for higher sale prices than if the tariffs were not in place.

5.2.3 Risks Associated With Quotas and Tariffs

Sometimes the combination of overwhelming restrictive quotas and extremely high tariffs lead to negative outcomes and rise of tension between nations. The last decades many trading disputes have started due to barriers imposed by the host nations on the importing nations. This way the prices went up, and the local products became more competitive in the marketplace. Extremely high quotas and tariffs can make products unaffordable for the public and importing businesses lose their financial stability on foreign countries. These measures are often met with resistance which lead to conflicts, embargoes and even problems at the political alliances between trading nations.

5.2.4 Non-Tariff Barriers

Non-tariff barriers are by definition mechanisms created by the governments to restrict the trading activities of a country or a business but not in a form of a tariff. Non-tariff barriers may serve political or strategic purposes other than pure financial motives.

Non-tariff barriers come into conflict with the basic idea of a liberalized market another way and may affect not only on the country or the industry that are applied to, but also the governments that imposed them (<http://www.investopedia.com/terms/n/nontariff-barrier.asp#ixzz4apIWRilq>).

Non-Tariff Barriers come in different forms and each one serves a different purpose. Their main characteristic of them all is the limitation and restriction of the trading activities of a foreign country and the reduction of the quantities of the imported goods. As a result any barrier imposed to international trade will eventually create an economic loss, as it restricts the actions of standard market trading.

Country	1989–94	1995–98
	%	%
East Asia and the Pacific (7)	30.1	16.3
Latin America and the Caribbean (13)	18.3	8.0
Middle East and North Africa (4)	43.8	16.6
South Asia (4)	57.0	58.3
Sub-Saharan Africa (12)	26.0	10.4

Table 5.1 *Frequency of total core nontariff measures in developing countries, 1989–98*
Note: *Figures in parentheses are the number of countries in each region for which data are available* Source: *World Bank (2001), based on Michalopoulos 1999*

The most common Non-Tariff Barriers are:

- **Licenses**
- **Embargoes**
- **Voluntary Export Restraints (VERs)**
- **Sanctions**
- **Exacting Standards or Specifications**

5.2.4.1 Licenses

Governments use licences as another mean to limit the access of specific products inside their region. In order to import its products freely a business has to acquire a special trading license from the government. The designated business has to be able satisfy all the specifications and requirements provided by the law and is obliged to respect the governments' trading limitations to be granted this licence. In case the businesses are unable to acquire these licences for various reasons they are not permitted to continue their trading activities.

5.2.4.2 Embargoes

Embargo is considered to be a form of a strong diplomatic measure imposed by the government to restrict partially or completely the trading actions of a foreign nation. Embargoes can be imposed in different ways such as banning import and exports with a specific country, freezing bank accounts, slowing down transports. Businesses should be informed constantly about countries that are imposing embargoes as the regulations keep changing sometimes along with political reformations. Embargoes are considered to be very strict measures against a country or a business and they often serve political or strategic reasons. In the past embargoes were used to cripple a nation economically or as a form of punishment such as the embargo imposed by the U.S. on Cuba and is considered to be one of the longest. The main reasons the U.S cut off the trading activities with Cuba is the improvement of human rights and freedoms for the citizens.

5.2.4.3 Voluntary Export Restraints

Voluntary export restraints or commonly known as VERs are considered another type of non-tariff barrier. Voluntary export restraints are created by the importing countries and are self-imposed. Governments in order to protect their infant industries come to agreement with multinational companies to control the quantities of specific imported goods and services that may hurt its economy and maintain good relations and political alliances. Although in recent years in order to avoid VERs companies have established themselves in new territories. For example, shipping and airline companies have built offices around the world and can perform their action without limitations.

5.2.4.4 Sanctions

The uncontrollable access of a foreign industry to the local market may cause problems to the economy of the country. It is very common for major shipping industries and other international companies that can afford to spend big budget on marketing and advertising, supplant local companies and their trading actions. In order to put this problem under control the governments apply sanctions on imported goods as financial penalties against a targeted country. Sanctions are additional barriers that slow down and limit the trading procedures of a company inside the borders of a foreign region and sometimes are imposed to serve political and military purposes by securing the high ground position to

the countries that impose them. The effectiveness of sanctions is questionable as the public's buying options are limited down while at the same time the importing country may prohibit all trading actions with the imposing country.

5.2.4.5 Exacting Product Standards or Specifications

Non-tariff barriers can also be imposed as exacting product standards and specifications. These kinds of non-tariff barriers are often imposed by governments in order to protect the citizens from an imported product that may not meet the standard requirements. These requirements may include the production processes, the ingredients that were used during the production (certain ingredients and sub-materials are not prohibited in some nations) and even the packaging. Industries are obliged to put labels on their products with the origins, the ingredients and the manufacturing processes that were followed during the production. These measures aim to limit the imported goods and can be used often combined with standard tariff barriers.

5.3 Advantages of protectionism policies

Some countries have defined their own policies considering the maritime market and do not tend to apply liberalized policies at their maritime market, as they tend to support a locally based economy rather than a system which has been established by foreign owners and is against the profits of the workers and the host country. The main advantages that support the establishment of market based on liberalized policies are:

- **Protection of domestic shipping industries:** By allowing the entrance of foreign shipping industries in the domestic market, it is common sense that the international and more expanded shipping industries will pose a natural threat to the small domestic industries. Major shipping industries' fleets are consisted of newer, larger and modernized vessel therefore they are more appealing to the public, putting out of the competition the domestic companies that are unable to keep up with the public demand.

- **Protection of domestic employment:** A nation's government by not allowing foreign companies to be active and establish themselves inside its borders, is forbidding at the same time the entrance to foreign workers who are looking for an opportunity to work abroad. The residents of a country feel safe from losing their jobs from foreign workers that are working for a foreign shipping industry.
- **Strategic reasons:** Many governments are very sceptical to allowing foreign companies perform trading activities inside their borders especially to those that are established on countries they have political disagreements with.
- **Political pressures:** The governments try to protect the domestic shipping industries by forming laws and regulations which limit foreign industries perform inside its borders. In case a foreign company violates the laws established by a nation's government the situation gets easily intense and strict penalties are applied.
- **Protection of culture:** Free trade provides limitless access to foreign companies and encourages the relocation of multinational manufacturing sites from developed countries to poorer nations with much lower costs putting traditions and culture at stake. Globalization is a natural outcome when colossal global industries enter a new territory as it is very common that the people they bring along with do not share the same customs with the local community.
- **Protection of infant industries:** By providing subsidies for their production and imposing tariffs on competing foreign products the nations aim to protect domestic industries and the benefits of their workers. As a result the newly formed and small shipping industries are protected until they grow in size and capital and are ready to compete in the global market against multinational companies that could have put them easily out of business in the past.

5.4 Disadvantages of protectionism policies

It has been pointed out that the development of protectionism policies creates problems in the shipping industry and international trading movement. Protectionism policies are claimed to be eventually harmful for the nations that apply them instead of helping them. In order to overcome these obstacles the liberalized system was conducted. The main reasons that have led to this are:

- **Cargo and passengers cannot easily reach a remote destination:** Many countries don't have the sufficient shipping network to cover the needs of distant places, so many times foreign shipping industries have to step in. Passengers and cargo who want to reach their destination in time, travelling from one country to the other have to intervene with third parties.
- **The ensuing inefficiency and rising of freight rates :** Without many shipping companies there is no competition and the domestic shipping industries can increase the travelling cost as there is a monopoly created. As the international shipping industries are out of the picture, domestic companies seize the opportunity to take advantage of the locals' needs and improve their financial state.
- **Disruptions of international trade and maritime transport:** As a result of a domestic shipping network the local products cannot be sold globally, which affects directly the economy of the country and also passengers who want to travel by sea have to travel another way which affects directly the maritime economy. The tourism is also affected by these disruptions as customers have to get through a lot of trouble to reach their destination and may choose other places to visit that can have easy access to, by boat.
- **Trading is limited amongst a small portion of the purchasing community:** The merchandise produced by the small domestic industries faces limited access to the public as the protectionism policies do not allow products to be exported to foreign countries where there is more demand. Practicing protectionism policies against importing nations is often a double-edged sword as the same barriers may

be imposed by them as well. As a result, the local industries cannot reach their highest potential and expand.

- **Rise of Unemployment Rate:** Along with the decline of tourism and maritime industry come the problems to the employment sector. Job opportunities are fewer, the employees have insufficient training and experience concerning the maritime industry and the ones that are already working for such companies have lowered their standards. Without competition, companies within the industry have no need to invest on innovative ideas and hire new staff. Eventually, the domestic production will stay stable and people with the required will search for job and better working conditions abroad.

5.5 Economic Efficiency Effects of Protectionism Policies

The main question that occurs after analyzing the pros and cons of both free trading policies and protectionism policies is whether protectionism is effective in modern days' economy.

Many people claim that protectionism may be more efficient than free trade as protectionism ensures a fair market and equal opportunities. In a completely free trade market, there is always the danger that larger businesses can unfairly exploit both their workers and the smaller businesses. As a natural outcome big companies seize the opportunity and expand themselves while smaller fresh business are doomed to be devoured by global well established companies. This leads to inefficiency and the only way to rectify this is for a smaller business to establish itself and become the next big thing, and only if that smaller business is anti-exploitation. The government also plays a major role in this situation as a little oversight sees that this never happens in the first place and can ensure equal opportunities for every business without considering its scale.

Eventually the whole protectionism vs free trade debate all comes down to on who is being affected. In terms of domestic production, protectionism is often better than free trade. In terms of the efficiency of transnational corporations, then free trade is typically

more efficient as companies of bigger magnitude tend to expand and cover the needs of the most demanding customers.

There are real gains from free trade, but there are also benefits in maintaining a degree of local self-sufficiency which is very different from autarky.

There could be done many unwise things to make a country more internationally competitive. That doesn't mean we should. There are two ways to make products cheaper for the consumer. One is to increase efficiency and the other is to reduce environmental and employment standards. Reducing the wages paid for a given amount of productive work represents a lowering of standards, not an increase in efficiency.

It is safe to say that despite the fact that free trade policies can lead the way to enter the appealing and promising global trading network, a country should move with consciousness and always aim for the good of its people. The economic benefits may be only the front image for greater forthcoming dangers that hide underneath (<https://www.globalpolicy.org/component/content/article/209/42749.html>).

6. CONCLUSIONS AND SUGGESTIONS

As it is very obvious the liberalization policies despite some minor disadvantages are the best form for the development of a world trading shipping system. As a result markets are open for developing shipping industries and eventually they improve their economic conditions. Globalization is not a short cut to development. Successful development strategies have always required a combination of imported practices and domestic institutional innovations. Policy makers need to create a domestic growth strategy, relying on domestic investors and domestic institutions (**Dani Rodrik, 2001**). Jobs lost in one industry of a developed country can grow in another industry. Free trade is meant to improve the economy of all participating companies of the maritime industry.

Consumers usually favor free trade as it offers them a wider selection of products and brands to choose from. Most of the times the imported goods especially from eastern countries such as China and South Korea tend to be cheaper and reliable as the labor cost are lower in these countries.

Protectionism on the other hand is claimed to result to an atrophy of the competitive abilities of the countries that is applied to. Increasing protectionism will further slow economic growth. It would cause more layoffs, not fewer. If the states close their borders, their neighbor countries will do the same. This could cause layoffs among the workers who owe their jobs to exports.

If the protectionist route in shipping is followed, more efficient shipping industries will have less scope to expand, and overall output and economic welfare will suffer. This policy is closely aligned with anti-globalization. It is often seen that countries with more advanced education adapt to a free trade economy more effectively than others. This stems from the ability of the labor market to adjust to changing demands and the ability of production facilities to shift their focus to more in-demand goods.

Countries with lower educational standards or averages may struggle in adapting to the changing economic environment. One can easily realize after the above analysis that protectionism is out dated for so many countries round the globe, yet still the standing peak of many others as any has the right to perform its own policy and regulations.

Since both of these systems present some major disadvantages along with their advantages the best option is to form a combined system using the best characteristics of both.

Of course, the formation of the best policy system considering the maritime market is different for each country. As a result nations collide with each other as their purpose is to promote their own financial interests and to protect their domestic industries.

To conclude, the best policy system based on the facts is the liberalized system but in some cases certain protectionism policies can be fuddled in order to create a system which will combine the best features of both systems.

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