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WORLD MARITIME UNIVERSITY

Malmö, Sweden



**TOWARDS A BETTER UNDERSTANDING AND
DEVELOPMENT OF THE COLOMBIAN
SHIPPING MANAGEMENT POLICIES**

By

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Colombia

**A dissertation submitted to World Maritime University in partial fulfilment of the
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Abstract

Title of the Dissertation: **Towards a Better Understanding and Development of the Colombian Shipping Management Policies.**

Degree: **MSc**

The dissertation is a brief study in the usage of the past protectionism mechanism practice in the Colombian shipping sector and the impact of the entrance of the open and free market economy in this industrial sector.

According with this increasing expansion and development of the global shipping market and the constant changes in the structure of the shipping activities; a brief look and evaluation of the advantages and constraints of the different international shipping management strategies, i.e. consortia, partnership, alliances, mergers and acquisitions are present in order to apply their corporate benefits in the national shipping Industry.

The Explanation of other multiple benefits in the application of current shipping environment strategies, i.e. Marketing, quality assurance, outsourcing, benchmarking, logistics and multi-modal services, are part of the study in order to support and enhance the corporate objectives of the national shipping companies.

Additionally, in the concluding chapters a development plan to maintain and developed the fleet and a summary of the principal benefits in the application of the international shipping strategies are presented with the aim of speed up the national shipping industry and maintain the operation of the current national shipping companies involved in the international seaborne trade.

KEYWORDS: Marketing, quality assurance, outsourcing, benchmarking, logistics, multi-modal services, consortia, partnership, alliances, mergers and acquisitions.

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Abbreviations

FMG	Flota Mercante Gran Colombiana
NVOCC	Non Vessel Operator Common Carrier
MTO	MULTIMODAL TRANSPORT OPERATOR.
BPO	BUSINESS PROCESS OUTSOURCING
ERP	ENTERPRISE RESOURCE PROCESS
IT	INFORMATION TECHNOLOGY
ALADI	ASOCIACION LATINOAMERICANA DE INTEGRACION
JIT	JUST IN TIME
B2B	BUSINESS TO BUSINESS
IACS	INTERNATIONAL ASSOCIATION OF CLASSIFICATION SOCIETIES
MARPOL	MARINE POLLUTION (INTERNATIONAL CONVENTION)
SOLAS	SAFETY OF LIFE AT SEA. (INTERNATIONAL CONVENTION)
DANE	DEPARTAMNETO NACIONAL DE ESTADISTICA
DIMAR	DIRECCION MARITIMA.

Chapter One

Introduction

The maritime transport market is fundamental for the development of the foreign affairs commerce policy in any country. Policy that is reflected the internal economic growth and development of a nation.

National fleet aims are obtained through the total control in the transport of the goods produced by the country and also through securing the frequency and continuity of the imports and exports. Once the fleet is established the international power of negotiation, control in the fluency of the cargo, freight competition and the participation of the country in the international scenario became a fact, after that the national development can be reached.

From the operational point of view national fleets should be capable of:

- Providing and securing a frequency of the service to avoid interruptions and enhanced the availability of products;
- Serving in all needed routes in time;
- Supplying ships technically equipped to cope with the needs of the required transport;
- Providing freight prices according with the international market to hold the cost of transport.

The proper exploitation of national fleets in the international maritime transport contributes to the expansion and development of many other national industries and the progress and economic health of the nation. Therefore, from an economical point of view developments to the country can be seen by:

- the increment of the foreign currencies by saving and captive them;
- a better balance of payments;
- creation of employment on board ships and ashore facilities;
- safe guarding the sovereignty of the nation in times of crisis by providing a fixed service with the autonomy of the country to transport goods. (Naval Reserve);
- increasing the economic and political interaction with other countries;
- speeding up the transference of technology and know how and
- acquiring new markets.

According to these facts investments in shipping transport help to diversify the national economy by the interaction and commitment of other sectors of the industry like vendors and providers of equipment and materials, shipyards for construction, maintenance and repair of ships, bank services, insurers, telecommunications, brokering and many other markets linked with the shipping activities like ports and land and inland transport.

Nowadays, with the globalisation process around the world and the appearance of the free and fair market policy in almost all the sectors of the industry, most of the Latin American shipping companies are facing a difficult period because an unequal competition against foreign lines. Hence the massive bankruptcy and disappearance of the national fleets is a trend in many Latin American nations.

In Colombia the shift from an over-protected stage to an open economy stage, has caused big changes in shipping activities that ended with the bankruptcy of most of the national shipping companies, a situation that can be seen in the obsolete and decadent fleets.

On the other hand it is true that the open market period in general terms brings great benefits for the customers, because the huge options to select a better and competitive service and the flexibility of the market against the monopoly system.

Some of the typical results and developments in the application of an open market policy are shown in other continents like Europe, Asia and recently in Colombia.

Some clear examples of the benefits of the open economy are:

- Better quality of the service.
- More competitive market.
- Lower freight rates.
- More power of negotiation for the customers.
- Multiplicity of chartering options.
- Freedom to access the niche and potential markets.
- Freedom of contracts.
- And disappearance of the monopoly system

In the particular case of Colombia the lack of a proactive “open market thinking” and awareness to the change from the national shipping industry, which permit the sector growth through a totally new process, kill the economic and corporate objectives of the companies leading to the fade and obsolescence of the current national fleets.

Nowadays, maritime transport is just one of the main stages of the logistic chain and with the introduction of the logistic concept, the interaction of different types of transport with other activities and services for the benefit of the shippers, consignees and carriers is a fact. Thus more tight and close relations like partnerships, alliances and joint-ventures are growing rapidly in the industry and the importance in offering a better service that add value to the product/service, is what makes the difference in the total process.

This link of more actors and sectors of the industry make vendors, suppliers and consumers become more and more dependent on each other. However, the one who provides most services for most of the products is maritime transport because the prices, economy of scale and easy access to different markets. Therefore, continuous

attentions in the development of environmental, quality and management strategies are the keys to success in the future of the shipping market market.

Under this picture it is understandable, why the operation of national fleets in international shipping activities produces stability and development on the economy of a country. According to this, the application and explanation of some international strategies for the recuperation of the national fleets will be shown in the following chapters after an analysis of the shipping framework in Colombia.

Chapter Two

Colombian Maritime Transport Framework

2.1 Shipping Industry background in Colombia.

Not until 1945 did Colombia begin to develop a national merchant fleet due to the economic impact and repercussions from the lack of it during the Second World War.

The lack of a national fleet dedicated to international maritime transportation to mobilise exports and imports from and to Colombia, lead to a total dependency and manipulation by rich nations. These factors were seen in insurance costs and levels applicable to freight rates. Therefore, not until the creation of a national fleet and the participation of it in international conferences, were freight rates levels reduced.

Basically the creation of national fleets in Latin American countries responds to the need to defend and develop the national economies. In fact during the coming years after the foundation of a few fleets, regular transport was created. This guaranteed to the importers movements of any size and volume of goods by the substitution of foreign fleets for national fleets. This reflects a clear reduction in expenses and a better balance of payments for the countries due to the export of a transport service.

The procurement of a national fleet is of extreme importance mainly when they can assure the continuity of production levels by providing resources not available in the country as well as minimising the risk of accumulation of products for lack of transportation due to difficult events like international crisis or war.

The shipping industry in Colombia during the first 25 years of development was integrated by few companies, for example Flota Mercante Grancolombiana, Compania

Colombiana de Navegacion Maritima, Lineas Agromar, Colombiana International de Vapores and Navenal.

The first founded and most important company was Flota Mercante Grancolombiana (FMG) which had 95 percent of the vessels in the country and its entrance in the international market produced several impacts in the shipping relations with some nations. Especially in the trade of products like coffee and machinery with the USA, due to a break of the traditional monopoly system, performed by lines like Grace line Inc, United Fruit Company, Lykes and the West Coast Line.

Other national shipping companies became active as well for instance Cia. Colombiana de Navegacion Maritima; however, FMG became the bigger and more important private company because of its voluminous movements.

One of the products that reflected the active operation and participation of few national fleets in the trade and competition with foreign fleets at that time was the coffee. (See table I).

Table 1 **Buenaventura Port Exports**
Month of August 1947

Line	Coffe Bags	In %
Grace Line Inc.	159.142	61.34 %
Cia., Col. de Navega Maritima	44.224	17.21%
FMG	33.276	12.95%
Independence Line Inc.	10.974	4.27%
Lykes Bros Inc.	5.375	2.09%
West Coast Line.	3.961	1.54%

Source: Statistics Federacion National de Cafeteros.

From 1968 to 1984 the merchant fleets from countries who were members of the **ALADI** (1) grew approximately 200% over the world tendency (124%). In this period also the Colombian merchant fleet grew to 78% DWT and many new companies incorporated the national fleet. The total national fleet was integrated by Granelco with 6%, Interoceanica 2.40%, Maritimas Internacionales 1.40%, Ligracol 1.30%, Transpetrol 0.53% and Maritimas San Andres with 0.33%.

During this period FMG remained the bigger one with 71.02 %, followed by Lineas Agromar with 17% of the total DWT. It is also important to mention that the Colombian fleet was only 2.8% of the total DWT of the South American fleets at that time.

The Colombian fleet during this time consisted basically of general cargo ships with about 77% of the total fleet, 13% bulk carriers, 8 % oil tankers and 2% others. Container ships were not used during this period because incorporation of them to the fleets was relatively new. The average age of the ships until 1984 was 12.9 years. From 1984 and afterwards the fleet was reduced as shown in figure 1.

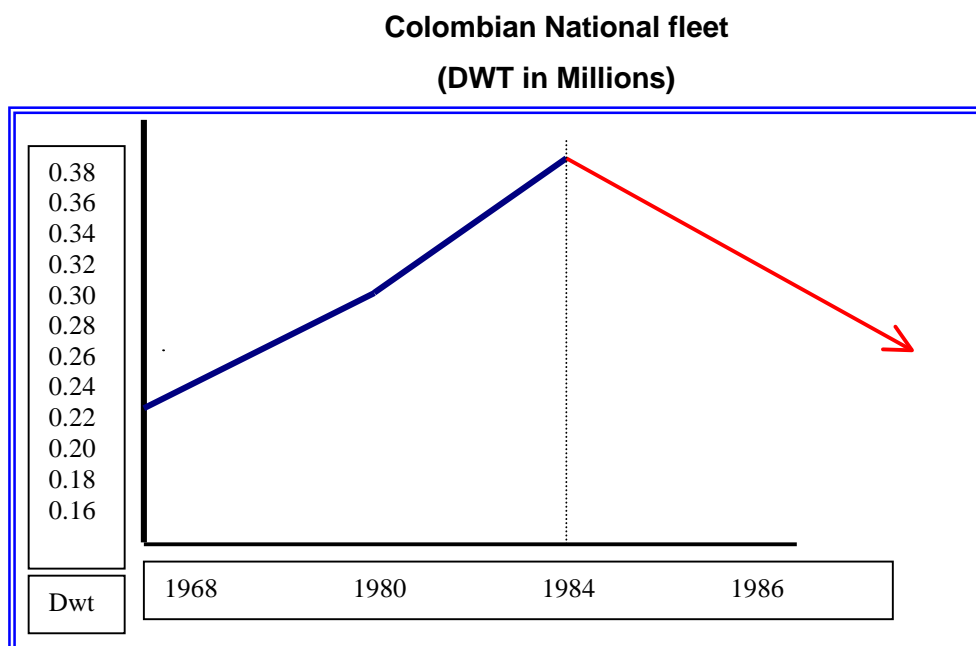


Figure 1.

Source : Statistics Federacion Nacional de Cafeteros.

ALADI: Asociacion Latinoamericana de Integracion

The Colombian merchant fleet after this period started to lose participation in the international trade in terms of DWT as well as many of the Latin American countries due to different economical, technical and political factors inside and outside the countries.

The shipping competition after 1986 was very hard and there were more than 30 foreign shipping companies operating in Colombia through special contracts of association with national owners, in which the foreign lines with this association enjoyed part of the cargo reserve policy benefits. In this context FMG was contractually associated with more than 26 foreign companies and Agromar lines with the other four.

According to this particular association of fleets and the unlimited option to charter foreign flag ships by the national lines, the cargo reserve practice became of more benefit for the foreign flag ships than for the national flag ships. Hence, the national fleets only participated in 34% of the benefits of the cargo reserve and the associated flags and the chartered ships of national owners participated in 66% of the cargo reserve policy. (DIMAR (Dirección Marítima), DANE (National department of statistics) 1980.

These facts have created again a total dependency for the national owners to enjoy some commercial benefits under the utilisation of associated ships and chartered ships with a disastrous consequence of a not renovation and technical development of the national fleet leading to a fast break down process and disappearance of most of the national companies.

Actually the situation of the national shipping companies is almost devastating and the outlook for the future is uncertain, thus most of the existing companies are still in difficult and risky economic stability.

2.2. Fleet with national Flag

In 1997 the national fleet was composed basically of three Colombian companies as follow:

- Compania transportadora Colombia de graneles SA (Granelco) integrated by three Single-deckers with a total tonnage of 12,767 Dwt.
- Interoceanica Ltd. integrated by one Ro-Ro ship and one Tween-decker with a total tonnage of 8,500 Dwt.
- Lineas Agromar Ltda. integrated by four Tween-deckers with a total of tonnage of 52,410 Dwt.

Nowadays after the bankruptcy of Lineas Agromar the fleet is composed of the following: (Excluding open registers, and considering only ships over 300 DWT).

Table 2 shows the critical composition of the national fleet under Colombian flag.

Table 2 National Fleet

Total DWT age	Total Gross T	No. Ships	Average fleet
48,985	36,196	18	27

(Source: Fairplay January 2000)

The two biggest shipping companies, Flota Mercante Grancolombiana and Lineas Agromar have been bankrupt in the last 5 years and the remaining companies like Navesco, Granelco and Interoceanica Ltda are out of competition in the international market.

Colombia and other countries of the Andean community of nations like Bolivia, Ecuador Peru and Venezuela have adhered to the decisions of the agreement of Cartagena (Decision 314), related to the free access of the cargo transported by sea in order to promote the development of the national fleets and boost the international trade under the principles of reciprocity. Under this agreement, the countries of the community have access to the movement of cargoes within them and from and to third countries but of course cabotage is reserved for the national fleets of each country.

This agreement is not absolute and therefore the reserve of some cargoes like hydrocarbons and iron in Ecuador and some financing cargoes by the Eximbank in Venezuela are not included.

On the other hand MERCOSUR is also working hard trying to eliminate all the bilateral agreements and permit an open access to all the regional cargoes. However, in cases in which the shipowners of the state parties of any bilateral agreement can not provide a service, the mechanism of cargo freedom to third flag ships is available in order to promote the trade and to not prejudice the economic development and production activities of the countries.

2.3. Maritime Shipping Products

Colombia is basically able to export big volumes of bulk cargo like oil, coal and fuels and some break-bulk cargo like the coffee and salt. (See Table 3).

Table 3 Exports during the period of 1975 to 1983

PRODUCTS	TONNES	PARTICIPATION
OIL	1.500.000 T	37% of all exports.
FRUITS	689189.2 T	17%
SALT	608108.1 T	15%
COFFE	527027.1 T	13%

Source: (DANE, Departamento Nacional de Estadística)

For the trade of these products maritime transport is essential, therefore, the main way to participate in the international commerce is by the operation of a strong and diversified fleet capable of moving different products and volumes to different destinations.

Nowadays after the sale of Flota Mercante Grancolombiana (FMG) to Transportadora Maritima Mexicana (TMM), (which is now owned by Canadian Pacific) and the bankruptcy of Lineas Agromar Ltda, the second leading shipping company in Colombia, the future of the exports and imports will depend on the foreign flags and very small national companies like Navesco, which does not represent an important percentage in the total imports and exports of the nation, therefore, facing the difficult situation of surviving in a competitive market.

2.3.1. Why the need for a fleet ?

In Colombia different products are showing increased benefits to the national economy. Coal brings opportunities and expectations for the future exports of the country. i.e. Colombia ships almost 17 million tones/year. However according to the forecasted expansion, it is estimated that Colombia will ship 30 million tones/year around the early stage of the new century.

Crude oil also is expected to increase in the short run. In 1996 Colombia produced 649,000 barrels bpd. (Drewry Shipping Consultants), but now with the production of other reserves like the Cipagua region the production per day may reach the 1 million bpd in 2000.

Thus, if analysing the dry bulk and oil market, the hope to maintain a fleet is not an utopia, on the opposite the good exploitation of these products in partnership with the shipping sector by the support of cargo owners will be the solution to keep the national fleet in the international scenario.

Unfortunately, coffee prices have fallen in recent years; therefore, total exports are below imports in value terms. Further Colombia's retention plans to increase the prices of the coffee failed and coffee is still showing diminishing returns.

Hence the concentration of shipping activities in these two markets by the development of national fleets, a national tanker and dry bulk cargo fleets can be built to cope with the transport of these products. However, the lack of experience and financial capabilities to deal and go through these markets is the principal barriers in addition the high competition and development of these sectors.

2.4. The freight market.

The freight rates in Colombia are controlled by maritime conferences and registered in the maritime administration with a so called "freedom controlled system". To control the system the companies inside or not in the conferences, have to submit to the administration the value of the tariff the overcharges and many other alterations of the freight. This practice is basically to check and track when the shipping companies operating on different routes and markets are not applying loyal practices.

This means that the companies can not charge freights over the limit registered (roof) in the Maritime Administration or set unfair freights that do not reflect the real costs of operation of the companies.

Actually the customers within the open market policy have negotiation power and can bargain the freight getting some discounts depending of the negotiations in course taking into account the ship volumes, routes, type of products and the long or short relations with the shipping companies.

Some of the overcharges playing in the final freight and which modified the basic tariff are: fuel, congestion, terminal, currency, port dues, collect overcharges and other less

common applying according with the operation of the ship or the port like handling operations and security matters.

2.5. The Scrapping Market

The scrapping market is well known as a “dirty industry” and is the only sector of the maritime industry that is not regulated. Actually high quantities of toxic and several environmental hazardous substances such PCB, heavy metals, hydrocarbons, ozone depleting substances and asbestos are present in large quantities especially in older vessels.

Nowadays most of the scrapping activities take place in the Indian sub-continent, mainly in India, Bangladesh and Pakistan. Most of these countries became leaders in ship scrapping activities just after a few nations like South Korea and Taiwan lost their business because stricter environmental and safety regulations were imposed by their national authorities.

On the one hand, fortunately in Colombia these activities are not well developed due to the absence of national legislation and interests for the commercial benefits of these activities. This is a consequence of the decadent panorama of the shipping sector, but on the other hand this weak development can endanger the evolution of the scrapping market in an unregulated nation, if looking at other developing countries like India and Pakistan where low value, high labour intensity and duties under hazardous conditions, occupational health and safety are the main characteristics.

A future development in the regulation of these activities by the IMO, ILO and the national authorities will prevent foreign shipowners to change to countries where safety and environmental regulations to this matter do not exist. Hence vast benefits can be observed such as reduction of accidents and discharges of wasted emissions preserving the environment and protecting developing countries of unfair exploitation.

2.6. Labour Framework

The effects on the crew size and employment

Not so far ago the maritime shipping industry was a big source of employment. One part of the labour force was destined to operational activities carried on board the and the other like in any other industry for the administrative operation of the company.

Nowadays crews are becoming smaller and smaller because of the automation of the ships and the increment of information technology (IT) in the shipping industry. Therefore fewer crew members and officers are needed for the operation of bigger and specialised ships like VLCC tankers LNG and LPG carriers and big container ships; hence, fewer personnel as well are needed to control the administrative operations of the company ashore.

In Colombia with the disappearance of the national fleet many thousands of seafarers became unemployed. If looking at figures from 1971 to 1975 around 2.100 seafarers were employed only in Flota Mercante Grancolombiana (FMG). Afterwards the crews were reduced from 52 to 36 crew members on board the ships, reducing the number of ratings to only 1.100 in 1986.

Nowadays with the presence of many national and international regulations regarding minimum safe manning standards and the increment of high tech ships the crews are reduced to 26 and fewer ratings; therefore, the recession and crisis of the maritime industry is found in different organisations and sectors such as merchant academies, nautical schools, the maritime administration, cabotage activities and port facilities.

Basically in Colombia most of the officers and crew members who were dedicated to international shipping are now employed in port operation activities and a few others in cabotage activities. In consequence this high supply of seafarers are able to work ashore, make salaries and working hour conditions unfair in comparison with past

decades and a few seafarers remain in the international shipping activities, almost in the same poor conditions. (See figure 2.).

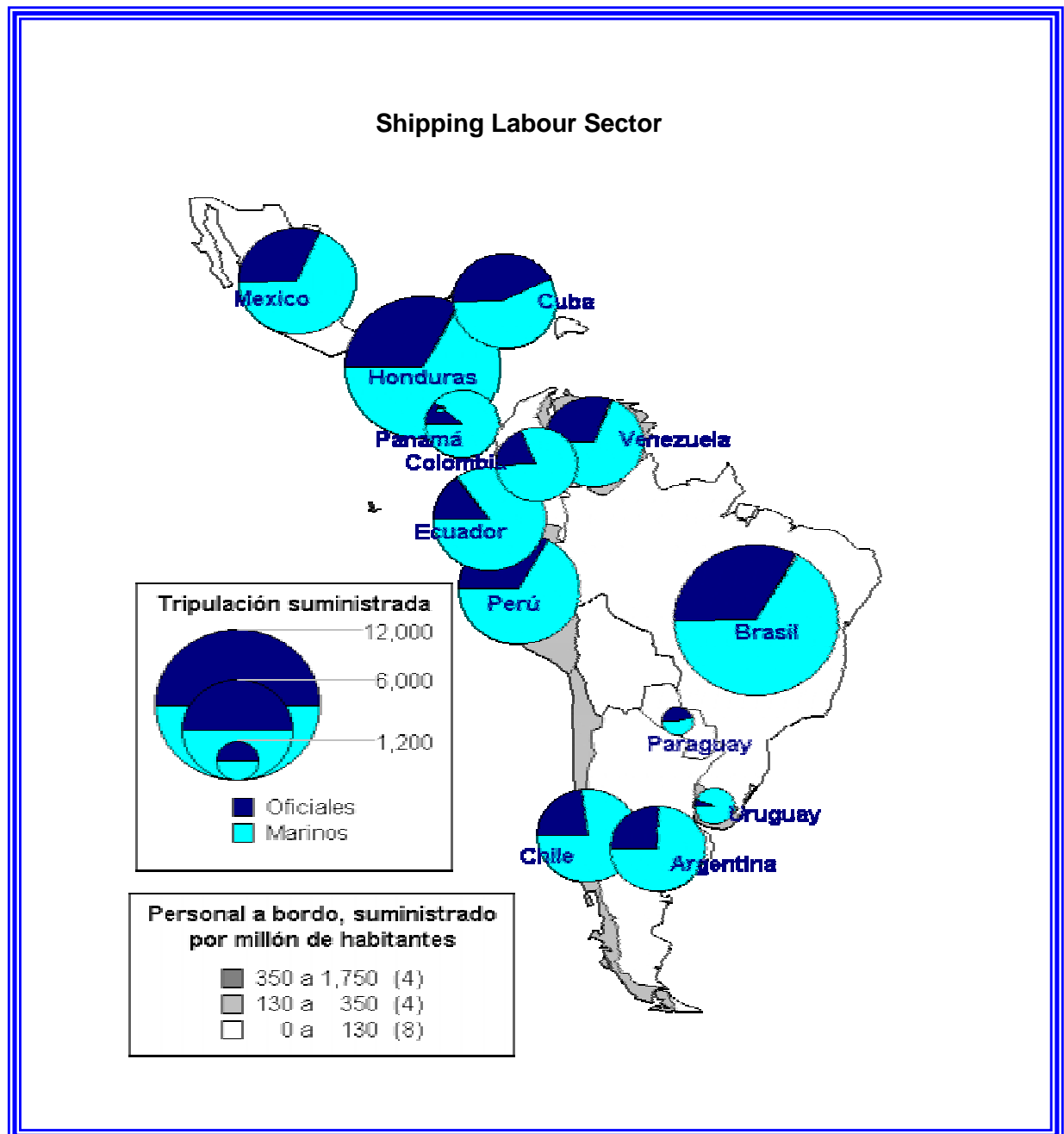


Figure 2.

Source: <http://www.eclac.cl/espanol/investigacion/transporte/perfil/index.htm>

Another small portion of the crews abandon the activity completely to join other sectors of the industry and others with more luck join foreign shipping companies on board ships and ashore facilities.

The academies and nautical schools have decreased the number of graduates so the lack of interest and support from the government for international shipping activities have become more remarkable. This last aspect can be seen in the slow process taken from the state in the ratification and implementation of international regulations related with seafarers, certification, working hours and educational standards, i.e. STCW and some ILO regulations.

2.7. Shipping protectionism economic policy

Colombia as any other country interested in the protection and promotion of its merchant fleet introduced a protecting mechanism to become free from the dominion and dependency of foreign fleets. This was a result that was born from trade interruptions, commercial autonomy and for the disconnection with industrialised countries caused by the Second World War.

Protection Mechanisms.

➤ Cargo reserve

Colombia as many of the Latin American countries members of the ALADI, appoint to their own benefits a special reserve of cargo of 50% for their export and import traffic and total control for cabotage traffic.

The direct beneficiaries of this cargo reserve were the Colombian shipowners, who were supported in this matter by the employment of ships under different operation modalities like:

- operation of Colombian Flag ships (National Ships),
- operation of foreign flag ships under Colombian ownership,
- operation of foreign chartered and leased vessels as well national vessels by Colombian owners and
- operation of foreign flagships associated with Colombian ship owners under a legal status.

The indirect beneficiaries of this mechanism were also foreign shipowners who convened a legal association with Colombian shipowners under contractual relations.

It is worth mentioning that even under the application of this mechanism, for the period of 1980 to 1986 only the national fleet and associated ships moved 29% of the international seaborne trade of Colombia and 71 % was move by foreign flag ships contracted by particulars. Nowadays the situation is worse because the huge changes in the open economy policy and the free and fair competition with international shipping companies.

The direct implication of this open market policy is the total capture of almost the entire shipping industry by foreign shipping lines, due to the powerful infrastructure, technology and know how.

➤ **Tax exemptions**

The president of Colombia by Law Decree 10 of 1946, declared tax exemptions of rent, patrimonial taxes and any tax for excess of utilities (income) in the capitals, on the benefit of Flota Mercante Grancolombiana fleet, which at that time was working in partnership with the republics of Venezuela and Ecuador.

There were also other exemptions on port dues, anchorage and special treatment in the assignment of quays or berths for the attention of these vessels in all the ports of the country.

➤ **Agreements with foreign companies**

The agreements with foreign companies in the distribution of cargoes and the chartering of vessels under national flag for the commitment in the movement of cargoes on certain routes, were a general practice that is still being used by countries of the Andean community in order to compete with the biggest companies and to survive in the competitive market.

In order to maintain a complete operation and employment of the national fleet, the council of ministers declared that all the official shipping contracts, celebrated to supply state assets, should use FOB clauses instead of CIF clauses. These was done in order to maintain the level of the freights of the national fleet and to have a more attractive business for the fleet.

On the other hand, the sales of coffee especially to the USA have had to be preferably traded on Colombian flagships.

➤ **Collect Freight Payment**

The Colombian shipping lines under this mechanism offer a very flexible and attractive practice for the customers, in which they can pay the freight on destination. This practice was called “collect system” and was contrary to the common practice of the foreign shipping lines in which the “pre-paid” freight system was the norm.

Under these circumstances the national shipping lines acquired a special negotiation power with the customers, giving an advantage position in terms of capital interest savings and control of the payment in case of damage to the cargo.

➤ **Tributary exceptions**

The benefits under these mechanisms assured the operation of ships in the international shipping trade market by bringing a better health economy with a positive balance of payments.

In Colombia these were the basic mechanisms to speed up the development of the national flags ships, but unfortunately this it was not a policy of promotion by special subsidies and credits in terms of new acquisitions, buildings, renovation, transformation and reparation of the vessels.

2.8. Shipping industry break down process

The break down process began from a series of shortcomings not only in the management of the companies but also due to the legal gaps encountered in the protectionism mechanism.

The implications of these legal gaps in practice, acted against the development of the national fleet, because in many instances they just promote the economical maximisation of the shipowners who encountered the economical activity more attractive (corporate income), rather than the shipping activity as a whole, weighting it as fundamental sector for the development of the country.

The protectionism regime of the “cargo reserve” in practice with its particular exemptions not only benefits national shipowners but also foreign ones. An example of this situation was that the cargo reserve mechanism was not applied in some situations, as in the following:

- if the nationals shipowners were not able to proportionate the service,
- when the cargo was destined to the defence of the nation and
- when the level of the freights affects the national economy

These situations in a general sense are correct for the self-benefit of the country but not always for the sector. In other words, the trade of the country can not be sacrificed for the lack of a public service. Therefore high utilisation of better equipped chartered and associated ships rather than the use of national flag ships, originating the fading and

irremediable stanch of the purchasing and renovation process of the national shipping companies.

The lack of economical power from the state to subsidise the merchant fleet was other factors that lead to the ship bankruptcy process. Hence only the cargo reserve system was the mechanism introduced to balance the differences between the rich and the poor countries in which the former have a strong support subsidies policy due to the developed economy and services.

However, it is true that the subsidies are not a healthy policy and the tariffs of transportation should be profitable in order to maintain the existence of the companies, (which in most of the cases and under the difficult competing circumstances are not easy to manage.).

To resume and reflect some of the implications of the bad management of the fleet and the misunderstanding of the protectionism policy system by the shipowners, the following results are presented from this analysis:

- Inefficient and costly monopolies
- High service and freight costs
- No capacity of negotiation for the customer
- High operational costs of the fleet
- Inefficiency of the ships and the crews
- Obsolete fleet
- Frequent delays
- Slow growing of the fleet
- Administrative and technical limitations
- Congestion due to technical and operational constraints
- Permanent sanctions and overcharges due to insecurity, delay, inefficiency, currency and bunkers.

- Extension of benefits to foreign flags (associated ships).
- Permission of chartering activities for reserve cargo: this implicates no national reserve, no increment for the employment of nationals, increment of deficit in the balance of transport; shipowners became mediators or brokers therefore not naval reserve.

2.9. Open Economy Policy

Actually and after the open market period, the Colombian shipping lines were and still are competing with foreign lines under disadvantaged conditions, i.e. Operating with tariffs lower than the real cost and without subsidies from the government; therefore, the deficit has increased in the shipping sector with a clear disappearance of the fleet on the international shipping market.

From the side of the shipping companies in the particular case of Colombia, the following different factors produce weaknesses in the operation of the companies and the disadvantaged position against foreign shipping flags:

- Elimination of the reserve of cargo
- Freedom of routes traffic and tariffs for foreign lines
- Freedom to access cargo
- Free competition between lines
- Deregulation and liberalisation of the market
- Strong and fast changes in the legal framework
- Change of mentality
- More offer of services from 30 services to 140 services
- Strong presence of foreign shipping companies in the new scenario
- Old and weak fleets from the national side

- Lack of management systems, infrastructure and prepared personnel able to deal with the new commercial environment
- Lack of proactive policies
- Lack of awareness
- Resistance to the change

To conclude, according to these changes in the development of the Colombian shipping industry it is necessary to introduce new strategies and analytical methods in order to guarantee maintenance of a national shipping fleet and to assure economic independence of the country in the international shipping market.

These new strategies and methods will be analysed in the following chapters.

Chapter Three

International strategies

3. Analysis of shipping environment in a global market

3.1. Marketing

For a Colombian shipping company dedicated to the international seaborne trade “transport of goods”, the application of a “Customer Relationship Management” (CRM) marketing theory is a very important issue. It has to be taken into account in order to maintain the company in direct contact with the customers, making the closest links and better co-ordination with the benefit to remain competitive and efficient in the market.

3.1.1. Implications of CRM

The implications of applying the CRM in the Colombian shipping industry are wide because it can guide the companies to gain new business and perform on potential markets like the tanker and dry bulk markets, i.e. oil and coal products.

CRM also helps to focus more in what to do in a specific or current market by detecting who needs the services and the products, i.e. The general cargo and container markets.

Other direct implications of the CRM theory is the treatment with the customers who should be seen as partners in order to satisfy their needs. Therefore the relationship with them becomes more personal and the responsibilities and commitments between each other become deeper. Special links and trustworthiness are the key to keep on business; therefore, assignment of personnel to work directly with the customers or settlement of special work groups to enhance the relation and connections with partners are of special attention.

3.1.2. Key Features

3.1.2.1. Data base Analysis

The data base analysis implies a wide series of activities like selecting, exploring, and modeling large amounts of data also known as “Data Mining”, from which it is possible to deduce possible and potential customers. This can also be understood as targeting customers by an appropriate tool analysis.

The result of this process bring wealth and stability to the company because the appropriate selection of demanding customers will lead to intensified our competition in the future market.

The implementation process of the CRM theory in the Colombian shipping industry is possible but some internal barriers can be found because the extensive time and costs. Specially when concerning the data base analysis studies, investment in new computer and soft systems and managerial support to determine who are the best providers of income for the company, i.e. know how in research programs and financial capabilities to acquire systems focusing on determining when to dedicate to core business or to diversified and discover new markets or consider all combinations. (See figure 3.).

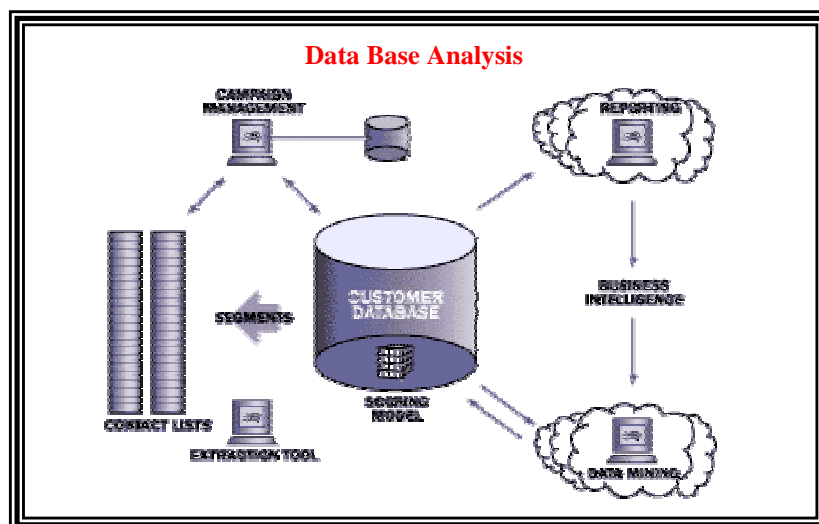


Figure 3.

Source <http://www.crm-forum.com/crm>

Figure 3 shows a cycle process in which the scoring model as a center provider stores the customers data base of different types of markets or segments of one market. The markets and segments after a previous selection done through management campaigns and supported by an extraction tool system send the data to the database which provide a continuous flow of information to the data mining and reporting system called “Business Intelligence” that is where the selection of possible and potential customers take place. The scoring model is fundamental when huge amounts of segments are in the study.

3.1.2.2. Customer Driven Approach

In reference to the product/service it should be applied in a market driven or customer driven view. This means that a selection of activities should be appointed to one specific sector of the market because all the markets can not be covered in all extend with the same efficiency as if focusing on the ones which give more revenue. Therefore, niche markets are of special attention for developing sectors in which competition with developed shipping companies are not possible. This VIP practice can be seen as discriminative. Also specialization and outsourcing of activities to cope with the new needs of the global market like Just in time (JIT) services are part of this thinking that is reflected in the globalisation process. (See Figure 4).

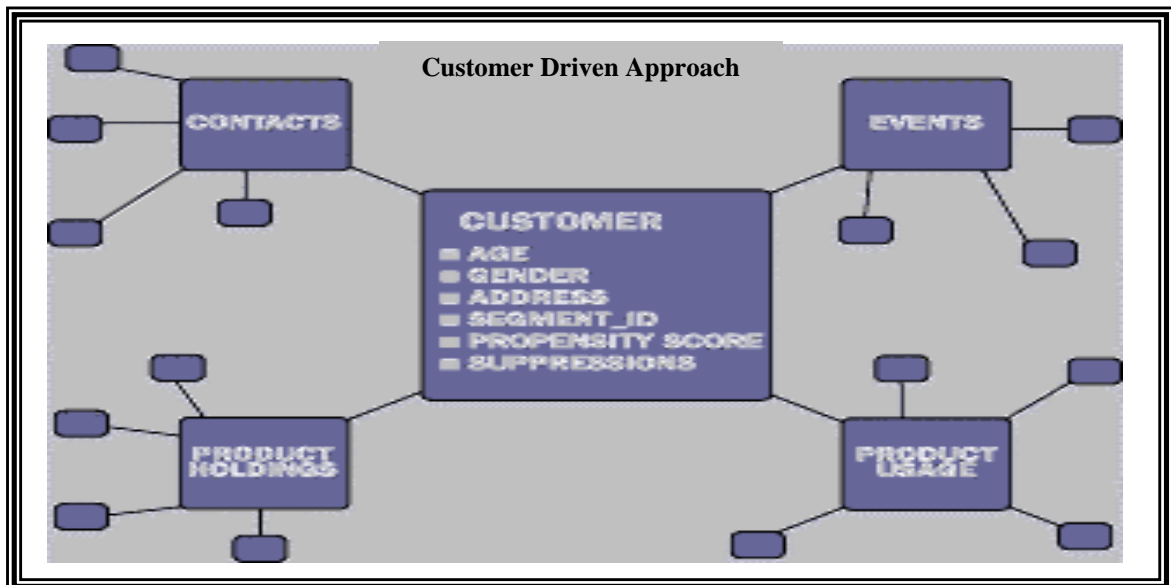


Figure 4.

Source <http://www.crm-forum.com/crm>

What the current graph is intended to demonstrate is that the key of the business is the customer; therefore each facet of a relationship may be treated as an island of analysis, but always linked centrally to the customer.

3.1.2.3. Customer Segmentation

This selection can also implicate “Customer segmentation” which means divide the market in small groups and segments that have special interest for the products or services. This segmentation will enhance the total operation of the company by saving resources and meet the requirements of the customers. This generates a high quality service and improves the profitability of the company. (See Figure 5).

Segmentation by Contribution

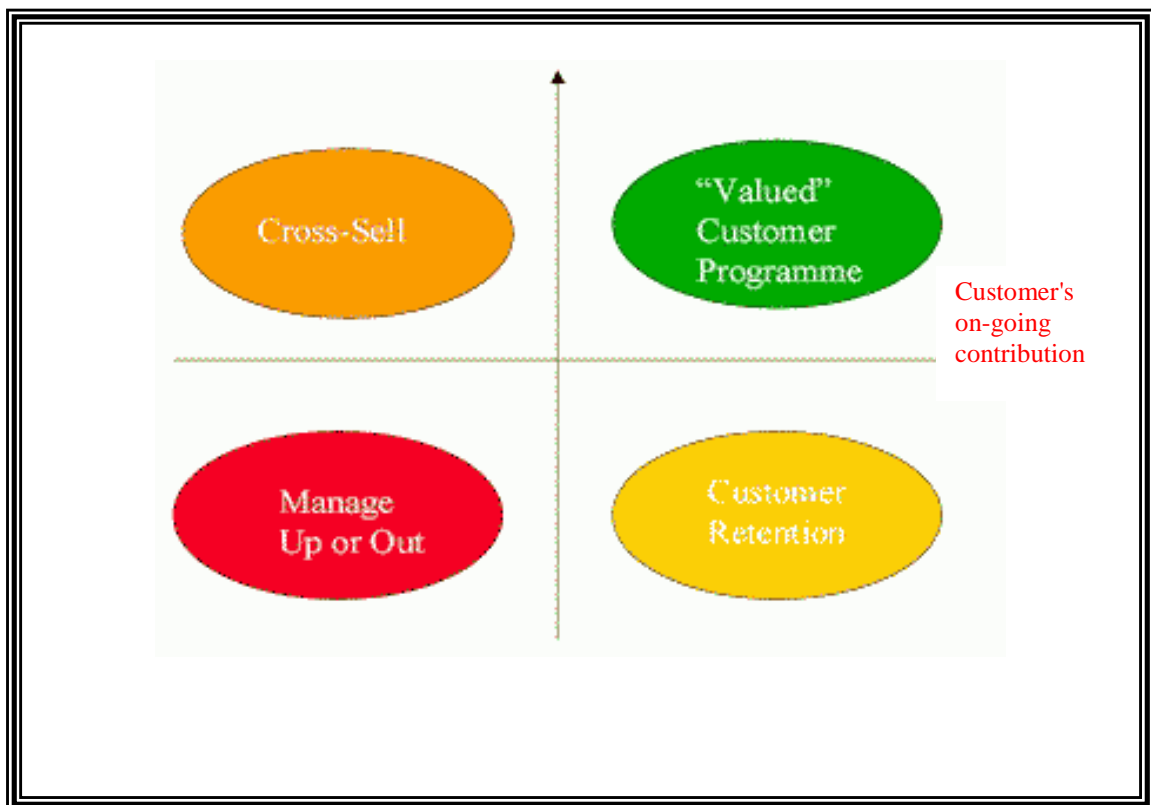


Figure 5.

Source: <http://crm-forum.com/>

The previous matrix is just one of the multiple examples in how to segment customers. Some can be selected and introduced to the program by contribution, others by revenue or by volumes and depending on the segment of the market and the price and sensitivity of the product.

3.1.2.4. Information Technology

Of course Information Technology (IT) is part of the new implications and maybe one of the most important activities.

The communication and promotion of information through EDI and e-commerce media as well IT systems applied to different services, are in many markets, what makes the difference of the service and certainly the leading sector to growth. Therefore appropriate investments in IT systems and acquisition of equipment and experts in the field are more than necessary. This is one of the biggest barriers for the Colombian shipping companies because of the lack of capital resources and adequate personnel (Know How). Nowadays, IT has been updated very fast and prices have been going down; hence, sometimes equipment is not a restriction, however huge investments without advice and expertise became a very risky activity. (See Figure 6).

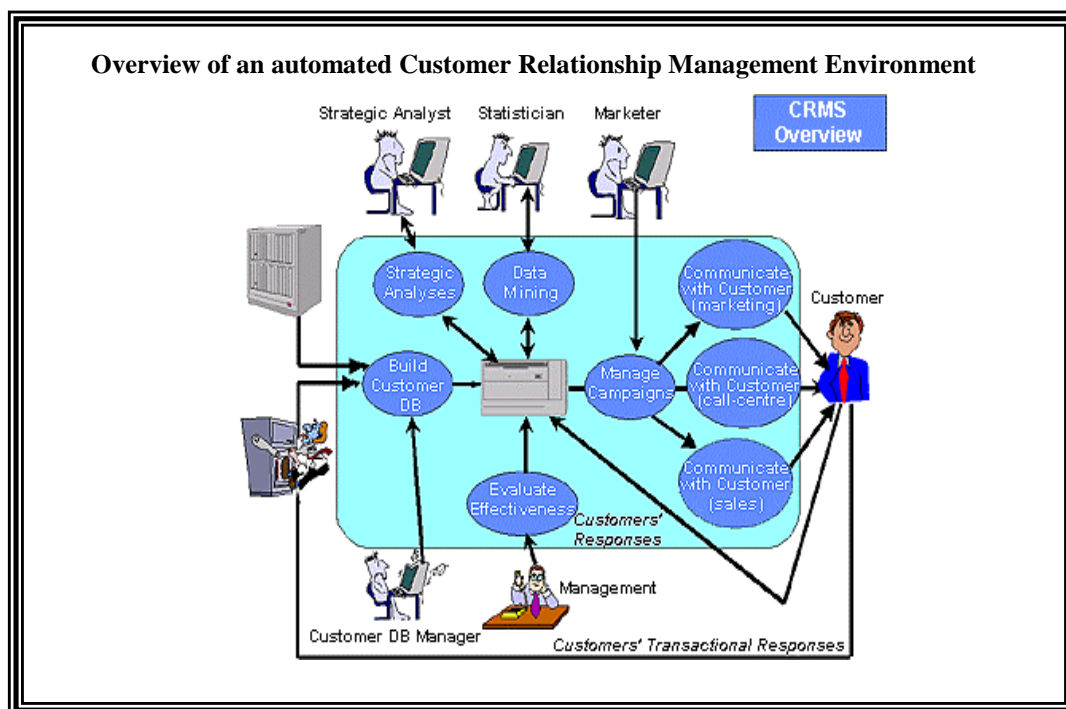


Figure 6. Source: http://www.crm-forum.com/crm_forum_presentations/mstrat/ppr.htm

The application or utilisation of IT to support the data mining activities are of great support and enable the company to target more accurately the potential markets and customers. Some actions to be taken are:

- Establishment of a confident computer network system linking all the customers with the corporate actions, staff and developments of the company.
- Establish a Web site for the company with multiple customer services incorporated in the net is the trend.
- Intranet systems to record all actions of the company on board ships and ashore installations regarding type of cargo delivered quantities, receivers, damages, claims delays etc.
- An establishment of a customer database to analyze current customer's base on crossselling, up selling and lifestage procedures.

Computerised systems are very important because they give the possibility to manage huge quantities of information in short time and link services with customers and interested parties in the business.

The application of a CMR system to the national companies based on an international business strategy will definitely give enormous benefits to the company by adding value and cutting costs, hence, improving profitability.

The implications or results of a good CRM process in the national fleet can be summarized as follows:

- Identification of niche markets
- Maximization in the employment of the fleet, hence, more revenue and operating profit. (increased sales revenues)

- Minimise operational and transit costs including time in port (turn around) by choosing better routes and efficient ports
- Maximize the return on invested capital
- Enhance the quality of the service for the customers, hence, improved customer satisfaction rates
- Minimize total cost including overhead or administrative costs
- Minimize cargo damage and claims
- Safety operations of the fleet
- Environmental friendly practices
- Better freights. (Low cost production/ service)
- Less imbalance of cargo
- Differentiation
- Increased margins and increasing win rates

3.1.3. Suggestions

In order to have an effective CRM system, first of all the company has to analyzed which type of customer to approach. This means to understand the culture and the behavior of the region where the targeted customers are living. Therefore, different types of tools have to be used to determine the best options, i.e. Implementing Process (See Figure 7.)

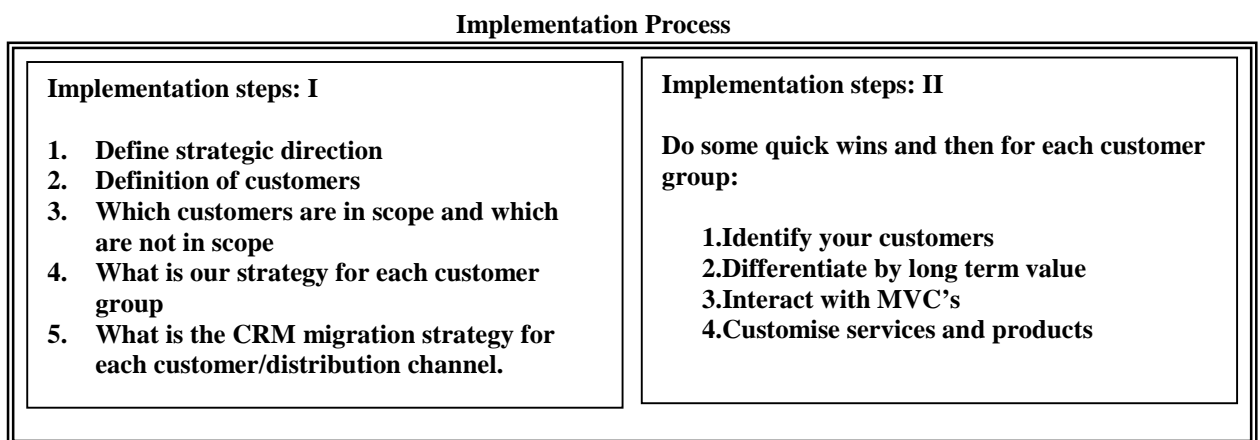


Figure 7.

Source: <http://crm-forum.com/>

Some of the techniques that will be mention in the chapter five for the acquisition of second hand a new vessels can be apply in this marketing phase to understand the advantages or disadvantages and the barriers that the company will face in the different markets

3.1.4. CRM has to focus on:

Segmentation of markets by ports, by products (type of cargo) and by traffic (regions) including the analysis of other shipping lines inside the business to give a clear understanding of the position in the market.

- In the case of the operation of the ports, the physical constraints and the equipment including feedering services, handling operations, cargo capacity, turn around, port dues, berth availability, productivity and stability have to be analyzed.
- In relation with the market, traffic and location of ports, the comparison and data mining analysis against other shipping lines and services, should be done making emphasis on the following:
 - Transit time, operational costs, running costs, capital costs, transit costs
 - conference systems
 - Economies of scale or cost per unit of cargo
 - Practices of different types of transshipment like: Scattering/feedering transshipment, Interline transshipment, switching transshipment, catch up transshipment and by pass transshipment
 - Direct calls or feeder calls
 - Operational patterns like pendulum, double dipping, hube spoke, triangle, round the world, end to end and tramp land bridge.
 - Number of competitors, market shares and potential alliances.

Finally marketing procedures, like the CRM theory, are of special interest and importance to lead the company in present and future markets. Therefore the

application of this theory for the acquisition of new customers and the maintenance of strength relations with them are of extreme relevance.

3.2. Quality and Safety shipping

3.2.1. Quality Systems

Quality system and standardisation are also part of the process and the implications of their use are determinant in the capture of new markets or customers. Moreover, the application of these quality systems, like the International Safety Management Code (ISM), ISO 9000 or ISO 14001, reflects the health and the good performance of the company in terms of transparent procedures to secure the production or operation of a good product or service respectively.

In relation with the quality systems many reputable companies apply them to become more marketable for business and commercial purposes. (Popularity in the global market). Therefore, the differentiation between the service or product from one to another company under these international standards is nowadays very narrow and competition harder than before. Hence, the implications of a standard market is reflected in the offer of more added value services to the customers like IT and logistic packages in order to remain competitive and attractive for potential customers.

For a commercial point of view the training of strategic staff in quality standards like ISO 9000, ISM code, ISO 14001 to increase the quality performance and operations of the company is vital to remain competitive.

3.3. Safety

In relation with the fleet, different elements integrated the safety operation of it. That is reliable equipment, sound procedures and competent operators; all of them regulated by different International conventions such as:

- Safety of Life at Sea (SOLAS 74/78),
- International Convention on Marine Pollution (MARPOL 73/78) and the
- International Convention on Standards of Training, Certification and Watchkeeping for seafarers 95 (STCW 95).

As is known safety is a very wide topic in which ships and the human factor are entirely involved. Therefore, the coverage of this issue will briefly focus on mention few possible international strategies and procedures to avoid the and dangerous operations.

There are basically five different ways to avoid substandard ships, Michael D. Tusiani, March 1993.

- First are the standards and regulations created by the nations in which a ship is registered.
- Second, is the classification society, which inspects the physical condition of ships and publicly reports their conclusions.
- Third, is the port or coast guard authority at load and discharge ports, who accept or reject ships calling there.
- Fourth, are the inspections and other acceptance procedures of the companies, who use the ships, or allow them to call at their terminals.
- Finally, and most important, are the standards and operating procedures of the individual shipowners and operators.

The last two of these five strategies are the ones which have more impact on shipowners or operator companies and which have to be apply in accordance with the International Safety Management Code (ISM). Chapter IX of SOLAS 74.

SOLAS makes mandatory the application of this safety management system under the certification and periodical reviews from the Flag state administration or delegated Classification Societies.

To summarize, the principal criteria of this safety management system (which can be encountered in detail in the ISM Code) it is worth mentioning, that the Code intends to ensure that shipping companies establish their own safety and environmental protection policy regarding topics like:

- Defined procedures for normal shipboard operations
- Emergency response
- Reporting of non-conformities
- Internal audits
- Management reviews
- Levels of authority and
- Lines of communication I.e. Designated Person Ashore (DPA)

Safety and quality policies and procedures ensured not only the protection of human life and green environmental practices, but also sound commercial and profitable environment for the company.

The shipping environment in a global market is not only evolved inside the corporate objectives of the companies, but also in the general management and operation of it. Therefore, the explanation of the main global trends or international management strategies for the development of the shipping industry, will be explained in the next chapter.

Chapter Four

4. International Management Strategies

4.1 Alliances, Partnership, Consortia, Mergers and Acquisitions

Due to the high competition, achievement on economies of scale, changes in environmental factors and the increase of the customer's demand patterns, many shipping companies are seeking new ways of growth and expansion to remain competitive in the market. Hence different schemes of co-operation have been taking place in the last decades like alliances, mergers, consortia, partnerships and acquisitions.

Agreements in slot-vessel sharing, co-operation to merge services in different routes, exchange space, co-ordination in the frequency of the services, sharing of port and land equipment, and other technical co-operations; are a just few of the different manners in which the leading or top 10 shipping companies operated to lead the market in order to cut costs and prove a high quality service. (See Figure 8.)

STRATEGIC ALLIANCES Members and Affiliates			
New world alliance	Grand Alliance	TriCon/Hanjin	Sealand /Maersk
APL- NOL MOL HYUNDAY	NYK HAPAG-LLOYD P&O NEDLLOYD MISC OOCL	DSR SENATOR CHAO SANG HANJIN	SEA-LAND MAERSK
Independents: EVERGREEN/ UNIGLORY, COSCO, ZIM, CMA, MSC, "K" LINE, YANG MING			

Figure 8.

Source: American Shipper. 1999

Unfortunately, for small shipping companies operated by developing shipping countries, the scenario is uncertain and devastating. Bigger companies are absorbing smaller and now with the trend of possible logistic alliances where manufacturers secure their markets by commercial co-operation with bigger carriers, the future panorama is even worse for the smaller. For the last only few niche players will remain in the market.

4.1.1 Strategic alliances and partnership.

The principal advantages obtained by the application of strategic alliances to the liner carriers are:

- Consolidated cargo Volumes. (economies of scale)
- Increment in the service frequency
- Better employment of the assets by sharing of vessels, terminals, containers and port and land equipment
- Combination of financial and capital power for the acquisition and reposition of assets in the long run
- High quality services
- Costs reductions
- High market coverage
- Enlarge networks
- Door to door services

Disadvantages:

- Co-ordination of separated operations
- Creation of new goals for a new entity
- Find new competitors (if competition is good, quality is improved)
- Setting up new profits
- Mostly short term agreements. (but longer than consortia or partnership)
- Unstable to long term relationships
- Basis in non-core activities

- No leadership basis
- Inflexibility to manage the business alone

4.1.1.1. Partnerships

The “partnership” is not strategic at all compared with alliances, which are strategic in nature. This is because in the alliances there is a direct support of the corporate objectives in all operational levels and also because the entire organization has a defined approach to business, which conducts the whole company.

Partnering is mainly to establish a long-term relationship with third parties like suppliers of goods and services. This relationship is based on plans and programs to increase efficiency, communication, service and decreased operational costs by sharing. In the author’s personal opinion this will be the trend in the future

“A partnership is a tailored relationship based on mutual trust openness share risk and rewards. “ (Maersk -Sealand Seminar March 2000).

4.1.2 Consortium

The consortium is small alliances that limit the services to specific routes; therefore, the co-operation between them mainly are of two or three lines looking for the increment of cargo factors in a few routes.

The arrangements in general terms vary from one consortia to another, i.e. vessels/space sharing and slot chartering, co-ordination of sailing routes, common co-ordination offices and co-operation for better space utilization.

Other features that boost this type of organization were the need for high investments in ships, based handling equipment, cost reductions and movement of container volumes.

The disadvantages of consortia are:

- Very rigid structure
- Slow decision making process
- little control of the ships by different shipowners.

Therefore alliances are a better example of co-operation in terms of market coverage commitments and quality service.

4.1.3. Mergers and Acquisitions

According with the new economic changes and developments in the global market, there may be many reasons for shipping companies to acquire or merge with other groups or companies.

The goals could be in many cases almost comparable with the reason to create an alliance or a partnership but the variants can be based mostly on the management profile of the new integration and on the scale and corporate objectives of the new business approach. Therefore the application of any strategy will depend on the management capabilities, infrastructure, capital power and know how of the company that wish to merge or acquire another.

The mergers and acquisitions throughout the economy is important when the companies involved are not only seeking solutions that enable them to focus on their core competencies, but also on solutions that provide them with greater flexibility for moving assets and integrating new company units.

A few of the basic reasons to merge or acquire a company are:

- To achieve a big scale of operation by acquiring a strategic competitor (increase its market share),
- Gain a new customer segment by driving a new industry process,

- Strengthen the providers and distribution channels of the company,
- Integrate new technologies like IT and EDI services,
- Increase the competitive strength of the company,
- Acquire new business areas,
- Integrate sales of its products
- Create a high return on its shareholder investment (add earnings in the group).

By the application of this strategy, the companies will maintain a high and constant growth, because the integration of new services/products to the portfolio of the company. This constant growth will lead to further strength developments, acquiring the advantages of the merge group, reflected in an enhanced production process by the profitable use of new installations, personnel and equipment.

The capabilities and the potential of the company will reach new levels of development by corporate synergies and economies of scale, not only in the production but also in the sales and administration process.

The merge will endure the management of the company, in which several joint resources will secure the future growth and opportunities for internal and external expansion, leading a market penetration with flexibility, quality and product innovation. (See Figure 9.).

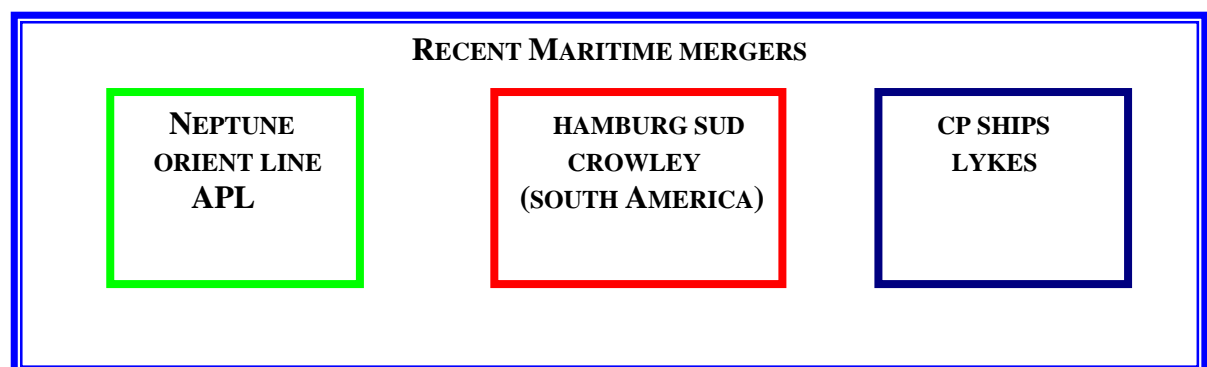


Figure 9.

Source: American Shipper. 1999

4.1.3.1. Corporate Acquisitions

The acquisition process requires an analytical and thorough procedure in which different features of the market and the companies have to be analyzed. Estate, tax, business and corporate plans are involved; therefore, clear strategies and systematic search profiles procedures have to be undertaken to target the potential sellers. The legal commercial, financial and the accountants department have to be aware of the possible contracts to co-ordinate the future negotiations under well-developed investment and appraisal methods (project management). Leading firms reducing expenses and costs can outsource these activities which can be time consuming.

The recent “takeover” of Sealand by Maersk can be considered within this category.

4.2. Outsourcing

The outsourcing strategy is of great support for the companies interested in focusing on a main field or segment of the shipping industry; therefore, the identification of the core business of the company is fundamental and requires a clear definition of corporate objectives and goals.

When a company uses to outsource activities, it means it is specialized in a main activity, i.e. own equipment and personnel only for a specific purpose or business. Thus it performs extra activities by hiring and contracting assets and know how for a limited of time. Hence relying on the knowledge and capacity of the outsource company.

Outsource in many cases can be seen as a flexible business because the easy adaptation of the current company to future changes, specially when high costs of capital (assets) are involved in the operation of the company.

Outsourcing activities reduce costs and save time because the utilization and advice of specialized agents, firms or suppliers that permit the company focus in the main business.

A few examples of outsourcing strategies will be explained hereunder as possible solutions to enhance competition in the future market.

4.2.1. Outsourcing supply chain management

Nowadays the changes in the way to perform business to business (B2B) and the high utilization of electronic and Internet system speed up the application of outsourcing strategies, which are of tremendous importance because the need to cut costs.

Nowadays, many organizations make big efforts to implement and outsource new technologies like e-commerce because they are finding themselves short of skilled and train staffs with experience at a time when deployment must be rapid. Hence It is clear why many IT departments are aware from the pressure to maintain and update their ERP (Enterprise Resource Process) environments while extending into e-Business applications.

“The growth of B2B e-commerce could easily promote a common framework in the supply chain between companies who use the same ASP (Application Service Provider). Hence Asp’s could play a critical implementation role in the expansion of a safe and managed environment for inter-company Internet transactions.”

(Price WaterhouseEcoopers May 2000).

The electronic era makes companies become more cash flow based than assets based in order to maintain more liquidity (precious cash). Therefore companies invest more and more in business strategy and oriented staff capable to deal with systems and with

managing skills to outsource relationships of suppliers and vendors (outsourcing management).

“Management generally recognizes that there is a complex trade-off between in-house production and purchasing the services from an efficient specialist in the open market, thus cost benefit research to determine the correct path is now the preferred approach.” (Outsourcing Journal, 2000).

In the case of liner shipping companies, ships will remain in-house. (with exemption cases in tramp shipping, where the time and voyage charter options prevail). Because the ships are the strategic assets that with up-date technology make the difference and the quality of the service, supported by high IT systems ashore, plus few added value services as part of the logistic chain.

However, other internal duties of the company like maintenance, repair and operating office supplies can be outsourced in order to cut expenses by reducing personnel, equipment, facilities and extra responsibilities, which reflects time and overhead expenses.

Retraining of managers or acquisition of new trained personnel with better strategy business approach are definitely the key to success in the future business. For example, not only the supplies can be obtained for the internal use of the company, but for the customers of the company due to the huge discounts, rebates, preferential treatment and big volumes managed by the buying groups. All of this is also a big benefit for the suppliers by less purchase orders.

4.2.2. Outsourcing benchmarking

When companies are involved in outsourcing activities the benchmarking procedures are of relevant importance in order to provide a real measurement and objective performance of it activities.

Why use of benchmarking?

- Because it is important to know and set up the real pricing and service levels of both parties involved in the outsource contract, i.e. From one side the customers can take the risk to deal with or not an outsource company according with the benchmarked prices and services, while the supplier can understand the risk taken by the customer when choosing their services.
- For the health of the long-term relationship.
- To guide the context of the contract negotiations.
- Because benchmarking is an economical method that permits assessing and weighting of the benefits of a contract relationship.
- Because it facilitates "fast tracking" or unique source considerations. This means clients can be outsourced rapidly through quick negotiations. However "benchmarking data" is needed to avoid huge risks with catastrophic losses.

The benchmarking process can be tedious and time consuming because of the different types of information needed; thus, honesty and transparency in the process are of a relevant importance for both benefits.

As a general guide to success in this long process, some important steps are shown briefly hereunder:

- **Investigation**

This stage is very important and is the one, which give the high and profitable benefits in the near future, i.e. the current performance of a company may not be the optimum and since the managers of it are not aware of the real performance, potential losses can appear when an outsource activity comes into the operation of the company. Therefore, knowledge of the company's own IT activities, logistics, and capacity to improve operations are basic to make better deals and negotiations.

Other critical areas like desktop management; application development, maintenance and networks are of special attention because losses can be bigger

Another benefit of this stage is that it ensures the required information to compare the performance and the improvements given by the outsourcer; finally, this also helps to measure the industry trends throughout the relationship.

- **Tendering**

This stage is important for the identification of actual competitors in a business and the performance expected of each.

- **Negotiation**

Negotiation in benchmarking can set:

- Right expectations for cost
- Performance
- Service levels
- Ensure fair deals in a unique source situation

- **Implementation**

In the implementation process benchmarking is not commonly used; however it is helpful for the context and transparency of the contract.

- **Relationship Management**

Why is benchmarking the most commonly method employed in relationship management?

- Dissatisfaction over pricing and service levels (re-negotiation).
- Clients need access to industry performance parameters.

- Help to achieve outsourcing objectives.
- Help to gain extra pricing concessions from a supplier or vendor.
- Ensured better deals for both parties and
- Enhanced long-lasting relationships.

4.2.3. Outsourcing BPO (Business Process Outsourcing)

BPO, as defined by the Gartner Group, "...is specialised outsourcing services whereby a vendor assumes responsibility for managing and optimising an entire business process or business function, including the supporting staffing and information technology, to effect improved business performance or results." (May 2000).

Shipping is becoming more and more dependant on IT and added value services due to the pressure to offer better and high quality service and to perform economically operations (cost reductions) followed by better prices levels. BPO offers great varieties of solutions and strategies that support the company with a better business approach.

Nowadays, not only commodity type services or "back office" like claims and check transaction processes are part of the BPO strategy. But also other critical businesses like procurement, human resources, accounting, document management and also the new value based pricing services like customer relationship management (CRM), supply chain integration, enterprise resource process (ERP) and outsourcing relationship management. Therefore, the importance of the application of this strategic outsource tool for the enhancement of the business practice in shipping is perhaps a new issue that can lead the companies to improve business benefits through technology and remain competitive in the market by focusing on the core business.

As BPO is a new tendency of the market, it is not the intention of this paper to developed the strategies offered by a few firms. A brief presentation of the benefits in the application of BPO is mention here as a guidance for future outsource businesses:

- Flexibility to focus on practical and complex industry solutions
- Provide huge transformations in business practices
- Define the core business of the companies
- Define outsourcing areas
- Help to produce a world class service
- Developed business solutions hence companies can become a potential outsourcing provider
- Help for the consolidation of alliances, mergers and partnerships strategies

The use of BPO in shipping companies is definitely important because the wide selection and coverage of these applications and specially now when IT systems are appearing in short time revolutionising the market.

Chapter Five

5. Approach for shipping solutions in Colombia.

After the brief analysis of the Colombian shipping products in chapter two and the presentation of few international strategies of this global market and considering the difficulties of the shipping environment for small players like Colombia, a few recommendations may be applied in the national shipping sector.

- In accordance with the good expectations of the national economy for the production and exportation of some products, it is important to emphasise that the Colombian shipping sector can focus on niche markets or specific regions, where to trade oil and dry bulk products like coal, salt and coffee .

The benefit of choosing a niche market is because the fleet can succeed against big shipping carriers and large-scale competitors by having more flexibility towards customer wishes and by quickly responding to market changes.

For this purpose it is worth remembering that the product/service has to be managed in a “market driven or customer driven view”. Therefore, the selection of these activities has to be appointed to one specific sector of the market (Niche market), because nowadays with the huge competition and market players all the market can not be covered in all his extend with the same efficiency. Then we should focus in the ones, which give us more revenue. And especially when competition with developed shipping companies are not possible.

- The corporate approach can be based on strong “partnerships” between cargo owners and carriers; hence, build a strong dependency on each other giving to both the shipping and productive sectors more commercial independence and power of negotiation with third parties interested in the products.

- The concentration and self-dependency of the exports of dry and liquid bulk products by building a national dry cargo and liquid tanker fleet can be a possible solution. The plan can be supported by government subsidies on the one hand and on the other represented by the partnership of cargo owners with private national shipping companies interested in developing the shipping sector.
- Creation of maritime sectoral integration schemes as MINCOMAR in Africa to secure the development of the Andean maritime transport. Hence contribute to the cost-effectiveness of the shipping services by increasing the competitiveness, efficiency and survival of national and regional operators. As well as developed and protect the multi-modal transport systems and shippers interests.
- Entrust multilateral agreements and corporate partnerships base on regional development to ensure the effective competition against other regional blocks through economies of scale and economic co-operation.

5.1. How to survive?

From the national point of view to survive in this competitive market solutions like possible bilateral agreements within the MERCOSUR, Andean and Caribbean regions all just one of the strongest commercial strategies to secure customers and employment of ships in the long run.

Focus on joint ventures, consortia and partnership with other small shipping lines will increase the opportunities to rebuilt the fleets and remain in the market.

The feedering, transshipment, intra-regional and passenger service can be justified the establishment of co-operation schemes in the region as well, but this activity increases the risks, damages of the goods and the operation costs of the ships if compared with direct call services. Therefore, direct calls or “hub spoke” practice will generated more

revenues for the company and the country. However, the development of coastal shipping networks and feeder systems to connect hub and spoke ports and establishing an effective multi-modal transport system for the Andean region are no less important activities to be taken into account.

Other important activities that are involved in the present shipping developments are the practice of a logistic provider, which can be a way to increase the value of the service to a large extent. Thus, a brief analysis of the advantages of the multimodal and intermodal transport services and logistic providers will be explained hereunder.

5.1.1. Multimodal / Intermodal Services

As the Colombian shipping sector is composed of many freight forwarders, brokers and charterers, but only a few shipping operators or carriers remain in the international scenario. This relevant analysis and its application for the national market can be a route and strategy to provide possible solutions to the shipping sector specially for those who are interested in assuming and providing an international MTO (Multimodal Transport Operator) or NVOCC (Non Vessels Operator common Carrier) service.

In accordance with the different requirements and qualifications for a Multimodal Transport Operator, the main advantages and disadvantages will be analysed and explained. These apply to some national shipping and forwarding companies that wish to offer multimodal transport services as an option to remain in the international market like NVOCC or MTO operators.

For this comparison exist several types of organisations that are able to become MTOs, like vessel operators (carriers), unimodal transport, freight forwarders, consolidators, containers leases and brokers. All of them have the abilities to guide their clients in MTO related matters, but just for the purpose of guiding the main players in the

Colombian shipping market; only the shipping companies and freight forwarder companies will be analyzed.

5.1.2. Freight Forwarding Companies

- **Legal aspects (liabilities)**

The freight forwarding companies are used to working by two different modalities taking in to consideration the legal terms in which they decided to operate.

One modality is when they can act as a principal, in which the company is considered as an independent contractor also known as non vessel operator common carrier (NVOCC) in North America or MTO in Europe. In other words this means that the NVOCC acts and responds in his own name.

The other modality is as a freight forwarding “agent” in which they represent the principal (consignor or consignee) in several transport and subcontracting activities. This is the principal case of the Colombian shipping activity, therefore the responsibilities and liabilities rising for a forwarding agent, represent a bigger change in the legal status if they want to become an MTO operator.

It is also important to mention and emphasise in that the scope and responsibilities of the forwarding agents or principal MTOs vary from country to country. Therefore, it could seem that some “legal” obligations and responsibilities of these two types of companies under different types of legislation (Common law and Civil law regimens) could be the same or similar; hence sometimes differences between them can only be found in the financial capabilities.

According to this it is understandable that the main differences, advantages and disadvantages of the forwarding companies against shipping companies depend not

only on the commercial and operational activities performed in the logistic chain and their capacity and infrastructure, but also on the legal responsibilities and liabilities acquired after having decided to perform an MTO operation.

- **Advantages and Disadvantages of Freight Forwarders to become MTO against shipping companies**

The main advantages for freight forwarders are found in the activities that carriers are not used to performing. Therefore, the advantages explained in this point are in contrast to the disadvantages for the carriers and vice versa.

Nowadays, most of the different activities like storage, packing, transshipment, loading and un-loading or handling of the goods can be arranged by the forwarders or the shipping lines before and after the sea transport is performed. However, from day to day the coverage of these and many other activities are part of the operations offered by one or the other. Therefore, the advantages or disadvantages will depend on the structure and may vary from one organisation to another. Hence, the following analysis is not absolute or determinant for any type of company.

Advantages

- Fast arrangement of the logistic chain between the shippers and the consignees or receivers included the link with the carriers and other subcontracting companies. Sometimes the service is so strong that forwarders perform door o door services as MTO operators; therefore they are more willing to perform this activity than the carriers.
- Knowledge and practice in Customs clearance activities.
- Experience in warehousing and storage facilities.
- Local transport (land and rail transport).
- More experience in documentary process and clearance of goods.
- Provide expertise in worldwide networks, in all the stages of the logistic chain.

- Expertise in subcontract of port operations and facilities.
- Expertise in the use of different types of Incoterms.
- Knowledge of different liability regimes depending on the regions of operation.
- Application of new distribution patterns.
- Experience in value added services like packaging, storing and just in time environment.

Constraints

- Strong Financial Situation (High Liquidity) to pay anticipated expenses or prepaid services.
- Increase the assets value with increment of land transport or inland transport services to attract more customers.
- Developed high quality management systems.
- Build a good reputation in short time. (Shipping companies are fewer and not so worldwide known but freight forwarders are more in number in the world; therefore, competition is higher and just a few well known).
- Management of seafarers
- Maintenance and management of the fleet if the sea leg service is provided by own ships.

5.1.3. Shipping Companies

• Legal aspects. (Liabilities)

The liabilities for a shipping company that wish to become an MTO are as high as for a forwarding company. However the commitments, responsibilities and new duties born to them can impact in more extend the structure and operation of the shipping company if the sea carrier operation is only its core business.

In the case of the Colombian shipping companies It is assumed and understandable that the shipping operations concentrate mainly on the sea transport obligations and all activities related with the care and safety of cargo, i.e. Cargo damage and liabilities rising of it. Therefore, the performance of this activity in the whole supply chain is the core business of many companies and just few additional activities out of the scope of a sea-carrier are performed rarely by few other companies depending on the structure, capacity and infrastructure of the organisation.

Consequently, for big liner shipping companies like Maersk-Sealand or P&O and Nedlloyd, if they are willing to cover more services in port and on land or want to become an MTO operator, the change can be done absorbing the new liabilities and responsibilities with fewer risks and vulnerability than for small tramp shipping companies.

This principle can also apply between freight forwarders, but in general terms the risk can be less for them, who are more used to carry additional services having extensive connections and reputable experience in almost all the activities of the logistic chain.

Finally, it can be said that for freight forwarders the change to become an MTO operator could be easier in terms of experience and operations but maybe not in relation with the financial capabilities, which are the stronger feature of the shipping companies.

However, the financial liquidity for the MTOs is of main importance for prepaid operations and cover of liabilities; therefore, the high tide capital of shipping lines to assets (ships) is a big barrier and disadvantage when an MTO service is in plan.

From an international point of view the shipping lines in most of the cases will control the MTO services.

5.1.4. Common Advantages and Disadvantages between Freight forwarders and Shipping Companies that wish to become MTO operators.

Advantages

- Instead of receiving a commission for the services received a global price should be given for the total operation. For the shipping company the commission is not applied but the total price and profit will be higher because of the whole operation.
- They are autonomous in deciding the routes, modes of transport and companies selected.
- Knowledge of subcontracting sea transport.
- Knowledge of issue Bills of lading.
- Knowledge of sea transport legal regimen (Hague -Visby, Hamburg...)
- Issue of one MT document for the whole operation.

Disadvantages

- The freight forwarders and the shipping companies have to deal with and respond to directly to, in all the supply chain with many other bodies, such as: consignor, customs, port authorities, transport license authorities, import and export trade control authorities, central banks, health control and consular offices consignee.
- They also have to deal with shipowners, road carriers, railways, airlines, inland water operators, warehousemen, Insurers, packaging companies and commercial banks.
- Under the MT Convention the MTO is responsible in the first instance to the shipper for any loss or damage. Not always will he get reimbursement from the performing carrier.
- Wrong decisions lead to decreasing the profit margins drastically
- Need of a very strong financial situation because they are in charge to pay all the expenses like freight and also port operations from many other duties.
- Independent contracts with each subcontracting carrier (sea, air, and train, land transport).

5.2. Logistic providers

➤ Implications of logistic management in the Colombian shipping industry

With the globalisation process around the world and the huge increment of international commercial activities in a free and fair market environment for almost all the sectors of the industry. The logistic concept has been changed from one stage to another and new paradigms have evolved with the introduction of new practices like Total Management Quality (TMQ), Just-in-time (JIT), Quick Response (QR), and Efficient Consumer Response (ECR); all of them practical solutions that can be seen as a tool for shipping companies, which are looking to provide more value added services and remain competitive in the market.

Nowadays, the maritime transport is just one of the main stages of the logistic chain and with the introduction of this logistic concept, the interaction of different types of transport with other activities and services for the benefit of the shippers, consignees and carriers is a fact. Hence, more tight and close relations like partnerships, alliances and joint-ventures are growing rapidly in the industry.

The link of more actors and sectors of the industry make that vendors, suppliers and consumers become more and more dependent one from another. However, the one who can provide more services for most of the products is maritime transport because of the low transport cost and economy of scales.

➤ Implications of logistic providers in the shipping Industry

Logistics is not only transport service, but also location of resources, transformation, movement, storage and delivery of it. Therefore tactics to improve inventory management, close co-ordination and customer service levels are part of the future challenges for any proactive and aware shipping company.

The implications of the application of the logistic concept in the national shipping companies is wide and extensive, understanding that this process is basically about location, movement and storage of economic resources. Therefore the main factors of this concept will be analysed hereunder.

➤ **Factors**

Location

If the shipping company is interested in covering potential markets and geographic areas, different logistic features must be analysed in order to establish strategic sourcing locations and facilities.

- First, the company must analyse what type of goods to transport and service to provide.
- Second, the company should analyse if there is a possibility to establish long-term commitments or partnerships with the suppliers of resources, cargo and products to transport.
- Then, agree on the size, number and location of the service facilities.
- If any transformation of the product is required for example packaging, labelled, marking, coating or other value-ad activity are introduced for the product, bases or industrial centers should be established.
- Finally, warehousing, distribution centers and branch organisations can be set up, at both ends of the supply chain.

All these factors can change from one location to another; hence, the placement of resources and facilities are conditioned to costs, quality, access to the product, movement and storage of it.

Costs are very relevant in this stage; however, then internal and external costs have to be analysed.

Movement

In relation with the movement of the goods, many logistic implications surge when this new concept is taken into account. Thus, the “product” and the “transport” have to be analysed.

- **In reference with the product:**

- Study the amount or quantity of cargo to transport
- The density of the cargo
- Stowability, space utilisation and filling rates
- Cargo handling equipment performance and costs
- Manipulation of hazardous, perishable and value cargo in case of accidents or pilferage
- Packaging

- **In reference with the transport:**

- Analyse distances and routes
- Technical conditions of the transport (Type of ships, regulations, crews.)
- Co-ordinated schedules (Frequency, time in port.)
- Evaluate transport times
- Select number size and location of storage facilities
- Balance and imbalance of cargo
- Ship shore transfer: Automatic mooring, tide variation, automatic lashing and sea fastening, cargo equipment on board the ship.
- Government and international regulations

The study and correct application of all these factors are determinant to obtain the “quality” and the required “customer service level”. Market sales, costs, reliability and flexibility of the service are other key features and implications tied to these logistic concepts.

Storage

When talking about logistics cost, the storage costs for some shippers rise up to 40 % or more of the total costs. Therefore, the shipping company must be interested in offering storage or warehouse services in order to increase revenues or provide an option by sharing costs in partnership with shippers.

The selection of storage should be done deciding the better option between the warehouse or a distribution center (DC). Rent, lease and outsource this service to a third party or share the cost in partnership with shippers can be part of the strategy.

From the logistic point of view the application of warehousing systems has traditionally many benefits and implications. Examples of these benefits are the enhancement of transportation economies, achievement in economies of scale, maintenance sources of supply, achievement of time and space differences between producers and consumers, increment of discount rate prices and enhancement of the customer service levels.

On one hand the warehouse systems handle products in four cycles; receive, store, ship and pick, which is the traditional approach. However, the DC system only uses two cycles: receive and ship, which in fact reduce cost and also maximise the profit of the company. Why? Because this system collects data in real time, reduces inventory costs, applies JIT philosophy and meets customer delivery requirements, with other value services like final assembly, packaging and possible applications of “Cross-Docking” systems, which break down products to customer shipment, also called “distribution mixing centers”.

In relation with this stage, other features have to be analysed such as the number, size and location of the warehouses or DC's; depending on the environment, transport costs, development and service levels.

EDI in logistics

Another important feature to be taken into account in this stage is the application of "computer technology and information systems", due to the huge flow of information, data transfer and movement of stored goods.

Investment in electronic data interchange (EDI) and bar code systems is a good alternative when "inventory management" is the issue. Reductions in the cycle time, cash tied up in the inventory, labour intensity, error rates and increments on space utilisation and handling equipment efficiency are just a few of the implications of (EDI).

Other general implications of EDI for an organisation and the shipping Industry are explained briefly in the following:

- The clearance and streamline process brought by these systems lead to better use of time saving and increasing company efficiency with more transactions per day.
- The better flow of information under electronic messages, saved time and money because of the high capacity and speed of operation compared with traditionally paper documentation.
- Elimination of the task of typing the information manually to the system.
- Application of environmental friendly policies because paperless processes is a fact.
- The "Back up" information used under these electronic messages can be stored in a safe manner by compressed floppy discs, leading to less volumes of paper and less shelves full of spare material gaining space utilisation.
- Reduction of staff and personnel dedicated permanently to booking and client service processes are replaced by automated data collection systems.

- Flexibility of the EDI system, i.e. Instant correction of errors and mistakes, save costs and time with huge benefits for shippers and consignees.
- Establishment a corporate global freight selling system responsible for central data management on a global tendering and carrier allocation is a cost benefit key.
- Structured the tender process that is global in scope and fully harmonised with the client's requirements.
- Setting up of system that identifies the company's service lines and trade routes so as to customise the services to meet clients needs.

According to these benefits the national private and state shipping companies must be involved in the application or usage of these electronic system, specially when partnering with manufacturers and consumers who are in the corporate objectives and future strategies of the company.

To conclude, logistics is a big business strategy and an efficient marketing tool from where huge cost savings can be create; therefore, this practice in the national shipping industry is of relevant application in order to increase profit and maintain the competitive advantage of the companies. Consequently, logistic from the author's point of view is the present and future issue of the shipping industry. Moreover, when there is today a growing impact on the logistic market by the expanding range of services developed buy third party providers associated with ocean carriers in joint ownership with parent transportation groups, i.e. Genesco established a partnership with Mercantile Logistics part of the AP Moller Group , which also owns Maersk Lines.

Why? Because customers are looking for more than just a transportation service, which means creating a logistic provider service able to manage the cargo and the information status of the goods.

5.3. Development plan for the national fleet

5.3.1 New and second hand acquisition.

The shipbuilding industry in Colombia is not well developed because of the lack of high technology, infrastructure and know how. Therefore, most of the shipyards are dedicated to the building of small vessels like barges and fishing boats, required for the exploitation of hinterland resources.

As is know the construction of ships is a very complicated market, which is dependent of many technical, commercial and political factors that are mixed to a long building tradition. Therefore, just a few countries like Japan, Korea, China and other European countries are in the strong position to offer high quality ships that can cope with the over regulated shipbuilding market. (See Figure 10).

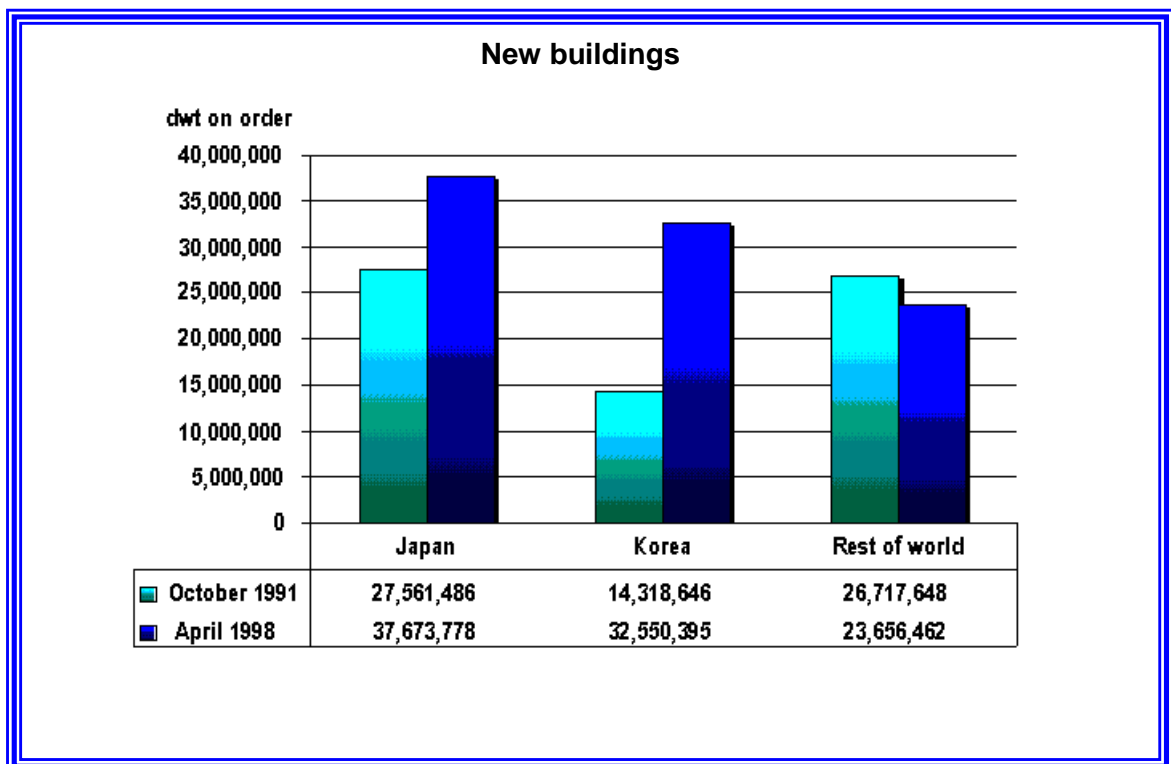


Figure 10

Source: Fairpaly 1999.

The technology required to build new ships and the knowledge in the applications of safety rules, design, construction, operation and classification techniques of ships are developed mainly by the IMO and IACS (International Association of Classification Societies) members. Hence, the application of class rules for the different types of vessels and all other design techniques require expertise, machinery and know how, which is a big barrier for participation of developing countries in this market. This means that most of these countries are not able to provide experts and infrastructure to compete with traditional shipbuilding nations.

In Colombia and almost in all Latin American countries, most of the national shipping companies rely on the technology and expertise of developed shipbuilding countries for the acquisition of new ships. However, due to the high capital investment of new ships other financing methods like “leasing” are more often used for the acquisition of ships.

Actually the shipowners in Colombia prefer to use other commercial activities such as time or voyage chartering, which represents a better operational activity with less capital risks.

Other financing systems like “export Credits”, raise loan capital, retain earnings, increase share capital, junk bonds and sale and lease banks can also be used.

5.3.2. Strategic analysis for ships acquisition

The shipping activities are a high capital intensive industry and some characteristics of it like volatility and seasonal fluctuations make of it a speculative business. The huge capital investments in ships and expenditure in operations, fuel consumption and manning costs, mixed with this cycle process make of it a very risky and uncertain business. Therefore, the acquisition of new or second hand ships has to be made under confident procedures and management strategies to secure the future of the company in this competitive market.

For the acquisition and employment of a new or second hand ship in a specific market many elements have to be taken into account to decrease the risk of the investment. Therefore, some of the elements to select for a success study are: type of product or cargo to transport, possible traffic/routes and operational patterns like Pendulum, Double-dipping, Hube spoke, Triangle, Round the world, End to End and all of them studied in relation with the regions in question. For this purpose different kinds of systems (tools) can be used to understand which are the advantages, disadvantages and the barriers that the company will face in the acquisition of a vessel.

Some famous studies like “PEST “ (Political, Environmental, Social and Technical) tests or also the “SWOT” (strengths, weaknesses, opportunities and threats) “Harvard strategic thinking studies” By Kenneth Andrews. can help to determine the potential use of a vessel in different markets under different scenarios. All of these are of great benefits not only for the investor but also for the potential customers, who rely on the use of that service.

There are also other management technique tools to measure when or not to invest in a future vessel or when to take a big risk or not in the charter or leasing of it. These techniques are for example the “Growth share matrix in shipping” from Boston Consulting Group (BCG), which is very useful for this specific purpose. Other tools can be Mc Kinsey & Co portfolio analysis, to define strategic business units. (See Figure 11).

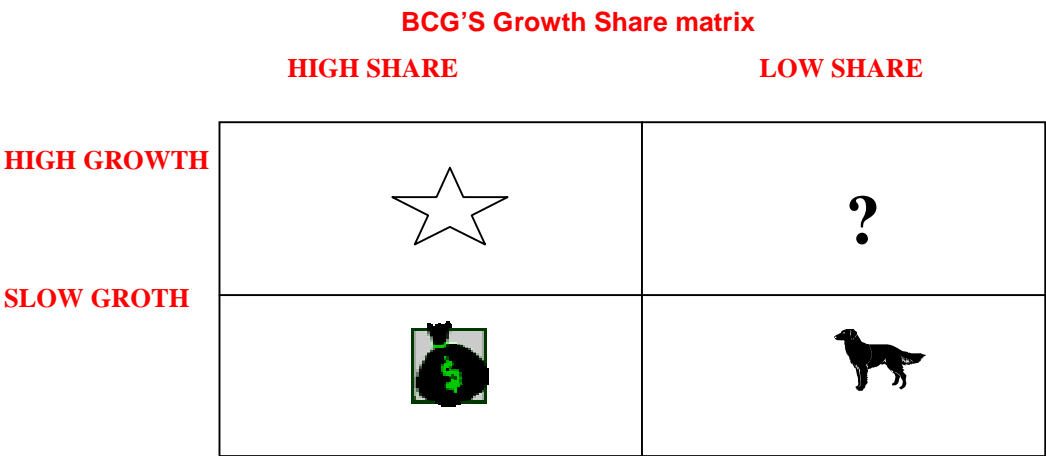


Figure 11 Source Shipping strategy WMU. Tor Wegerland

Other technique tools that can be applied to the shipping forecasting process are *Ansoff's Product/Mission Matrix* which defines that “product /Service (type of ship), must match a firm's distinctive competence” (Igor Ansoff), in parallel with market penetration, market development, product/service development and diversification of the service. (See Figure 12).

Ansoff's Product/Mission Matrix.

	Present Product	New Product
Present Mission	Market Penetration	Product Development
New Mission	Market Development	Diversification

Figure 12

Source: Ansoff's Product/Mission Matrix.

Finally the “Generic strategies” and “The five forces” analysis of Michael E. Porter will define and measure strategic advantages for differentiation, overall cost leader ship and when to focus on the world-wide industry or in a particular segments of the market. (See Figure 13.).

Porter Generic Strategies.
Strategic Advantage

	Uniqueness perceived by the customer	Low-cost position
Industry wide	Differentiation	Overall Cost leader ship
Particular Segment only	<div>FOCUS</div>	

Figure 13

Source: Michael Porter, Competitive Strategy

5.3.3. Second hand acquisition.

In the case of the acquisition of second hand ships, the potential shipowners must focus on other not less important factors related to the vessel. (see Figure 14).

Factors Related to the Vessel

Technical characteristics

- Age of the ship (ships over 15 – 18 years are consider old)
- Maintenance condition.
- Class and survey records .
- Performance: speed and fuel consumption.
- Builders reputation (quality and technology of the ship).

Economical characteristics

- Past trading experience.
- Charter commitments.
- Nature of transaction (judicial/Commercial).
- Cost of bringing vessel to buyer's standards (reactivation of a laid up ship).

Figure 14

Source: WMU Hand out, Patrick Donner.

The acquisition of second hand vessels for Colombian ship owners represent a better alternative in the present market, because the easy acquisition process and less capital investment among many other advantages. However, second hand ships can not offer the same quality and performance like a new building; therefore, all the advantages and disadvantages have to be measured carefully. (See Figure 15).

Pros & cons of second –hand vessels

Advantages

- Fixed price, often lower than for new buildings.
- Immediate employment of the ships, meeting the market demand contributing to the cash flow.
- Often more attractive to financing institutions, because less investment and market risk can be evaluated.
- Performance (operational and economical) can be evaluated.
- Mortgage to secure the loan is immediately available.
- Banks cover larger portion of the contract price, 80 %.

Disadvantages

- Often produce higher operating costs. (Manning level, maintenance, insurance, fuels consumption).
- Specifications and technical requirement may not fit buyers needs.
- Lack of uniformity among ships in the fleet.
- Shorter life spans.
- Banks cover smaller portion of the purchase, 60%.

Figure 15

Source: WMU Hand out, Patrick Donner.

Finally, to group the principal participants in the acquisition of second hand market ships, the following chart is shown: (See Figure 16).

Second Hand Market Participants

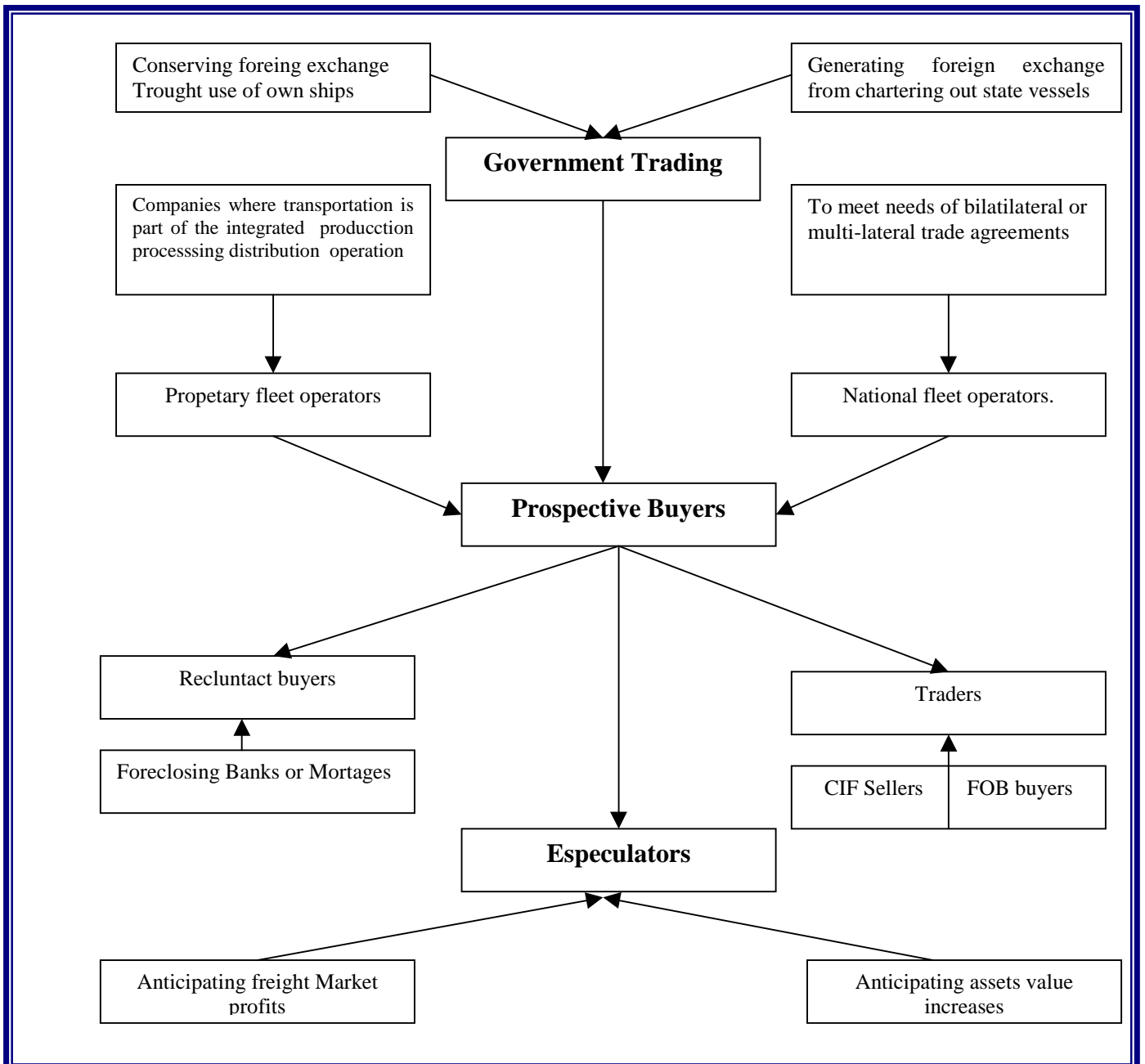


Figure 16.

Source: Drewry Shipping Consultants.
Investment opportunities in second-hand ships

5.4. How to finance the fleet.

Before showing different financing scheme it is important to stress that currently in the case of financing for investments in more ships, banks must look for the cash flow of the companies. However know banks are interest in money and not really in the ships, thus they will look for how the company will produce profits with these ships instead of looking for the value of the assets (Ships or equipment inside the companies).

In other words, cash flow based companies instead of asset based companies are what banks look for and different filters and indicators are being used to measure the performance of the company such as internal rate of return, payback time and solidity, profitability.

The fleet can be financed by different commercial schemes as follows:

➤ Export Credits

The use of “export credits” or government baked export credits can be used for reduced interest loans for shipowners (buyers credits) or shipbuilders (Suppliers credits) in favour of the shipowner.

With this credit different approaches can be used for instance:

- Set up a government bank especially for shipbuilding.
- Provide subsidies loans from commercial banks that receive guarantees from government.
- Set up government supported ship mortgages banks, taking also equity interest in vessels being financed.

An example of this export credit is the OECD loans in which 80% of the ship is financed with an interest rate of 8% per year payable during 8.5 years.

In 1994 OECD agree to change the fixed credit to countries already tied to the purchase.

With this scheme the national shipowners have to deal with foreign ship financing banks because in Colombia the banks are not willing to be involved in this activity.

➤ **Raise Loan of Capital**

This type of finance is made by long term loans from banks and also is need sometime the “mezzanine loan” known as “Equity gap” as subordinate debt.

➤ **Retain Earnings**

With this kind of scheme the finance is paid by their own funds or paid for the counter part of a loan “leverage”.

A case in point is If I have 40 million dollars (Cash) to pay for a ship it is better to take a loan for which I can pay in cash 8 million and the remaining 32 million by the loan, hence, I will have 32 million dollars in my own funds to buy four more ships with loans of 32 millions.

This scheme remains risky for national shipowners because the weak financial power of the companies and the problem to assure financial schemes by national and international banks.

➤ **Increase share of capital**

With this scheme public and private companies can follow a different approach:

- **Public or state Company**

A public company can increase the share of capital by newly issued shares so the company or enterprise will not loose control of the organisation.

- **Private company**

These types of companies have three different alternatives to choose from:

- Injection of capital by share holders,
- Short term investment for funding institutions,
- Going public offering the shares to underwriters or banks that take responsibility for the payment even if no one else buy the share or offer shares in a market for sale.

➤ **Sale and Lease bank**

This type of finance provides ready cash flow or capital to the company, which retains the vessel, and pays the lease requirements in a regular basis for a fix period of time and also have tax advantages.

➤ **Leasing**

The leasing for Colombian shipowners is the most convenient scheme, because the flexibility in using the vessels and the possible alternative to buy the ship.

The acquisition of new ships is very expensive and the financing schemes can endanger to a large extent the stability of the Colombian shipping companies, therefore this less risky and attractive option can be taken in to account.

Also known “Bareboat charter party with purchase option” (Leasing), that is a long-term charter where the charterer has the option of buying the vessel. In addition, the charterer takes over the vessel and operates it as if he was the owner; this option offers several advantages.

Advantages

- Costs of funds for a lessee are significantly less expensive than bank finance.

- Incentives to investment by capital & depreciation allowances utilised by lessors to shelter profits from tax,
- Reduced rental for the lessee: Rents are deductible as operating cost for lessee, therefore tax efficiency of leasing is minimised.
- Leasing provides funds for 100% of the cost of the equipment.
- Double dip structures enable tax benefits to be claimed twice in relation with the same equipment in the same transaction.
- Leveraging maximised tax saving opportunities
- Debt in leveraged lease is guarantee by an export credit agency combining tax and subsidy.

Source: Handouts in Maritime Law, Patrick Donner. WMU. Leasing structures (1999, 2000.)

Examples of these benefits in shipping companies

- Leasing is considering as a balance of sheet,
- The availability of different structures like leveraging leases, cross boarder financing and double dipping,
- Leasing structure are often for a ten year period, ideal time for any shipping project,
- Finally, the purchase options otherwise continuing the rent option with a much lower rate.

5.5. How to apply Quality Systems

Suggestions applicable to national shipping companies

➤ Project Organization.

For the application of a quality assurance system, the quality assurance manager has to lead and create a special working group with a selected staff for the co-ordination and recollection of data from the different departments according to an implementation process plan. (See the figure 17).

Implementation Process Plan

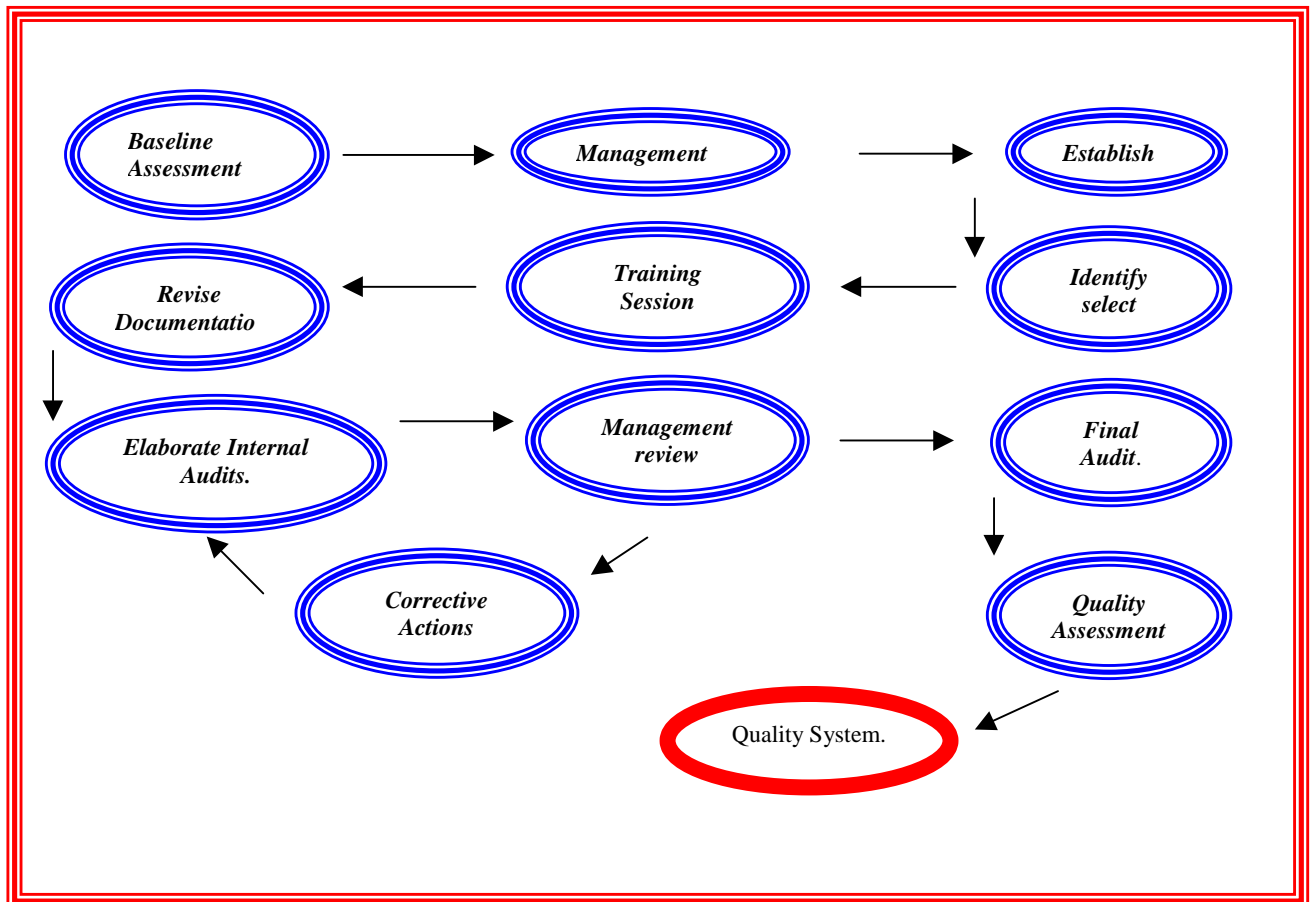


Figure 17

Source : ISO 9000 series.

➤ Scheduled

The scheduled strategy will be based on *short and long term* guidelines to achieve the required solutions and the best quality standards for the company.

- Short-term requirements will start from the official approval of the board of directors and will no take longer than one year.
- Long term strategy requirements will start after one year from the official approved of the board of directors; at least 65% of the requirements must be

done in the second semester of this term to secure the success of the project and the stability of the company.

➤ **Goals**

- **Goals of the short-term requirements.**

The purpose of the short-term strategy is to reduce the negative impact and the extra expenses of the company by an integrated environment and quality thinking of the different departments. (Operational, Technical and Administrative department.).

- **Goals of the long-term requirements**

The purpose of the long-term strategy is to increase the service quality standards for the customer, ensure the operational safety of the fleet and secure the long-term profitability of the company according to an environmental friendly policy.

The quality department should present in consideration the solutions to enhance the poor situation of the companies and to cope with the modern environmental and safety issues related to their markets.

➤ **Activities**

Short term requirements

- Agree on complete support to the project from the top management of the company and the board of directors, after meetings proposed by the Executive Manager.
- Organize discussions in detail about the current problems with the managers and personnel of each department to clarify and let them know the present situation.

- Establish of a confident computer network system to record all the actions on board ships and ashore installations.
- Present of a detail Survey report by a “Designated person” describing in detail the technical and operational conditions of the fleet.
- Identify immediately the personnel that are not required to cut extra wages after a reasonable study by the manager of each division. E.I. Temporal workers.
- Train strategic staff in new quality techniques to speed up the change.
- Review the main functions of the operational, technical and technical service departments to reduce possible overlapping of competencies.
- Extra services like cars, trucks, personal phones, computers and all fixed assets that are not necessary have to be reduced at maximum and cancelled as soon as possible.
- Cancel extra hours and over time must be cancel.
- Rationalise all office depot materials like printer tapes, cartridge, papers, pens an so on keeping the stock to the needs of the present situation.
- Revised functions of each member of the company and verified in way to make sure that the work is done on time and in the right way.
- Inform to the customers and clients of the current changes of the company.

Long term requirements

- Up dated courses and training programs will be settled for the personnel to spread quality techniques.
- Create direct links and communication in all staff levels.
- Establish a quality standard program to reduce the environmental impact operations in all its forms.
- Elaborate a “quality Manual” in order to compile all the technical, operational and managerial activities of the company.
- Introduce a variety of control measures to monitor and reduce spills or waste emissions from the fleet.

- Create a cost-effective and cost-efficiency program related with operating costs like manning, insurance, repairs and maintenance.
- Select cheaper reinsurance and created a fixed premium P&I market on the traditional P&I Club set up.
- Select potential new investments in new or second hand markets.
- Build servicing commitments in the way to keep capital costs firmly in the ship cost frame.
- Build a confident monitoring data system to evaluate and measured the operation and performance of the company by indicators. (Data mining techniques)

Structuring the organization

An organizational structure will be established to reallocate and create new positions, jobs and responsibilities. (See figure 18.).

Organization Structure

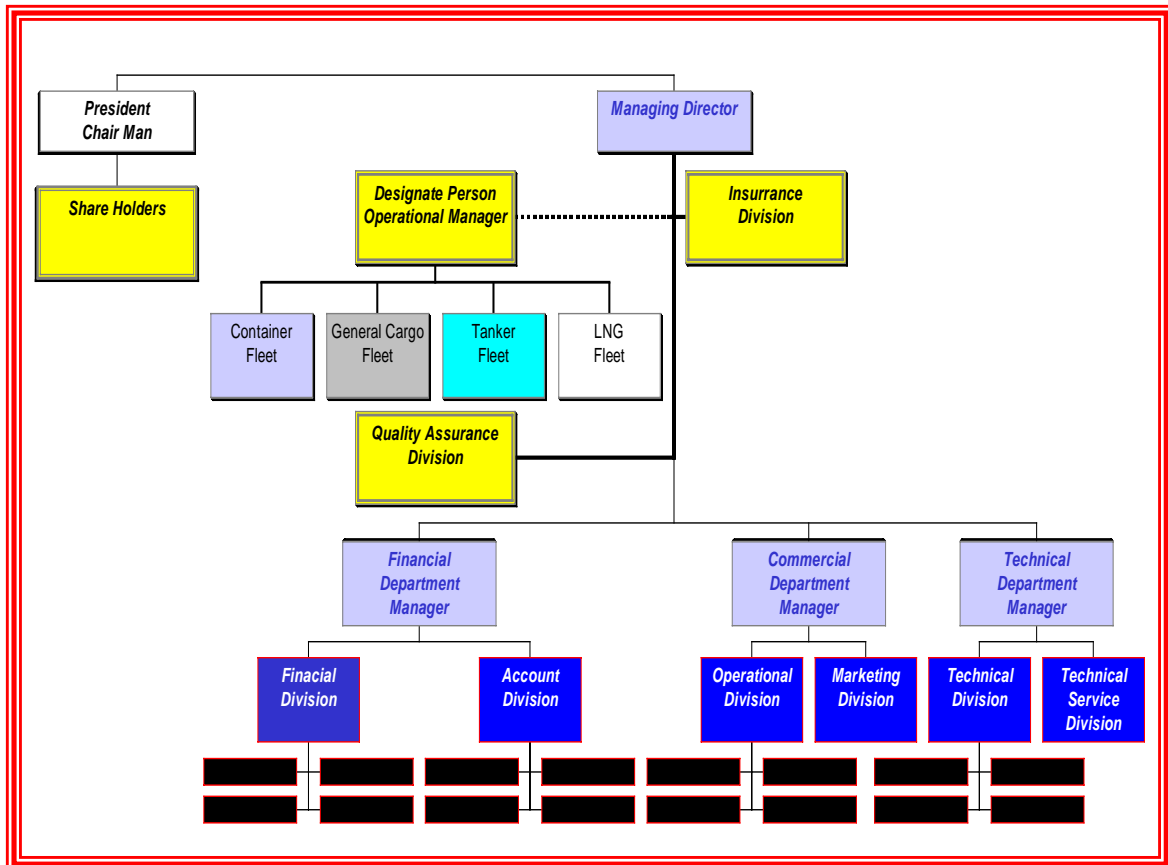


Figure 18

➤ **Education**

The company will continually provide programs to train and upgrade the offshore and shore personnel in quality, safety and environmental issues in order to comply with the international and national regulations.

Training of quality seafarers is essential for quality shipping, therefore shipping companies should invest in training, states should invest in technical co-operation and academies should invest in the exchange of resources.

The Human Element is vital to the quality initiative. Resolution A.900 should be adopted by all those in the shipping industry, as part of the drive towards a quality culture and environmental consciousness. (IATA News May 2000).

➤ **Policy**

- Develop and maintain a conscious and high quality system with a continuous environmental protection and monitoring management process.
- Operate the fleet according with the international and national regulations in force in order to minimize all forms of environmental impacts.
- Reduce at maximum all possible navigational disasters by continuous monitoring program on technical and operational duties to enhance safety at port and at sea.
- Participate in national and international programs related to quality environmental protection and safety operations at sea.
- Provide a high quality and effective service with fair cost tariffs to our present and potential customers.
- Assure a confident quality system base on safe environmental issues and
- Provide a quality customer commitment with responsibilities for the effectiveness of the procedures.

➤ **Manual**

A Quality Manual must be established according with the long-term strategy. For this purpose the quality assurance division should write down specific and clear guidelines.

This manual should include for example policy, descriptions, responsibilities, routines, control, pre and post auditing procedures. (See Figure 19).

Quality Planning Manual		
Table of contents		
INTRODUCTION		
1.1	Purpose/Scope	1-1
1.3	How to use the manual	1-3
1.4	Roles and Responsibilities	1-4
1.5	Procedures	1-5
1.6	Organization	1-6
2.0 Program quality management.		2-1
3.0 Quality integrated work plans.		3-1
4.0 Standard operating procedures.		4-1
5.0 Formats for technical quality operations.		5-1
6.0 Annual quality assurance assessment report.		6-1
7.0 Dissemination of quality assurance results.		7-0
7.1.1 Publication of Papers		7-1
7.1.4 Promotional Material and Press		7-2
7.1.5 Intellectual Property		7-2
Guidelines for the Effective Communication of quality results		7-3

Figure 19

➤ **Budget**

The budget invested for the currently changes will be covered in the long run by different strategies as follows:

- Cost reduction by minimized damages in cargo and port operations.
- Better performance of the ships due to periodical maintenance.
- Implementation of good quality management system.
- Commercial improvement due to good marketing and better business relations.
- Increase of potential customers because a better quality service with competitive rates.
- Trained personal will maximize the working time and customer service with an evident reduction of the failures, mistakes and defects in all the administrative and technical operations.
- Estimations and assumptions of inflation rates, exchange rates, rents, taxes, wages, salary and overtime have to be taken into account.

To conclude, in Colombia as in other countries the shipping industry is an important sector from which many different industrial activities are dependent. Therefore, each company should forecast and make a detailed analysis of new different markets to assure the success of the companies in this competitive environment.

Conclusions

After the presentation of the previous chapters, the author will discuss some general conclusions and implications of the application of the different international strategies in Colombia, based on the foregoing analysis and development of the Colombian shipping industry in the last decades.

As a summary, it can be said that according with the dynamical global growth and development of the shipping industry present increasing competition and networked economy, most of the companies are seeking more economies of scale, trading patterns and international strategies. Therefore, the sector is moving day by day to the application of high quality and environmental services with differentiated products and expanding its coverage by merging, partnering or forming alliances.

Nowadays, the evolution of the market due to unimaginable innovations and economical and technological developments presented in automation, internet evolution, business to business approach, logistic management and customer driven philosophy; makes sea trade stimulates with consequently big effects in the trade policy, the business cycle, the trade elasticity, the commodity traded by sea, the trade development cycle and the political developments of the world trade economy.

Hence, huge implications and practical results can be summarized for the benefit of the Colombian shipping companies.

➤ Implications of economic structural changes and his Impacts in the Colombian shipping industry.

- The open market economic policy has been shown as a driven trend for many countries, because the enormous diminishing of artificial trade barriers and

increase of multilateral trade agreements. This is a policy that reflects reductions of time delays and total transport costs. Hence, a clear deregulation process and liberalization of the shipping market policy have to be taken in order to participated on equal conditions and opportunities in the international sea trade market.

In Colombia the practice of this open market policy has not been successful in the shipping sector because the lack of preparedness of the Industry and the factors explain in Chapter 2.9. However, with the new mentality and application of the current strategies of the present study potential benefits can be reached for a fair and free market competition.

- It can be seen that there is a two-way interaction between developments in shipping and developments in the world economy. Structural changes in the world economy and world trade have had significant influence on world shipping. This can be seen in the improved efficiency in shipping and ports; bigger, better and faster ships and more effective organization of the shipping operations, which have brought about a steady reduction in transport costs; and a higher quality of service. Therefore, investments in high tech, IT, training personnel, and application of management strategies are the role to play in the future market.
- Increase in foreign trade and demand for services has grown faster, a trend, which is likely to continue. This has led to increase in shipping activities. Hence, logistic providers and value added services are the ones who make the change and the key of a differentiated product and service.
- Nowadays, many multinational companies are looking out for global transportation providers, rather than just shipping services. Therefore, shipping

companies need to have office set-ups and strategic service points across the globe, which will be an enormous task. Colombian shipping companies may soon be forced to open up numerous overseas offices and shift personnel in order to fit in the global vision of the sea market trade.

- The companies strategy are increasingly shifting away from a physical shipment of goods to a value added process through which new services and economic values are added at each step of the chain. Therefore, shipping transport and communications network will need to show clear signs of sudden changes and to grab the great opportunities involving logistics and multi-modal development.

➤ **Implications of partnerships, consortia, alliances and mergers in the Colombian shipping industry.**

- According to the new shifts of the industry, the existing companies must focus on differentiating their products, services and getting bigger by either partnering, merging or forming alliances in order to satisfy market requirements individually with a better asset utilization, higher frequency of sailing and improvement of the marketing capabilities for a wider service coverage.
- The process of mergers and acquisitions within the liner shipping industry is expected to increase as carriers look for financial power in an arena of falling freight rates.
- As alliances did not deliver as much results as had been expected and consortia have too many members to be properly workable. The possibility of partnership agreements can be more suitable for the national infrastructure. Therefore, in the case of Colombia, the shipping companies are forced to adjust and rearrange themselves in order to meet the trade requirements. Why? Because

in today's market the cargo owners prefer to deal with fewer first class service providers on broader geographical basis rather than use multiple low class or medium class providers that offer lower rates but involve risk, damages, delay and low quality storage, carrying capacity and scheduling services.

- Also as is shown the reduction of freight rates and the increasing innovative trading patterns to offer efficient services at lower costs is the objective that is attained at present. Therefore, mega-carriers and niche market agreement services can be applied by merging and partnering with Mercosur shipping companies, which will achieve economies of scale and secure the participation of the national fleet in the international seaborne trade.

➤ **Why is the practice of outsourcing, logistics providers and MTO services changing the business?**

- Outsourcing or third party logistics is by far the prevailing trend in the logistics market. According to a report published by US Bancorp Piper Jaffry in January 99, some US\$ 40 billion of annual transportation expenditure is outsourced to third party logistic companies in the US per annum. Thus, national shipping companies should rely on the expertise and knowledge of some service providers and dedicate full time in their core business.
- The need to improve efficiency in the supply chain will create greater demand on the supply side of transport, including its performance, reliability, flexibility and quality of service. Therefore, Colombian shipping companies must be able to offer global service, which can encompass a thorough service from producer to consumer.
- Shippers increasingly require not only sea transportation but also logistic services from the shipping companies. In view of the above factors it can be predicted that in the future big ocean carriers that have more resources will

remain ahead of the smaller operators because they have greater geographical or global reach as well as resources to enable them accommodate the requirement of logistic packages.

➤ **Which are the main implications of outsourcing, logistics providers and MTO services in the Colombian shipping companies?**

Some general implications of this application in the national companies are:

- Focus in all the links of the chain in order to optimise its operation and to minimise overall costs.
- Create completely new and competitive rates.
- Increase the degree of differentiation (service/product).
- Integrate most of the functional areas of the business with suppliers and customers.
- Develop and incorporate new trade patterns and operations in all the activities.
- Speed up the transformation of the shipping market with competitive benefits.
- Create reductions in total costs.
- Facilitate expansion and market coverage.
- Decrease labour investments/intensity.
- Increase training and qualification of people
- Increase productivity.
- Introduce new technology.
- Procure flexibility of the market.
- Deliver merchandise at the market place on time.
- Establish global transport networks.
- Secure Investments in both ends of the chain including other transport operations land and train.
- Boost partnering strategies, that will be base on quality, service, costs and environment.
- Increment Standardise equipment and procedures.

- Secure transport capacity for long commitments.
- Enhance access to better and easy information.
- Spread the risk when non-expertise.
- Increase bargain power
- Increase filling rates and reduced empty packages. (Space utilisation).
- Reduce waste products. (Environmental issue)
- Reduce damage and requirements for handling operations.
- Make sound business decisions.
- Improve company image.
- Increase performance, market share, sales growth, return on assets employed and operating income of the company.

➤ **Why do Colombian shipping companies have to focus on the future trends?**

- Because the carrying capacity (size, speed, loading factor) of the world merchant fleet is expected to increase due to the increasing trend of economic globalisation.
- Because the significant reductions in the cost of transportation. (Shipping companies, in particular container carriers or liner shipping will keep on improving the basic services to the customer.
- Because more cargoes and new kinds of cargo “Project cargo and specials“ will be containerised and shipped on container vessels.
- Because the trend of globalisation and liberalisation will speed up pooling arrangements in the tramp and some niche services.

- Because the revolution in the liner containerised service pattern is expected to involve a massive conversion of end to end, pendulum and traditional round the world patterns into new equator round the world patterns.
- Because new pure transshipment ports are expected to emerge.
- Because the recent technological trends in ship design have been geared towards improving the economies of scale as well to meet the growing demand requirements in the market. Therefore, National Ocean going vessels should be larger, faster and fitted with computerised navigation, propulsion and communication systems to provide enhanced safety and easy communication and exchange of data with the rest of the world.
- Because the advances in information technology and communications technology have seen the development of various systems. These have impacted on the operation of ships and the running of shipping companies. Hence, changes in information and telecommunication technologies will continue to lower production costs of information technology products and drive rapidly accelerating market demands for new products.
- Because human resources are becoming a long-term investment of the organisations due to high costs of training and research. In today business it is more important than ever to be creative and innovative with new ways of seeing the world. The creativity process in organisations involves idea generation, problem solving or idea development and implementation. In shipping this view is reinforced by competitive environment.
- Because environmental concerns are becoming more and more the drivers of economic performance, shipping companies will have to spend much more time and money on planning ahead and in budgeting for investment in this regard. No

doubt environmental costs will impact substantially on shipping companies' balance sheets at a time of intensive competition.

The above explanation and analysis of the future trends and possible implications of the international strategies that could be applied to the Colombian shipping industry, are the result of the study of a decadent national merchant fleet, the concerns related to the development of that industry and the implications of the shipping activities for the national economy of the countries in the present competitive and global market.

The application and successful development of the strategies within the national shipping industry will depend on the modification of the corporate objectives of the companies and the deep understanding of the operational, financial and economical factors that affect the performance of the merchant fleets.

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