

THE STRATEGIC NATURE OF THE MERCHANT MARINE IN COASTAL NAVIGATION IN BRAZIL.

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SUMMARY: Several key sectors for the successful development of the Brazilian industry were relegated to background for a long period of time, especially when regarding the Brazilian logistics network infrastructure for handling of materials and outflow of production. Being always in the margin of investment required for proper development of its operations, the various logistical operators in different operating modes such as road, rail and sea, find themselves in great difficulties operating in a country of continental dimensions like Brazil. This article aims to cover the difficulties encountered in material handling in maritime mode, specifically in coastal navigation, cabotage, in Brazil and draw some perspectives for its future.

Keywords: Cabotage. Brazil. Merchant Marine. Shipping.

1 INTRODUCTION

Protectionism was a remarkable and historical factor of Brazilian industrial policy from around 30s to mid 90s. The arguments for such stance were to protect the national interest and industries against the voracious appetite of multinational corporations and the so called developed countries.

Historically, the protection system evolved from a simple system, based on the administration of economic and exchange factors to something complex, with direct control of various industrial sectors. This led to the creation of a closed market, making the necessary investments to improve services and processes in the different modes of transportation not to occur, in order to increase competitiveness and turnover in this sector.

Today the same goes for navigation, where an exceeding state protection is present, with its strategic segments of international competition facing the world trade. The fraction reserved by the market for coastal navigation or cabotage has its practice noted in many nations even related to a "maritime tradition" where the common goal is to control and preserve, deliberately, the fleet belonging to the country of origin, and to control what is called " the domestic market. "

However, the market opening is forcing companies to adopt some changes to improve their logistics processes, they have seen a steady increase in the degree of requirements of the consumer market and also in the level of competitiveness that is presented. Due to these factors the maritime mode should improve its overall performance, thus aiming to offer better products and services to its customers.

The increase in domestic trade between the North, Northeast and Midwest, major producers of raw materials, with the south and southeast, with a high degree of industrialization, is a trend already outlined by Castro (2001). Following the same argument, Fleury (2003) makes clear that

having a multimodal matrix based on more than 60% in a single modal, road (Table 1), shows a clear inability to meet future demand. The only opportunity for companies to become more competitive is to adopt more than one modal, according to Nazario (2000).

Table 1 - Intermodal matrix of freight transport - 2004

Modal	Millions (Tons / Km)	Participation
Road	485.625	61,09%
Rail	164.809	20,73%
Waterway	108.000	13,59%
Pipeline	33.300	4,19%
Aerial	3.169	0,40%
Total	794.903	100,00%

Source: ANTAQ (National Agency for Waterway Transportation)

2 THE RIVER TRANSPORT

River transport is practiced to a greater or lesser degree throughout the world, especially, in this sense, in the European continent, where large and important works, such as artificial canals, port facilities, dams, among others, were built to allow better use in freight. Among the many navigable rivers of Europe, we can mention: the Rhine, Danube, Rhone, Seine, Volga and Don. River navigation in America is practiced mostly in the Amazon, St. Lawrence, Mississippi, Ohio, Tennessee, Orinoco, Magdalena, San Francisco and Paraguay.

According to Monteiro (2005), among the many factors that influence the Inland Water Transport (IWT), it can be mentioned:

- **Relief:** While lowland rivers are great for navigation, the upland rivers tend to have waterfalls, which ultimately increase the cost of shipping, it is necessary for the construction of river gates and elevator systems.
- **Climate:** In very cold areas, the rivers are used for navigation only in spring and summer. In the autumn and winter, due to freezing, navigation becomes paralyzed. In areas with prolonged drought, the navigation is also impaired because of the wide variation in water level.

2.1 The Waterways

Monteiro (2005) also indicates that the transport done by waterways is little used in Brazil, this is mainly due to the predominance of upland rivers, some examples may be cited: the Parnaiba river, between Maranhão and Piauí, and the Tiete river in Sao Paulo, for navigation to become viable in these cases, it was necessary to build dams and locks.

The inland waterways in Brazil go through a period of adjustments and decisions. There is, gradually, the acceptance of new paradigms towards larger scales of production and transport operating in an efficient, safe and reliable way.

Except for the Amazon, Solimões and tributaries of the left margin, the waterway transportation in Brazil adds little more than 10 billion tons.

3 The Strategic Nature of the Merchant Marine in Coastal Navigation in Brazil.

International maritime transport and inland waterways is regulated by the IMO (International Maritime Organization), responsible for promoting safety and efficiency of navigation, taking preventive measures to restrain marine pollution resulting from accidents or improper preservation of boats.

In Brazil, the Department of Merchant Shipping, a public body related to the Department of Waterway Transport, of the Ministry of Transport, is the governmental agency responsible for monitoring this type of transportation, editing the necessary rules for the good performance of shipping companies, managing their records, freight, bilateral agreements, among other issues.

3.1 Protectionist Factors in the International and Brazilian Cabotage.

Barbosa (2008) discusses some protectionist practices directly linked to cabotage, it is important to mention that even with globalization and free trade zones, this practice is still present implicitly or explicitly in international trade negotiations.

In the United States, cabotage operations must be performed only by vessels constructed, documented and authorized by U.S. companies. It is mandatory, in transactions, that the crew, including helpers, officials and other workers, to be formed by 75% of U.S. American citizens.

Regarding China, coastal navigation and related services must be operationalized by Chinese flagged ships. Investments and implementation of foreign companies are limited and depend on specific authorization from the Chinese government.

In Japan, the current legislation provides that the transportation of cargo is reserved for the Japanese flagged vessels, being provided limited access to Japanese coast, from countries that trade is established and have friendship and navigation relations with Japan, based on the principle of reciprocity.

In Argentina, cabotage is performed exclusively by Argentine shipping companies. While Chile establishes that coastal shipping is exclusive of Chilean ships, with the possibility of participation of others in the transportation of cargo with volume less than 900 tons.

Brazil has adopted, since 2004, a resolution that involves the chartering of foreign vessels by Brazilian shipping companies, quotes Canelas (2004). This resolution regulates that vessels can operate with other flags in the national territory, provided that:

- National vessels of appropriate size or type for transportation are found inexistent or unavailable
- They are replacing vessels which are under construction in the country, in a Brazilian shipyard, for a maximum period of thirty-six months and up to the limit of the contractual tonnage.
- Public interest is seen and duly justified.

4 Positive Aspects of Coastal Development in Brazil.

According to Souza Araújo and Martins (2007), being a country of continental dimensions, the adoption of the maritime mode in Brazil becomes natural for the growth of national economy. The fact that the country has an extensive coastline and a large amount of public ports and port terminals

(Figure 1), as well as the presence of the productive sectors and consumers along the coast, or close to it, are favorable aspects to the development of cabotage in Brazil.

Figure 1 - Major Brazilian ports



Source: ANTAQ (National Agency for Waterway Transportation)

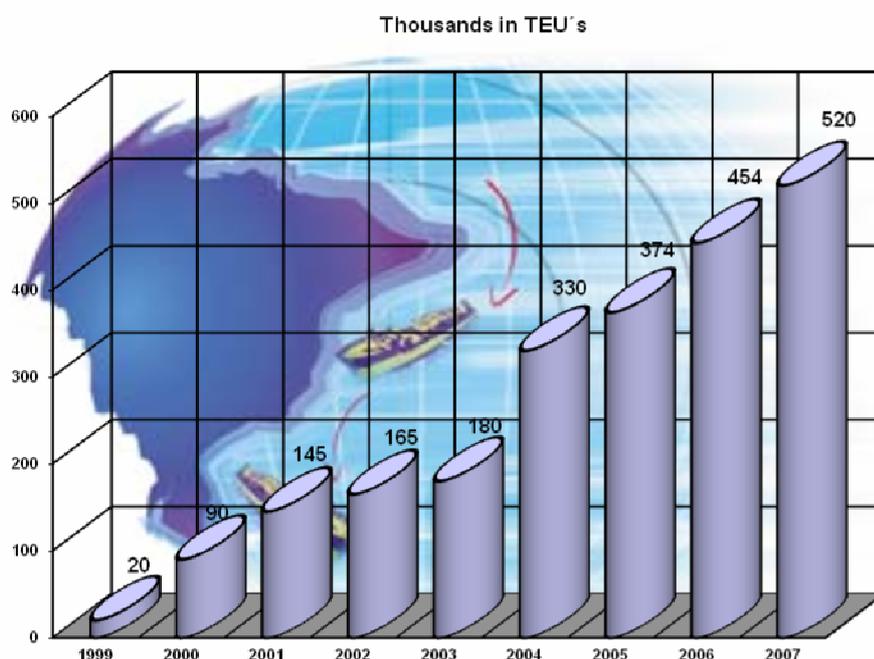
Investment in infrastructure, enabling the development of a multimodal transport "door-to-door" and modernization of shipping companies, giving a greater focus on the operation of integrated logistics, are also factors that help in developing this modal in Brazil.

The increasing number of TEUs (equivalent unit to a 20 feet container) transported (Figure 1) per year, makes clear the need for this investment and enhancement of coastal shipping in Brazil.

According to Barbosa (2008), among the operational advantages of the modal shipping (cabotage) in relation to the road we can mention:

- Energy efficiency: given that the consumption of fuel per ton transported in cabotage is significantly lower when compared to road transportation.
- Transport capacity of all types of cargo: in cabotage, it is possible to transport all kinds of freight (Table 2), without the need for special operation times.
- Ability to move large cargo over long distances: due to the large capacity and safety of vessels that this transport offers.
- mode, as well as equipment operation and transport vessels, tends to have a longer durability compared to the road.

Chart 1 - Thousands of TEUs transported a year



Source: ANTAQ (National Agency for Waterway Transportation)

Table 2 - Fleet of coastal shipping by vessel type

Type	Quantity	Average Age
Oil	81	22
LPG	33	23
Chemical	8	25
Cargo	3	22
Bulk Cargo	3	23
Seaport Container	2	18
Refrigerated	1	32
Multi-Purpose	1	9
Total	132	22

Source: ANTAQ (National Agency for Waterway Transportation)

5 Factors that minimize the viability of Brazilian cabotage.

Barbosa (2008) explicits that Brazilian reality imposes certain factors that tend to hinder and obstruct the development of cabotage. The high operational costs, resulting from excessive taxes on this modal and excessive bureaucracy in cargo forwarding, are just some of the factors that make the operation of cabotage in Brazil still far short of its actual capacity.

The presence of an infrastructure that remains inadequate to properly meet potential new clients, due to the low priority of investments in modernization of ports and the construction and expansion of new access roads to them, which tends to hinder the regularity of the scales,

combined with relatively advanced age of the national fleet (Table 2) and the difficulty of hiring new ships, are realities of the everyday life of these modal companies operating in Brazil.

The lack of government incentive is also a major factor of not further growth of such a modal, it is clearly denoted by the non-implementation of the incentive to reduce the cost of marine fuel in the Brazilian coast, as provided for in Law No. 9432 from 1997, making the fuel cost for cabotage approximately 30% more expensive than in its equivalent road modal (Table 3).

Table 3 - Cost of diesel / ton x road transport and maritime cabotage

Diesel Oil	R\$/l	US\$/ton	Taxes	R\$/ton
Road	1,7	-----	-----	R\$ 1.451,64
Cabotage	-----	840,5	1,37	R\$ 2.015,10
Diference				(R\$ 563,46)

Source: Source: CNT - SEST - SENAT

Below, a survey of the CNT - SEST - SENAT (is presented Table 4), conducted with more than 150 companies already operating on cabotage in Brazil. Following it, it is clear that the excess of taxes on this is modal is seen as the most serious problem faced by it, followed by lack of regular timetable.

Table 4 - Major impediments to the development of cabotage

Source: Source: CNT - SEST - SENAT

6 Conclusion

According to a survey conducted by IPEA in 2005, potential users of the system of cabotage in Brazil would be the following areas:

- chemicals
- wholesale
- manufacturing and assembly of motor vehicles
- electronics industry
- machinery industry and industrial equipment
- metallurgy
- food and beverage

To encourage those potential customers that most use this modal, it is necessary deregulation of this sector, simplifying procedures and documents, and especially reducing its level of rates. Investment in infrastructure, both in port and the access roads will lead to a reduction in

the cost of freight, as well as regular maintenance of distribution lines and the adoption of multimodal operation.

The renewal of the national fleet, the adoption of modern efforts at ports and construction of distribution centers close to centers of consumption and production are also crucial for the modernization and expansion of the maritime cabotage modal in Brazil.

7 REFERENCES

AGÊNCIA NACIONAL DE TRANSPORTES TERRESTRES - ANTT, **Transporte Multimodal**. Disponível em: <<http://www.antt.gov.br/faq/multimodal.asp>>. Acesso em: 07 de junho 2009.

ARAÚJO, P. **Modais marítimo e ferroviário devem se fortalecer**. Belo Horizonte, abr. 2006. Disponível em: <http://www.ibralog.org.br/ler_noticia.php?cod=765> Acesso em: 07 de junho 2009.

BARBOSA, M. M. R. C., A Expansão da Cabotagem e os Reflexos na Gestão da Cadeia Logística dos Usuários e Transporte. In: 9ª Conferência Nacional Portos Brasil 2008. São Paulo, 2008

CANELAS, A. M. P., Navegação de Cabotagem. Brasília, mar. 2006 - Superintendência de Navegação da ANTAQ. Disponível em: <<http://www.antaq.gov.br/Portal/pdf/palestras/12-ApresentacaoAnaMaria0.pdf>> Acesso em: 07 de junho 2009.

CAMPOS NETO, C.A.S.; SANTOS, M.B. **Perspectivas do crescimento do transporte por cabotagem no Brasil**. Brasília, out. 2005. Disponível em: <http://www.ipea.gov.br/pub/td_1129.pdf> Acesso em: 07 de junho 2009.

CLOSS, J. D, BOWERSOX, J.D., **Logística Empresarial**. São Paulo:Atlas,1999.

FLEURY, P. F. A logística brasileira em perspectiva. In: **Logística empresarial a perspectiva brasileira**. São Paulo: Atlas, 2000. p. 19-26.

MONTEIRO, J. I., A logística do transporte marítimo no Brasil e no comércio internacional. Sorocaba, 2005. 110 p.

ONO, R.T. **Estudo de viabilidade do transporte marítimo de contêineres por cabotagem na costa brasileira**. São Paulo, 2001. 151 p. Disponível em: <http://www.teses.usp.br/teses/disponiveis/3/3135/tde-16012002-102949/publico/teses_online.pdf> Acesso em: 07 de junho 2009.

SOUZA, A. J., ARAÚJO, M. P., MARTINS, R. S., **Transporte de cabotagem no Brasil: Análise da viabilidade para carga refrigerada**. In: Sociedade Brasileira de Economia, Administração e Sociologia Rural, 2007, Londrina, XLV SOBER, 2007.

