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# *Editorial: Maritime and port economic geography*

Jacques Charlier, Antoine Frémont and Brian Slack

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- 1 Unlike the flows of capital and information, international trade involves exchanges of material goods and is largely dependent upon the organisation and capacity of one mode of transport: shipping. The growth in trade in manufactured goods and components has been made possible by containerisation, a sector of the maritime transport industry whose efficiency is at the logistical heart of globalisation.

## **An industry in transition**

- 2 Since the 1970s, flows of manufactured goods have been the principal motor of international trade. Today this trade represents 76% of the value of all international trade, compared with 62% in 1970. Manufactured goods comprise the largest single segment of merchandise exports of the countries of OECD, 80% today compared with 72% in 1970.
- 3 This growth in the value of shipments is reflected in the growth of volumes of non-bulk trade carried by maritime transport. While bulk shipments have grown at an annual rate of 1.7% since 1970, non-bulk trade has grown by 3.9% annually. Over 2 billion tons of non-bulk cargoes were carried by maritime transport in 2000, compared with 671 million in 1970. The market share of non-bulk cargoes has grown from 26% in 1970 to 40% in 2000.
- 4 As mentioned above, containerisation has been at the heart of the expansion of international trade in non-bulk cargoes. Originating as an innovation that appeared first on the North Atlantic in 1965, its global expansion was facilitated by the establishment of standard dimensions of container units by ISO. Its introduction resulted in formidable productivity gains in international shipping, gains that have been achieved through the continual growth in the size of ships. Compared with ships of 1,000 TEUs capacity in 1970, the largest container ships of today exceed 8,000 TEUs. These ships are turned around in ports in a matter of hours thanks to dockside equipment that can load and off-load

containers at rates in excess of 25 containers per hour per crane. The cost of container shipment have become so low that today products such as sugar and cereals, formerly handled in bulk, are transported in containers.

- 5 Today, containerisation has become very extensive. Up to 80% of all non-bulk maritime shipments are containerised. Container ships account for 11% of the world's fleet, and represent a capacity of 7 million TEUs. The number of containers in international trade now exceeds 230 million TEUs.
- 6 Container shipping is now an integral part of global production and consumption systems. The container is central to the success of intermodal transportation and door-to-door delivery systems. It is an important component of value-added streams that are being realised by logistics networks. The multimodal potential of the container has drawn several actors into developing and integrating shipping into transport chains. The shipping lines themselves have played an important role in this evolution. Beginning in the 1980s and increasing in importance through the 1990s, a number of ocean carriers have become a global presence, focussing primarily on the major East-West trade axes, but increasingly integrating North-South trades into their network of operations. They have succeeded in dominating the maritime sector and are extending their operations into land connections in order to directly serve customers. In this way they are able to effectively manage their pool of containers to provide maximum returns. These are truly global companies that no longer operate at the scale of the nation-state, but approach the global marketplace through a set of regional sub-markets. They are evolving their organisational structures in order to reflect the complexity and scale of their operations that show no boundaries between land and sea.
- 7 A different set of global actors is coming play, one that is exerting a considerable influence of the container shipping industry. A few terminal operating companies are extending their influence globally. These trans-national terminal operating companies now account for 35% of all the containers handled in the world's ports. This compares with their share in 1991 of 20%. Firms that have a global presence include Hutchison Whampoa, a company that has its origin in the port of Hong Kong, the Port of Singapore Authority, while companies such as Eurogate, formed by a consortium of German terminal operating companies, operate at a more regional level. The dominance of these trans-national terminal operating companies is being challenged by the shipping lines who themselves are operating port terminals, and today account for 19% of port container handling world-wide.
- 8 The port is the cockpit from where these firms seek to control containerised trade. Whether it is in handling the transfers of containers between ship and land, or the movement of ships to global markets, or the transport of boxes to their land-based customers, the companies organise their activities from ports. The port, therefore, is a fundamental link in transport chains. The classic vision of the port as a place between hinterland and foreland, has been replaced by the concept of the port as a focal point of organisational activity of a range of actors who are implicated in managing physical flows and extracting value added through logistics management of supply chains.
- 9 A significant horizontal and vertical integration is transforming the organisation of maritime transport and its spatial structure. The relations between the actors in the industry are changing and becoming more fluid. Container flows are being restructured at several scales, from the global to the local.

## The Le Havre seminar

- 10 In June 2003, a research seminar was convened by Antoine Frémont and Brian Slack in Le Havre, France, to explore the dimensions of the evolving structures of global container shipping. It sought to approach the issue from two perspectives. The first was to focus on the strategies of the major actors in container shipping. An important question was whether the development of alliances and mergers signified an end to the traditional structure of the shipping industry. At the same time and in a similar fashion was posed the question of the integration of once separate land and water transport modes and its effects on the traditional industry. Were the effects spatially even? Or were different parts of the world impacted in different ways? If the major actors are involving themselves in global transport chains, are there differences between land and water operations? At the heart of these questions was the nature of globalisation in the shipping industry and the degree to which it was becoming more standardised and similar. These are questions that are addressed by six papers collected in this issue.
- 11 The second theme treated in the seminar was the relationship between private and public actors in the evolving structures. The growth of trans-national companies in terminal handling, was it changing the role of public authorities? How could local public institutions continue to play a role in an industry that was global in scope and increasingly dominated by non-local private corporations? These questions were addressed by six other papers, assembled and published in issue 44 of *Les Cahiers Scientifiques du Transport* that appeared in 2003 and whose table of content is as follows:
- Frémont & B. Slack: Transport maritime conteneurisé, globalisation, intégration territoriale et ancrage territorial: présentation du dossier (pp. 5-10).
  - Comtois & B. Slack: Innover l'autorité portuaire au 21<sup>e</sup> siècle: un nouvel agenda de gouvernance (pp. 11-28).
  - J. Wang & D. Olivier: La gouvernance des ports et la relation ville-port en Chine (pp. 25-54).
  - J.-P. Rodrigue: L'autorité portuaire de New York et New Jersey: changements globaux, gains régionaux et problèmes locaux du développement portuaire (pp. 55-75).
  - P. de Langen & A. Chouly: Régimes portuaires et accès à l'arrière-pays (pp. 77-94).
  - E. Gouvernal: Les lignes maritimes et le transport terrestre: quels enseignements peut-on tirer du cas "Rail Link"? (pp. 95-113).
  - J. Guillaume: La mondialisation du transport des automobiles: entre intégration et autonomie des acteurs maritimes (pp. 115-127).

## The content of this issue

- 12 A. Frémont and M. Soppé focus on the strategies of the container shipping lines. They reveal how three European carriers, Maersk/SeaLand, MSC and CMA-CGM, are challenging the domination of the Asian carriers. They demonstrate how these three carriers have become industry leaders in the development of global services, and may be regarded as the most radical innovators in container shipping today.
- 13 R.J. McCalla compares theoretical networks with the actual shipping services of the Caribbean. He demonstrates that the network has become less dense, and its connectivity has been reduced, despite a significant increase of capacity made possible by the entry of

the mega-carriers. He relates these changes to market conditions and the strategies of the lines serving the region.

- 14 J. Marcadon considers the potential impact of the growth in vessel size of recent years. Vessels of 18,000TEU capacity may be developed in the future. He suggests that one of the repercussions of the deployment of such large vessels will be the further containerisation of non-traditional cargoes, such as neo-bulk and a wider range of bulk commodities. He considers how such large vessels may impact on port selection, with a growing potential for transshipment hubs in eccentric locations. The growing interport competition, he foresees, will lead to growing interport cooperation.
- 15 J. Charlier deals mainly with the cruise industry. While it is fundamentally different from the container business there are a number of striking similarities. Two of these differences are especially dealt with here, namely the search for economies of scale and of scope, and the technical jump to overpanamax-sized vessels. On the one hand, the cruise shipping industry has experienced a series of acquisitions and mergers leading to an even higher degree of concentration than the container shipping industry (even if well-known brands have often been retained by the new owners). And on the other hand, cruise shipping has also entered into the overpanamax era, with a series of consequences for the seasonal complementarities of the regional cruise markets as well as for ports and shipyards.
- 16 The focus shifts from sea to land in the following two papers dealing with very different locales. Th. Notteboom and R. Konings demonstrate the growing maturity of inland container shipments on the Rhine River. They explain the evolution in terms of growing volumes of trade and an evolution in the organisation of the business. Barge operators and inland port authorities are having to adjust to the dynamics of trade. The authors present a model of inland port growth in conjunction with network elaboration.
- 17 The paper of B. Steck treats an entirely different regional context, that of a state that is largely beyond the effects of globalisation, Mali. A poor, land-locked state, it depends upon maritime access via several ports in different countries – mainly Dakar and Abidjan. He suggests that, far from being in a dependency position, the choice gives some opportunities for Mali to play the card of competition.
- 18 In conclusion, the container has produced a revolution in maritime transport. A revolution that began on the seas with the development of new ships and in ports, with new methods of cargo handling, over forty years has transformed itself. It is today one of the key elements in supply chains and globalisation. Its effects have been profound on public authorities and on private actors. A growing integration is evident, and other sectors of shipping are evolving in a similar way. How this vertical and horizontal integration develops and for whose benefit remains to be seen. It involves actors some of whom are bound by place, while others are foot-loose. It impacts on territories and networks, and its evolving configurations merit the attention given by the contributors in this special issue.

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