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Intermodal Transport & Supply Chains Liberalization in Maritime Transport

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LIBERALIZATION IN MARITIME TRANSPORT

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Abstract

This paper explores the state of liberalization in maritime shipping. It first examines sectors of the market that are liberalized and then narrows its focus to look at the cabotage rules of certain OECD countries, comparing the more liberalized markets with those that are most protected. In an era of trade liberalization and new public management approaches to governance, it seems surprising that further liberalization has not happened in regional markets. The inefficiencies that materialize as a result of the failure to further liberalize protected short sea markets are most evident in North America. The protection previously granted liner conferences and currently under review for consortia is also discussed.

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Introduction

The market for one of the most globalized of industries—shipping—exhibits the full range of government regulatory philosophies from closed protectionism to open liberalization. What better industry, therefore, to discuss the future of transport regulation and the issue of liberalization than this one? This paper begins by first examining the more open market of bulk shipping. The discussion then narrows to the more protected sectors of the industry—liner shipping, domestic shipping and auxiliary services. It explores the theme of liberalization in maritime transport through presenting a number of case studies of OECD countries plus the People’s Republic of China before drawing conclusions about what liberalization of maritime transport may mean and what are the key issues in its implementation.

As noted by Marlow and Gardner (1980) and Wright (1991), the tanker and dry bulk markets, with unrestricted competition, are very close to perfectly competitive markets. Since capacity supplied to these markets adjusts much more slowly than demand, there is enormous pressure on shipowners to cut costs and meet minimum standards. In order to compete, shipowners in international trades have almost universally migrated to open registers and global labour supply—competitive necessities for survival.² Flagging at home, therefore, often only occurs when the owner’s national government offers preferential access to cargo (as is the case with the U.S. Military Sealift Program) or industry incentives (like a generous tax and labour regulatory environment), or mandates that a national-flag ship be used for cargo transport between ports within the country (cabotage). These three conditions are the substance of this paper and are discussed in the context of various countries’ approaches.

Relative to the tanker and dry bulk markets, there has been little concern in the liner shipping industry about the substandard shipping that has plagued the provision of bulk transport services. Because liner vessels maintain a consistent service schedule, they call the same ports on a regular basis and operate in a market where some buyers are prepared to pay more for premium services. As a result, many operators tend to gravitate towards quality as a marketable advantage. In other words, while they too are interested in a generous tax and labour environment, operators of scheduled liner services want to ensure that no non-tariff barriers to participating in potentially profitable operations exist. Regulation of the liner market is very dependent upon the government’s assumptions about the liner firm’s pricing strategy, and consequently governments have been more interested in competition issues when thinking about the efficiency of the market in meeting trading needs. This paper will return to the issue of pro-competitive liner regulation before drawing overall conclusions.

Every ship is required to comply with the regulations imposed by its country of registration (flag). As the industry is a global one, there is a need for multilateral cooperation in its regulation. The International Maritime Organisation (IMO) is the multilateral agency mandated to deal with technical issues in the industry, and it has led the charge over the past two decades on matters of ship safety and vessel standards, vessel and port security, and marine (and more recently air) pollution from ships. It has left the issue of conditions applicable to trade in maritime transport

2. This has led to a well-documented global market for international bulk shipping and was accompanied in the 1990s by ‘a race to the bottom’ in quality that was the substance of a number of ‘ships of shame’ governmental reports. The net impact of this was a refocusing of the efforts of the International Maritime Organisation towards ‘Safer ships, cleaner seas’ at that time. The economics of shipping and its impact on the evolution of shipping regulation is developed in considerable detail in Brooks (forthcoming).

services to the World Trade Organization and the General Agreement on Trade in Services (GATS) negotiations.

Progress on liberalizing³ trade in maritime transport services has been made at less than a snail's pace. During the GATS negotiations in the late 1990s, there was widespread agreement to remove cabotage⁴ from that round of negotiations, with a plan to return to the issue with the Doha Round. Subsequently, the U.S. declined to table an offer on maritime transport services and, consequently, Canada, the European Union, Japan and Australia withdrew their offers to further liberalize international shipping services.

In the Doha Round of the GATS, countries can opt in to particular commitments and some commitments already exist in the 'three pillars' of access to and the use of port facilities, auxiliary services and international ocean transport. Some progress has also been made through bilateral or regional trade agreements, such as the recent agreement between Singapore and China that reasonable and non-discriminatory access be available to international shipping companies for port use and access to ancillary services (WTO, 2009a).

From a review of existing position documents, in particular the background document by the Council for Trade in Services (WTO, 2008), it appears that international shipping, port access and access to auxiliary services like pilotage (and other sectors like aviation and telecommunications) are higher priorities for the WTO than cabotage, which is still not on the table. The Maritime Model Schedule deliberations are focusing on these 'three pillars' for trade liberalization, with participation by Australia, Canada, the European Community, Japan and New Zealand, and even China. However, as the U.S. is not a participant in the maritime discussions, its transport commitments are limited to air, rail, road and auxiliary services (WTO, 2009b). While easing of cabotage restrictions is not scheduled to happen in the Doha Round of the GATS negotiations, it could still happen through bilateral or regional trade agreements, and the opportunity exists for frank and open discussion within developed nations' fora, such as the G-20 or the OECD.

Case Studies in Cabotage Regulation

The starting point for most research on government support to the maritime transport sector begins with the table of maritime subsidies first published by the U.S. Maritime Administration

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3. Liberalization does not imply a 'laissez-faire' regime. A regime establishes access conditions, and the degree of liberalization is set to allow only nationals to participate (closed) or to allow non-nationals to participate under the same conditions as nationals (open), or some variant in between depending on the activity. How the regulations are enforced may be very restrictive or 'laissez-faire.' This paper does not set out that liberalization is therefore good or bad but does accept that in more liberalized regimes choices are market-driven, and that the role of the regulator is different at each end of the restrictive–liberal continuum.
 4. While cabotage was earlier defined as the requirement that a national-flag ship be used for cargo transport between ports within the country, it should be noted that this is a generalization. The exact definition is executed differently in each country. For example, the U.S. defines a port as a land border as well as a ship-to-ship transfer, not 'ports' in the definition that most other countries would use. Therefore, for the purposes of this paper, cabotage is the carriage of goods between two marine ports and, if the regime is closed, international ship operators may not pick up and drop off cargo between these two ports as part of their route.

access to foreign ship operators in 1998 due to a lack of adequate freight services to serve demand (Meyrick and Associates, 2007) and, by 2006, the liberalization had led to the following situation: “The coastal container market is once again being exclusively operated by foreign ships under the permit system” (Meyrick and Associates 2007: 32). The most recent changes to Australia’s regulation of the coasting trade were effective 1 August 2008 (BITRE, 2008).

A ship may participate in Australia’s coasting trade either by being licensed for the trade, or by being issued a permit.⁸ Licenses are issued on two conditions: (1) the vessel’s crew are paid Australian wages while the vessel trades on the Australian coast and (2) the vessel’s crew have access to the vessel’s library facilities. The ship must also not be expecting to receive or actually receive a subsidy from a foreign government during its time in Australian waters, or have received one in the previous 12 months (BITRE, 2008). Vessels may be licensed to participate in Australia’s coastal trade irrespective of ownership, flag and crew nationality, but must meet international standards and qualifications as required under those IMO and ILO Conventions to which Australia is a signatory. (Immigration rules are not immediately applicable.)

An unlicensed ship may be permitted to trade on the Australian coast in the carriage of either cargo or passengers under two conditions: (1) there is no suitable licensed ship available for the shipping task, or the service carried out by licenced ships is inadequate and (2) it is considered to be desirable from a public interest perspective that an unlicensed ship be allowed to undertake shipping activities. Two kinds of permits are issued: the Single Voyage Permit (SVP)—for a single voyage between designated ports for the carriage of a specified cargo or passengers—or the Continuing Voyage Permit (CVP) for a period of up to three months (BITRE, 2008). Unlike the Canadian waiver system, there are no duty payments to raise the price of access.

In 2000, the Australian government reviewed its regulation of domestic maritime transport services (BITRE, 2000). The underlying premise of Australia’s maritime transport regulation is the provision of safe shipping (accident and incident prevention) with an even-handed treatment of foreign and national owners. Most important in the government’s review of its maritime transport regulation was the issue of fair treatment of seafarers in the context of ship safety and pollution, issues of concern to Australians given the liberalization of international shipping over the previous two decades. The review concluded that Australia needed, as one of its general policy principles, to avoid “distortions in the shipping market through regulation” (BITRE, 2000: 52).

Has the liberalization been successful in growing Australia’s coastal shipping market? In 1995, there were 85 vessels in the Australian coastal fleet; this number fell to 45 vessels in 2006 (Meyrick and Associates, 2007: 130). This decline has been accompanied by a rise in the number of CVP permits issued and Meyrick and Associates conclude that the permitting system does not provide the stability needed to meet shipper requirements when considering sea versus land-based transport options. Furthermore, sea had only 2.9 percent share of the 1999 domestic freight market by mode (road had 73.6 percent while rail had 23.5 percent). However, the study also notes (page 115) that international shipping lines, because of their lower production costs, that is, their access to global inputs at global prices, are more competitive with road and rail, but the price advantage gets eroded during peak season when cargo interests are forced to use marine containers over the larger domestic ones.

8. The number of exceptions is limited; most notable are the exception made for coastal passengers between Victoria and Tasmania, and for trade to Commonwealth Territories, like Norfolk Island.

Australia is now reconsidering its cabotage policy. The Independent Review of Australian Shipping (2003) called for changes to Australia's cabotage regime, suggesting, among other things, movement to a tonnage tax environment as countries with such a regime had found it accompanied by a revitalized shipping industry. In October of 2008, the House of Representatives Standing Committee on Infrastructure, Transport, Regional Development and Local Government released its report on cabotage policy. The report concluded that

*The strongest argument for revitalising Australia's coastal shipping industry is an economic one. A strong domestic shipping industry can assist in the alleviation of land transport bottlenecks, infrastructure constraints and environmental impacts, as well as provide economic benefits derived from the creation of local employment and the growth of maritime services. ... Shipping must be able to compete with road and rail transport and will therefore need to offer available, reliable, timely service with competitive pricing. Infrastructure constraints, particularly at the ports, may impact on shipping's competitiveness and a skills shortage throughout the industry has the potential to limit its growth.*⁹

However, it did not advocate a return to cabotage regulation (e.g. access restrictions) but rather it focused on the need to clarify permit language. More importantly, it called for a tonnage tax regime¹⁰ and accelerated depreciation to enable Australian companies to compete on a playing field similar to that of their foreign-flag competitors.

In February 2009, the government formed a Shipping Policy Advisory Group to assist the Minister in determining the future of Australia's cabotage policy given the participation of fewer Australian ships (since the mid-1990s) in Australian domestic trade and the importance of coastal trade to overall freight movements. The choice of members of the advisory group has come under fire from ship owners and agents (Shipping Australia, 2009) and the unions, and in particular the Australian Institute of Marine and Power Engineers (AIMPE, 2009), for failing to include a broad enough group of stakeholders and the unions respectively in the advisory group.

In sum, the Australian situation provides a lesson in the problem of liberalization of domestic shipping while attempting to grow the marine mode's share of regional freight. Without a level playing field between marine operators and competing landside modes, sufficient growth may not be achieved to support the shipowner offering a stable, consistent service. The public policy balancing act between international and domestic is a complex and difficult one. It is too soon to tell if the current cabotage system (described above) will move to the left on the continuum presented in Figure 1, but it is clear that there is a local backlash brewing against the decade-long experiment (Sammons, 2009) and further movement to the right is not politically palatable.

OECD Case Study: New Zealand

Joining Australia at the more liberalized end of the cabotage continuum is New Zealand. This brief discussion is almost entirely dependent on the research reported in Cavana (1994,

9. House of Representatives (2008), p. v.

10. Tonnage tax is a method of calculating corporation income tax based on the net tonnage of the ship operated. Tonnage tax is often charged only on the income from shipping operations; the tax on profits from other operations is usually calculated as for other corporations in the country. A tonnage tax regime may set its tonnage tax rate such that the country is competitive as a source of shipping with open register countries like Panama and Liberia.

2004) and MacKay (2000). Prior to liberalization, coastal shipping was quite competitive with road transport, providing service via 10 operators with 19 vessels. Cavana (1994) reported that the driver for coastal shipping's competitiveness had been earlier deregulation of road transport. This drove prices for coastal shipping down and encouraged improvements in performance of the sector, but the government did not have a sufficient understanding of the cross-elasticities between the various modes to understand if the desired and anticipated further price reductions for cargo interests would materialize.

New Zealand's liberalization of the coastal shipping market, which came into effect 1 February 1995, was a small part of a very comprehensive reform of New Zealand's international trade, industrial, transport and fiscal policy. This was undertaken in the wave of new public management that moved the country from a highly regulated economy to one of the most liberalized, and made it a poster child for new public management principles. The coasting trade liberalization was envisaged as part of the establishment of a trans-Tasman free market with Australia.

By 2000, in New Zealand's coasting trades there were 21 vessels operated by nine companies; only four of the vessels did not fly the New Zealand flag (Cavana, 2004: 185). As with Australia, Canada and the U.S., the fleet is small and the full potential of the opportunity appears not to be realized given the coastal nature of the country and the promise of short sea services. In fact, MacKay (2000: 25) estimated that foreign shipping companies carried no more than 3-7 percent of domestic container moves. In other words, open access did not materially improve the volume of regional shipments by sea.

The government did implement a review of New Zealand's participation in shipping in 2000 (MacKay, 2000) and Cavana, who performed the research for that review, concluded that re-introduction of cabotage would most likely be accompanied by negative impacts (Cavana, 2004); in particular, the total estimated increase in domestic and international freight costs to New Zealand trading interests would be in the order of NZ\$13.1 million. The review team was "unanimous that a financial, fiscal and regulatory regime involving a second register and/or tonnage tax is justified to provide an equitable trading environment for New Zealand in both coastal and trans-Tasman trades" (MacKay, 2000: 6). Cavana's evaluation also indicates two additional components of successful liberalization: (1) the ability of the carrier to improve capacity utilization through open access, and (2) the freedom of cargo interests to choose operators. Both imply a critical minimum volume of trade is needed to ensure that a liberalized environment can deliver the benefits of liberalization to both parties.

OECD Case Study: Europe

Moving towards the middle of the continuum is the case of the European Union. As part of the move towards a Single European Market in the late 1980s, more open access in maritime transport services was desired. In the early 1990s, a number of northern States (the UK, Denmark, and to a large extent the Netherlands, Germany and Belgium) had open or mostly open cabotage regimes, but several southern countries (Greece, Italy, France, Spain and Portugal) had closed regimes. The dilemma was how to harmonize such disparate regimes with a successful transition plan that would open the market while ensuring that those countries already successful in international shipping, like Denmark,¹¹ would not lose their competitive advantage. This meant a transition plan that carefully addressed issues of national versus

11. Denmark is often cited as a 'best practice' country when it comes to liberalized shipping policies.

supranational regulation, the existence of second registers in a number of countries, and the relationship between international and 'domestic' shipping, as well as considering the impacts on surrounding trading partners in the Baltic and Mediterranean regions.

The primary instrument for the liberalization of Europe's cabotage policy was Council Regulation 3577/92, which came into force 1 January 1992. There were four issues in reforming EU cabotage that warranted careful attention and resulted in a transition plan for liberalization: (1) island cabotage (particularly important in the Mediterranean), (2) the provision of essential services involving public service obligations, (3) state aid to shipping, and (4) vessel manning. Most important, Council Regulation 3577/92 contained a phase-in schedule for island cabotage that addressed the particular concerns of Greek shipowners, then operating in a very protected market. Substantial progress in cabotage liberalization had been made by 1996, when the European Commission (1996: 1.1) released its revised shipping policy, indicating that its objective was "to ensure freedom of access to shipping markets across the world for safe and environmentally friendly ships, preferably registered in EC Member States with Community nationals employed on board."

While countries such as the United Kingdom and Denmark did not give up their open regimes, the closed market has become dramatically larger. Today, in Europe, a EU-flag ship is eligible to participate in the cabotage trades of any other EU state. Within Europe, each country may impose crew nationality requirements, vessel ownership requirements and fiscal requirements on owners. In addition, States that retain some restriction on access for foreign vessels usually maintain a waiver system based on the condition of non-availability or unsuitability of a national- or EU-flag ship. The widening of the cabotage area has enabled more than shuttle services to develop, so that operators can optimize their offerings to suit opportunities. This liberalization enlarged the region in which short sea services could operate and gave European vessel operators the longer routes that enabled short sea to compete effectively with land-based transport.

Also critical to the success of the European liberalization process was the continuing reporting and study process that accompanied regulatory change. Four Commission reports (1993-1994, 1995-1996, 1997-1998 and 1999-2000) on the implementation of the regulation appeared through the transition period, reporting events in open and closed parts of the market, and advising the Commission on changes that needed to be made to ensure that there was adequate adjustment during the transition. In particular, the third report (covering the 1997-1998 period) noted the critical issue of second registers set up by a number of EU countries and the access that ships flying those flags might (not) have to internal EU routes (European Commission, 2000). It also recommended that Council Regulation 3577/92 be extended to all European Economic Area countries, which it was on 4 October 1997 (Hodgson and Brooks, 2004). The fourth report (European Commission, 2002) advised that, as of 1 January 1999, the liberalization of cabotage services in Europe was virtually complete. Only the Greek market remained partially protected, and this protection was lifted 2 November 2002.

Furthermore, and perhaps even more important given the experience of Australia and New Zealand noted above, tonnage tax, or its equivalent, was formally endorsed as EU-wide policy and available in the large majority of Member States. While Greece had had a tonnage tax system in place for decades, it had not caught on as a concept because its rates were quite high; when the Dutch lowered their tonnage tax to open registry levels in 1996, the Dutch fleet showed such growth (more than 20 percent in the first year) that the master shortage drove further liberalization in its manning requirements (Brooks and Hodgson, 2005). Today, most tonnage tax regimes set the tax to be competitive with open register fees; this effectively

reduces corporate tax to very low levels and essentially eliminates the difference in the cost of conducting operations between the domestic and the international sectors of the industry. In addition, many EU states provide relief on personal income tax in support of seafarers. Brooks and Hodgson (2005) noted that, as a consequence of these fiscal policies, European shipping companies can allocate vessels to either domestic or international sectors of the industry (as circumstances warrant), and each part of the business is able to support the other through an adverse business cycle. As will be seen later, no such interplay between domestic and international sectors of the market is possible in either Canada or the U.S. given cabotage regulation.

Finally, the EU case is an instructive one looking forward. The EU has determined that short sea shipping is as much an energy and greenhouse gas solution as it is a part of the transportation network. Current EU funding for short sea shipping is based on the desire to remove trucks from congested freight corridors and address environmental issues (Communication from the Commission, 2006); this concept is translated into the structure of its five Marco Polo programs, all of which influence short sea development. The critical program purpose is to remove trucks from the road, and doing so is seen as not just a transport issue but one of industrial location and market incentives. Traffic reduction is an environmental solution and one not restricted in implementation by cabotage regulations. Furthermore, the intent is to now focus on the further reduction of maritime transport barriers by removing administrative and customs burdens on intra-EU maritime shipments (Communication from the Commission, 2009).

OECD Case Study: Canada

While North America has an extensive coastline, inland river systems and the largest freshwater lake system in the world, neither Canada nor the U.S. has the volume of short sea shipping that would be expected from such a wealth of coastline. Both countries reserve domestic traffic for national-flag ships. With the passage of the *Coasting Trade Act* in 1992, Canada closed domestic shipping to all but Canadian ships, albeit with a waiver provision, reconfirming “the same protectionist philosophy that has existed ever since Canada inherited its coasting trade regime from Britain” (Hodgson and Brooks, 2004, p. 51). Foreign-flag vessels may be used in Canadian coasting trade under waiver, if no Canadian-flag vessel is available.¹² While the protection of coasting trade is contrary to the overall liberalized trade intentions of both the *North American Free Trade Agreement* and the *Canada-U.S. Trade Agreement*, opening the market by providing access to shipping opportunities was excluded from either agreement.¹³

Unlike Europe with its tonnage tax enabling EU-flag vessels to operate in both European trades and international shipping, Canada has erected a firewall between domestic and international shipping. In the early 1990s, primarily in response to issues similar to those addressed in Europe, Canada adjusted its international shipping tax regime to create International Shipping Corporations (ISCs) in Canada. The founding of ISCs was based on the premise that it was imperative that Canada maintain expert and practical knowledge and experience in the wide range of commercial activities relating to ocean shipping, of which ship ownership was but one element. As this was seen as likely to occur through the operation of

12. Foreign flag vessels operating under waiver carried about 2.7 percent of all coasting trade traffic in 2006 (Transport Canada, 2008, Table M24, p. A104).

13. For more detail on the history of these negotiations and the trade in transport services provisions, see Brooks (2008a), Chapter 1. Specific discussion of the North American maritime cabotage issues may be found in Brooks (2008b).

Canadian-flagged ships (which were perceived to be uncompetitive), then the establishment in Canada of the effective ownership, management and control of foreign-flag ships could provide the means. This legislation, therefore, allowed foreign-owned international ship management companies to reside in Canada but not to participate in coasting trade (Brooks and Hodgson, 2005).

Today, the Canadian market is for 'niche' players. Existing services in Atlantic Canada are quite extensive and built on geographical necessity, such as the services to Newfoundland, community re-supply and energy shipments, while in Western Canada, the log trade is substantial and captive. The other two significant but niche markets are the predominantly bulk trades on the Great Lakes and Arctic re-supply in the summer months. In Canada, the primary deterrents to growing the short sea market are two: (1) a punitive tariff on imported ships (25 percent), and (2) a unique vessel regulatory regime that requires an operator to convert the vessel to meet particular marine safety regulations without any ability to recoup the investment on resale. Hodgson and Brooks (2004) note that the latter adds significantly to the capital cost of the vessel, thereby providing a disincentive for fleet renewal,¹⁴ and limits the likelihood that new short sea services will be offered through the chartering of used vessels. Brooks and Frost (2009) conclude that this second factor overrides all other disincentives to short sea service development, as the initial capital cost cannot be recouped in any right-sizing of the service during the process of growing a new service. Brooks (2008b) also attributed these two factors to the significant aging problem of the Canadian-flag fleet.

In addition to the deterrence factor that heavily regulated cabotage regimes impose—by limiting operators in their choice of market scope or making their operations excessively expensive—are the challenges that international operators may face in attempting to service two adjacent cabotage regimes. While they may be able to access cheaper, global market inputs, they are limited to offering shuttle services, as triangulation routing patterns are not acceptable by virtue of the presence of a cabotage regime. For example, a Canadian- or U.S.-owned foreign-flag vessel is able to carry cargo from Halifax NS to Portland ME or Boston MA (without the ability to pick up cargo in Portland for Boston) and pick up cargo in either of those two ports bound for Bermuda or Canada. However, with the imbalance in current demand on these routes, the unused capacity is sufficient to destroy the economics of operations on the route. The cargo is more likely to travel over the road (for all but Bermuda legs) or not at all.

In the case of Canada-U.S. short sea shipping, as early as 2004 Brooks and Frost (2004) found that other impediments stymied the development of Canada-U.S. short sea operations. These included the U.S. Harbor Maintenance Tax (HMT) on shallow draft vessels, U.S. advance notification rules that were designed for transoceanic moves being applied to short sea operations, and Canada Customs cost recovery charges at new operations (when no such charges were applicable to existing operations). All three of these remain today, although a bill introduced 14 January 2009 in the U.S. House of Representatives (H.R. 528, *Short Sea Shipping Act of 2009*), attempts to address this by amending the Internal Revenue Code to exempt traffic on the Great Lakes St. Lawrence Seaway System, which it defines as the waterway between Duluth MN and Nova Scotia. If it successfully wends its way through

14. This situation is somewhat more complicated by the presence of tariff relief through free trade agreements. The NAFTA agreement allows U.S. vessels to be sold in Canada without duty as do Canada's free trade agreements with Chile and Israel. The Government of Canada currently has legislation before Senate (Bill C-2 with first reading on 2 April 2009) that will implement its free trade agreement with EFTA and thereby phase out duties on imported vessels from EFTA countries over a 10-year period.

Congress, this bill could remove one of the more serious impediments to short sea development between Canadian and U.S. ports in the eastern two-thirds of the continent.

In addition to the three issues noted above, there remain two that need consideration in any liberalization program for North America, if not more broadly. Brooks and Frost (2009) identified the first as duties on vessels imported to Canada:

Canada's cabotage restrictions and duties on the purchase of non-Canadian vessels significantly increase feeder and regional short sea start-up costs. These are, literally, sunk costs and thus not recoverable in the event the service is unsuccessful. In areas of the world with a thriving short sea sector, operators typically charter, rather than purchase, ships. This provides the ability to change ships to better respond to the market and to limit market entry risk given the implicit lower capital costs. This would be difficult to do under Canada's duty and cabotage regime, as there are few such vessels sailing under Canadian flag.

The second is the U.S. 'build' provisions under U.S. cabotage legislation and the impact of this will be discussed in the next section.

OECD Case Study: United States

In the U.S., Chapters 24 and 27 of the US *Merchant Marine Act of 1920* (also known as the *Jones Act*) state that cargo may not be transported between two U.S. ports unless it is transported by vessels owned by citizens of the U.S., built and registered in the U.S., and manned by a crew of U.S. nationals. Foreign financial owners are permitted to fund Jones Act assets provided they derive the majority of their revenues from financing activities rather than vessel operations (Parker, 2006). While there have been minor revisions to this Act since, the protectionist sentiment continues today even after most other countries have liberalized their cabotage rules.¹⁵

The potential of domestic shipping in North America is considerable but underutilized; the separation of Hawaii and Alaska from the continental U.S. adds considerably to the size of the domestic market. In spite of the substantial opportunity for marine highways¹⁶ and the administration support for it (U.S. Maritime Administration, 2007), the domestic shipping market is not reaching its potential. U.S. operations are sufficiently expensive that the cabotage market is depressed and much of what could travel by vessel moves on rail or road, where the cargo interests are not captive (by virtue of product characteristics or network structure) to marine alternatives. The continuous decline of the ocean-going U.S. domestic shipping fleet is well documented, reaching 100 ships in the ocean-going Jones Act (U.S. origin to U.S. destination) trades by the end of 2007, down from 291 active ocean-going vessels at the end of 1996 (IHS Global Insight, 2009: 2). Furthermore, the argument made in support of cabotage in the U.S. is one of strategic interest. If security is its strategic interest, its own flag ocean-going fleet does not reflect this.

15. According to the Organisation for Economic Cooperation and Development (2006), U.S. laws and regulations influencing foreign direct investment in the transport sector are more restrictive than for any other major U.S. business sector, and more restrictive than the average among OECD countries for the transport sector.

16. See *Supra*, note 4.

Global Insight *et al.* (2006), in a study of short sea shipping for the U.S. Maritime Administration, concluded that the principal obstacles to the development of short sea shipping is the high cost of domestically-built cargo vessels, high stevedoring and crew costs, and the HMT assessed on domestic shipments. Furthermore, a GAO (2004) study found that there were significant benefits possible to U.S. port cities, seafarers and consumers from easing the build requirements in the application of cabotage rules in the cruise market. Smith (2004) noted that it is difficult to fully evaluate the costs of cabotage in the U.S. case but made a valiant effort to examine both political and economic factors. The balance of this case study will examine the taxpayer cost of the U.S. build provisions as one illustration of the costs of protectionism via cabotage.

The impact of U.S. shipbuilding support on American consumer welfare has been the focus of a number of critical studies. For example, Hufbauer and Elliott (1993) used a partial equilibrium analysis to estimate the net cost of the *Jones Act* to the U.S. economy, finding a cost of US\$4.4 billion in 1990. A series of four studies by the U.S. International Trade Commission (1991, 1995, 1999, 2002) concluded that the U.S. consumer pays for the protection the *Jones Act* provides to the shipbuilding industry. The 1991 report, specifically, found that the *Jones Act* generated more than US\$653 million in profits for the shipping industry at a cost to consumers of billions of dollars annually. The next three studies determined the cost to be US\$2.8 billion, US\$1.3 billion and US\$656 million respectively. Francois *et al.* (1996: 192), in their discussion of the first two USITC studies, noted that maritime policies

are on a higher plane of protection. The obfuscation is almost total. In the political arena, the supporters (and the associated administrative agencies) justify these policies as important defence and domestic programs that have little or no relevant implications for trade policy.

While the cost was declining in each of the studies, this erosion was attributed by the 2002 study (see Table 2) to the diminishing volume of oceanborne *Jones Act* traffic (USITC, 2002: 125).

[The] studies clearly show that if the sector were to be fully or partially liberalized, the price tag would be lost jobs in both the shipping and shipbuilding sectors.... Obviously, the job losses make liberalization a politically tough sell in the US, and to date employment issues have overshadowed the net welfare gains that could be had from liberalization of the coasting trade rules.

Table 1. **Estimates of U.S. Losses From Liberalization
(change from 1999 benchmark)**

Sector	Employment		Output		Imports		Exports	
	FTE	%	Value	%	Value	%	Value	%
Coastwise transportation	-7 690	-84.1	-1 287	-70.4	1 498	NA	*	NA
Other water transportation	-650	-0.4	-131	-0.4	*	NA	24	0.1
Shipbuilding	-3 140	-3.1	-395	-3.1	-6	-3.0	-27	-3.0

Notes: NA=not applicable if benchmark is zero. *= change is less than US\$500 000

Source: Table 5-4, USITC (2002), p. 126.

In sum, potential U.S. short sea operators face not only the general challenge of competing with land-based carriers as seen in coastal states like Australia, New Zealand and Canada, but also have the added challenge of being potentially uncompetitive by virtue of particular cabotage restrictions. In Canada this is due to the embedded duty cost and ‘higher than normal’ marine safety standards and, in the U.S., to the ‘build’ requirements resulting in more expensive ships. These are critical impediments to the adoption of short sea services, and are further compounded by the HMT and other costs imposed on the North American industry.

OECD Case Study: Japan

The cabotage market in Japan is explicitly closed to all but Japanese-flag vessels. The shipping sector accounted for 35.9 percent of Japanese domestic cargo transportation in ton km in 2006. Domestic transportation of basic industrial materials—cement, oil and metal products being the most important—relies more on shipping than trucking, while only 14.3 percent of general goods use Japanese coastal shipping (Japan Federation of Coastal Shipping Associations as supplied by Shinohara, 2009).

The volume of domestic maritime cargo transportation has been stable since 1970, but the number of operators has diminished and the percentage of ships over 14 years of age has increased. As of 31 March 2008, 80.6 percent of ships were below 500 grt in size. There is fierce competition among ship operators on the routes between larger ports. As Japan consists of numerous islands, sea routes to remote islands are essential services, maintained by substantial government subsidies. As the cost of Japanese labour is high, the costs of a closed market with Japanese-flagged ships and seafarers are high. Shinohara (2009) notes that the domestic freight rates are generally higher than those to Busan, Korea. Given this gap in freight rates between domestic and international shipping, some Japanese shippers, especially those on the Japan Sea coasts, tend to use Busan transshipment for trades with U.S. and Europe rather than Japanese hub ports in order to fully enjoy the low cost international transport. Shinohara (2009) concludes that

If the maritime cabotage is liberalised and becomes open to non-Japanese operators, Korean and Chinese operators will immediately join in the shipping market with low-cost ships calling at the main ports, making full use of their cheap seafaring labour. Large ships operating in trunk lines will also take cargo en route between hub ports on the coast of Japan. This will certainly cause a devastating

blow to the Japanese domestic shipping companies, and they will be forced to stop services. As a result, the local ports with less cargo quantity will be left without shipping services.

In the Doha Round (WTO, 2009b), Japan has committed to making the following services available to international maritime transport suppliers on reasonable and non-discriminatory terms: 1) pilotage services; 2) pushing and towing services; 3) provisioning, fuelling and watering services; 4) garbage collecting and refuse disposal services; 5) port captain's services; 6) navigation aids services; 7) shore-based operational services essential to ship operations, including communications, water and electrical supplies; 8) emergency repair services; and 9) anchorage, berths and berthing services. However, some horizontal commitments remain for towage and maritime agency services.

Non-OECD Case Study: China

The Chinese government controls maritime shipping in two ways: market access and prices; only market access will be discussed here. According to Chen (2009), the objective of market access control is to safeguard the relative balance between capacity and the actual amount of shipping market, in order to avoid excessive competition and waste of resources. As China began its transition to a market economy, the national government and various state governments allowed non-government-controlled entities to participate, which led to a serious over-supply problem and necessitated market access regulation in 1987 (*Regulations for the Management of Waterborne Transport of People's Republic of China*). Cabotage trades are still closed to non-Chinese companies.

According to Li (2009), the current regulatory framework for domestic shipping in China was established with the passage in 1992 of the *Maritime Code of the People's Republic of China*.¹⁷ In Article 4, it regulates that

maritime transport and towage services between the ports of the People's Republic of China shall be undertaken by ships flying the national flag of the People's Republic of China, except as otherwise provided for by law or administrative rules and regulations. ... No foreign ships may engage in the maritime transport or towage services between the ports of the People's Republic of China unless permitted by the competent authorities of transport and communications under the State Council.

In 2002, cabotage regulation in Maritime Code was further strengthened by the *Regulations of the People's Republic of China on International Ocean Shipping*.¹⁸ Its Article 28 states that "Foreign international shipping operators may not operate the shipping business between Chinese ports; neither may they operate the shipping business between China ports in disguised forms such as using the rented Chinese ships or shipping space, or exchanging the shipping space, etc." On the other hand, foreign shipping is able to operate between Chinese ports in exceptional circumstances under permit from the Ministry of Transport.

17. Adopted at the 28th Meeting of the Standing Committee of the Seventh National People's Congress on 7 November 1992, promulgated by Order No. 64 of the President of the People's Republic of China on 7 November 1992, and effective as of 1 July 1993 (Li, 2009).

18. Adopted at the 49th Executive Meeting of the State Council on 5 December 2001 and in force on 1 January 2002 (Li, 2009).

As with Japan, China has committed to the liberalization of many auxiliary services in the Maritime Model Schedule discussions of the Doha Round for international maritime transport. However, it has placed restrictions on the establishment of a registered business, mandating that no more than 49 percent of the company may be owned by foreigners and that such minority joint ventures must have Chinese citizens in the roles of Chairman and General Manager (WTO, 2009b). These ownership and management restrictions were promulgated in 2004 with the implementation of Provisions on Administration of Foreign Investment in International Maritime Transportation.¹⁹ Such restrictions are quite common in many OECD countries anxious for greater participation by their nationals in the business of shipping.

Lessons from the Case Studies

In many countries, companies wishing to operate in international bulk trades have open access while those seeking to provide international liner shipping services to the country are required to establish a local office. This requirement is not unreasonable given the repeated sailing schedule of the liner trade and the footloose nature of bulk business, and so cannot be considered a non-tariff barrier. It becomes more of one when the requirement of establishment imposes requirements on the foreign operator to grant majority control to local citizens, as is currently the case for both China and Japan. During the research for this paper, it became clear that, for most OECD countries, international maritime transport is becoming more open, if it was not already so. Regulation has focused on safety, security and pollution issues and the IMO has provided the institution for multilateral standards-setting so that open regimes do not result in unsafe, insecure and polluting ships; furthermore, regional Port State Control programs have assisted governments in enforcement when the footloose nature of carriers has been of concern and serve as a means of information exchange in support of that enforcement role.

On the other hand, regional or domestic shipping continues to be the domain where liberalization issues must be addressed if its associated benefits are to be realized, particularly as cabotage remains off the table in the Doha Round. Here, national governments are concerned about the ability of their nationals to participate in the industry and regional governments about landside congestion on their highways. These issues are evident not only in the more open markets of Europe, Australia and New Zealand, but also in the more closed markets of Canada, the U.S. and Japan. In the latter group, strong industry lobbies make further opening of the regional or domestic shipping market difficult for the politicians who ask what benefits there are to further liberalization and what the costs of relaxing cabotage laws will be.

In a study undertaken by the OECD (2001: 11) it is stated:

Cabotage is recognized as being important to many countries. However the effectiveness of cabotage in preserving employment and national fleets has been questioned, and cabotage regulations have been relaxed within the European Union without obvious downside costs.

19. Promulgated by Decree No. 1 of the Ministry of Communications and the Ministry of Commerce on 2 March 2004, and effective as of 1 June 2004 (Li, 2009.)

This gets to the heart of the matter. The regulatory noise found in this industry has distorted the market so severely that it is difficult for any one nation, let alone a group of countries, to understand the gains or losses they individually face from liberalization, except in theory.²⁰

Two key issues have arisen in the brief case studies above: (1) geographic scope and market access, and (2) a level playing field for transport suppliers.

Geographic scope

Access to longer routes makes it easier to put coastal shipping on a playing field that enables better competition against the short-haul mode of trucking, a necessity as countries attempt to address greenhouse gas emissions. Reluctance to use short sea shipping services in competition against truck has been documented by Evers *et al.* (1996); however, this is proven not to be the case on the east coast market of North America, where significant road congestion deteriorates the transit time benefits available from trucking (Brooks and Trifts, 2008). This latter study concluded that there is a distance range within which modal competition takes place; outside that range, one mode sustains a clear preference by virtue of its price and transit time characteristics. Such findings, while not necessarily transferable to other geographic markets, provide positive support for gradually expanding the scope of cabotage markets continentally, thereby enlarging shorter-distance maritime markets. This also explains why growth in European short sea has occurred while its adoption in North America has been limited except in a few corridors.

The level playing field

There are two components to the issue. First is the similarity of domestic shipping's regulatory environment to that of international shipping. The Australia and New Zealand case studies clearly underscore the importance of having a level tax environment between international and coastal shipping; without the introduction of a tonnage tax, domestic operators in these two markets are unable to compete fairly against international operators who may enter the regional market in direct competition as an incidental part of an international route. Europe in its cabotage reform recognized this, and all players in the enlarged geographic scope of the liberalized shipping market of Europe have similar access to tonnage tax reduced costs that occur already in the international shipping environment.

Second is the regulatory environment's treatment of the marine mode in comparison with its land-based competitors. For North America, the cost of shipping using Canadian or U.S. flag is considerably higher than the costs facing other modes, given the duty issue in Canada and the build and labour cost issues in the U.S. However, if the two countries were able to accomplish what Europe has already done by broadening the cabotage area, albeit gradually, this would move the companies operating in these markets into a more competitive frame of mind for future competition with land-based operators.

20. "In theory, there is no difference between theory and practice. But, in practice, there is." There is some dispute about who originally said this, Yogi Berra or Jan van de Snepscheut. Perhaps the best illustration of the difficulty of understanding the true costs and benefits of maritime transport liberalization is laid out in the thesis by Smith (2004). The data is simply inadequate to secure the theoretical understanding let alone the practical. The EU transition to a more open environment was based on the theoretical thinking that open markets are better and careful study and transition planning will address the practical issues.

Critical Issues in Liberalization of Regional Shipping

A primary goal of liberalizing regional shipping is to gain competitively-priced transport generally and, for some countries, to encourage a shift from road to ship for reasons of greenhouse gas reduction. Previous sections have examined this issue from the perspective of the shipowner looking to provide services, and the costs that he faces. This section considers the cargo owner seeking to buy cost-effective transportation options.

Best's (2005) framework for market growth development is a tool that may be used to explore this interface; it provides a resonating and easily comprehended perspective on growing market demand for a mode of transport. Best identifies five reasons why companies do not demand more from a particular operator: awareness of the option, product benefit deficiencies, affordability, availability and a positive experience with the operator. We can use these to explain why companies might not use short sea shipping to solve a transport problem.

Awareness: While a shipowner might offer the transport buyer a service, the buyer may not be aware that the service exists. As is often the case, marketing activities by new operators are intended to address this gap. Governments providing start-up aid for new services should not be seen as a continuing form of state aid, but a necessary one if maritime operators are to establish new services in an enlarged liberalization area.

Product benefit deficiencies: Cargo interests aware of a new service available in their region may postpone switching to it because they want it to be established before they commit. This can become a 'catch-22.' (Being established becomes a benefit deficiency.) There are large parts of the market that will not buy short sea services even if liberalized for benefit deficiency reasons.²¹ These include companies with just-in-time operations that worry less about road congestion than they do about carrier transit time variability or weather delay and for whom the ability to guarantee to their buyer a 15-minute arrival window is critical. Frequency of service when compared with those of truck in traffic-intensive corridors often militates against choosing the marine mode.

Affordability: This is not a critical issue for maritime transport operating in open markets where the playing field is a level one. It is an issue where an uneven field is generated by different tax environments (as illustrated by Australia). In the case of truck against ship comparisons, marine is often more affordable but deficient in frequency or some other desired benefit. The introduction of eco-taxes or road congestion charges improves the value proposition of the short sea mode against truck (García-Menéndez *et al.*, 2004; Brooks and Trifts, 2008). This becomes a critical issue in markets where the cost of short sea has been driven up by tariffs on ships, build provisions and other factors that raise the cost of shipping.

Availability: Shippers require service consistency. It is not enough to make the service available part of the year. This has been a primary issue in short sea services on the North American Great Lakes and the offering of a short sea service for only nine months of the year is unlikely to succeed when 12 months' commitment is sought by the market.²² Cargo interests, and those who contract on their behalf, need the certainty of long-term service arrangements.

21. See CPCS Transcom (2008) for a detailed discussion of these issues on pages 36-40; also see Brooks and Trifts (2008).

22. This was confirmed by MariNova Consulting Limited (2005) and CPCS Transcomm (2008).

Positive experience with the operator: This is a case of “it’s the operator’s business to lose.” Problems in execution of the strategy by the shipping company lead to switching back to the other mode, which may diminish the total demand for regional shipping services.

The present economic crisis has shattered the economics of the shipping industry. In a capital-intensive industry dependent on derived demand for trade, many operators have gone under or are about to go under. Vessels have been ‘parked’ in numbers not seen since the tanker crisis precipitated by OPEC’s decisions in 1974. Now, as operators are restructuring and seeking new opportunities, is a good time to encourage the leveling of the playing field for the maritime industry, via wider implementation of tonnage tax regimes (as sought by operators in Australia and New Zealand), and to consider how carriers in international trades interact with those in domestic or regional cabotage trades. It appears that the EU has found the balance on this continuum. The introduction of a tonnage tax has been identified as the remaining hurdle in liberalizing Australian and New Zealand domestic shipping.

It is also time for governments to consider making changes to the business environment in which regional shipping competes with land-based alternatives. Even if the regulators do their best to level the playing field, remove the disincentives for regional shipping and liberalize the market, this does not mean that short sea shipping will automatically be adopted. Industry is slow to accept changes and may need help in making them—perhaps through financial support or by building business cases. Examining the Marco Polo programs provides some food for thought here.

The ‘Special Case’ of Liner Shipping

Throughout most of the 1990s, the growth in merchandise trade outstripped the growth in world GDP and commodity output (WTO, 2000) and, after a two-year recession in the early 2000s, resumed its previous pattern. Only recently has the liner shipping industry, as a result of the global economic recession, faced a catastrophic downturn in its fortunes.

Unlike bulk markets, where the carrier chases cargo, the liner operator commits to serving a route and particular terminals to assure the cargo owner of a continuing, regular supply of predictable sailings. The OECD (2002) concluded that this meant liner supply must be maintained to service peak or near-peak demand in order to accommodate directional imbalances and cyclical and seasonal variations; such capacity decisions therefore tempt liner operators to engage in discount pricing in non-peak periods. Because of relative inelasticity, such discounting does not result in significantly more demand. Fearing price instability, regulators throughout the 20th century agreed that price-fixing should be granted anti-trust immunity and this resulted in considerable price stability (Brooks, 2000). Philosophically, the benefit of stability induced by price-fixing has been called into question in the past five years.

Regulatory changes, however, have progressively moved this sector of the shipping industry towards greater volatility and uncertainty, as governments attempted to introduce more competition between lines with three waves of changes to the ‘rules of the game.’ The introduction of ‘independent action’ in the U.S. *Shipping Act of 1984* provided the mechanism by which greater competition within a conference was induced. As part of the EU reform of internal maritime transport markets, documented by Brooks and Button (1992), the EU provided a block exemption for consortia, which encouraged the lowering of prices as carriers were able to extract greater economies of scale through a restructuring of service offerings. Alliances (consortia) offered the benefits of lower costs and slot-sharing, providing a business model not unlike airline alliances. At the time, few individual liner operators had the financial capacity to

buy the number of larger ships that long service strings on high volume routes demanded. The third pro-competitive wave, the *Ocean Shipping Reform Act of 1998*, encouraged confidential contracting as a means of balancing shipper and carrier interests, and introduced the potential for even lower prices for larger shippers by the fact that the price improvements did not need to be shared with all (read small) shippers (Brooks, 2000).

The most recent liberalization of the liner market was prompted by the EU decision to remove antitrust immunity for conferences effective 18 October 2008.²³ This move was not inconsistent with calls by the U.S. Antitrust Modernization Commission (2007: 352) for anti-trust immunity to be removed, as “there does not appear to be anything unique about ocean carriers that would merit holding them to a lesser standard [than other kinds of businesses].” The timing of this regulatory change could not have been more unfortunate. It will be impossible for economists to ‘unscramble the egg,’ that is, to separate the impact of the global economic downturn on liner prices from the impact of the regulatory change.

This does not appear to be the end of the liberalizing trend in liner shipping. In the EU, DG Competition has set its sights on the removal of liner consortia protection as well, with encouragement from the European Shippers’ Council. While the antitrust exemption for rate-making in liner shipping has a long track record of economic evaluation (e.g., Zerby and Conlon, 1978; Sjöstrom, 1989; ACCOS, 1992; Clyde and Reitzes, 1995; and Fusillo, 2006), the same may not be said of liner consortia.

The benefits of the existence of consortia to cargo interests that seek lower prices are clear. Brooks (2000) illustrated how consortia help smaller shipping companies compete through economies of scale, while maintaining independence in service offerings and carriage prices; the principles remain true today. As can be seen in Table 3, two smaller carriers, by forming an alliance (consortium), are able to offer a service with realized economies of scale on a thin route in competition with a competitor having larger vessels. The smaller carrier’s offering to the market in terms of capacity has not grown excessively to achieve the economies of scale, and neither has the frequency of sailings offered to the customer deteriorated. The restructuring made possible by the consortium agreement allows the carrier to make the needed vessel investment, and to share the risk of that investment, while reducing slot costs, which the competitive market will ensure is passed on to the cargo owner.

23. Council Regulation (EC) 1419/2006 of 25 September 2006 repealed Council Regulation (EEC) 4056/86 rules for the application of Articles 85 and 86 of the Treaty of Rome, granting liner conferences a block exemption with respect to the fixing of rates and other conditions of carriage within the conference system.

Table 2. **Slot Cost Comparison—Two Theoretical Alternatives**

	Strategy A	Strategy B
Carrier's Fleet	6 X 500 TEU	3 X 1 000 TEU
Annual Vessel Capital and Operating Costs	\$26 900 000	\$16 800 000
Annual Port Charges	\$7 800 000	\$3 800 000
Annual Fuel Consumption	\$10 700 000	\$3 700 000
Annual Total System Costs	\$45 400 000	\$24 300 000
Total Capacity Offered (round trip on route)		
Carrier	52 000 TEU	52 000 TEU
Competitor 1 (Potential alliance partner)	52 000 TEU	52 000 TEU
Competitor 2 (Larger competitor 12 X 500 TEU)	104 000 TEU	104 000 TEU
Number of Sailings per Year (one-way)		
Carrier	52	26
Competitor 1	52	26
Competitor 2 (No change)	104	104
Carrier's Slot Cost		
at 100% Utilization	\$873	\$467
at 75% Utilization	\$1 164	\$623

Note: The network schedule remains a 6-ship 42-day cycle for the two smaller companies. Instead of two sailings a week by the larger competing line, the alliance results in one sailing per week using a larger vessel (1,000 TEU vessel).

Source: Brooks (2000), Table 3.5, p. 73.

Porter (2008) has noted that cargo owners like Michelin are very much against the EU's current proposal to impose market share thresholds on carriers operating in consortia. The example in Table 3, while simplistic, would be in violation of the currently proposed thresholds and for what purpose? The route, being thin, may not be as attractive as higher volume routes; this raises the question of boundaries, e.g., which routes would be subject to thresholds if they were imposed?

The Federal Maritime Commission does not have an official position on the EU regulation of consortia, in their view a non-rate-making agreement. However, FMC commissioners have shown personal support for these non-rate-making agreements. In 2002, the Federal Maritime Commission Chairman (Creel, 2002) expressed his opinion that consortia serve a useful purpose in the supply of maritime transport services.

The aim of allowing limited antitrust immunity in ocean transportation is not simply to ensure adequate returns for the liner shipping sector. Rather, the primary objective is far broader and much more important: to ensure an adequate and efficient supply of ocean transportation services so that U.S. exports and U.S. trade can compete in the global marketplace. When shipping lines use their limited antitrust immunity to coordinate their operations or share assets to reduce costs or improve service, or even to stem losses from low rates that might threaten their viability, it is not just the carriers who benefit, but also U.S. businesses and consumers.

... Nevertheless, the ability to engage in ... cost-saving arrangements provides many carriers with some protection from risk, sufficient to justify their continuing to make

enormous long-term investments in serving our trades. Without these protections, operating ships to serve U.S. shippers would be an even riskier and less attractive investment for many of these carriers, one that some may well be unwilling to make.

Antitrust immunity also allows for a broad range of other efficiency-creating arrangements as well. It has provided carriers a valuable way to form alliances, groups of carriers which integrate their operational activities, such as vessel operations, terminal and shoreside services, equipment use, and information management. These groupings create operational efficiencies, leading to lower costs and improved service for customers. In addition, it allows for the preservation of separate competing commercial and marketing entities who are otherwise facing pressures to consolidate. Such cooperation can also facilitate entry into new trades, as carriers often begin serving a new route through a partnership with another line, instead of investing in a whole new string of vessels in the trade. ...

Other forms of carrier cooperation appear to be at least benign, or more importantly, beneficial to consumers of shipping services as well as carriers. These include agreements for the shared use of assets, ranging from chassis and container pools, which reduce costs and increase economic efficiency for the carriers and make equipment more easily available to shippers. There are also agreements which provide a degree of carrier cooperation in the sharing of vessels through slot exchanges or the more integrated operations of vessel sharing agreements ("VSAs") and alliances. Such agreements enable carriers to maintain an individual presence in a wider range of markets, with a greater frequency of service, while limiting their exposure to investment risk. They may also have the effect of slowing the pace of industry concentration through mergers, by offering carriers the economies of scale associated with mergers without the loss of individual market presence and national identity.

More recently, Federal Maritime Commissioner Rebecca Dye spoke at the Global Liner Shipping Conference on 2 April 2009 in London on the issue of liner regulation and her personal view of the regulation of consortia:

I still believe international comity must be a key consideration when drafting liner regulations. A multilateral perspective is needed. Late last year, APEC's Transport Working Group released a consultant's report on non-ratemaking agreements. The authors concluded that such agreements have the potential to provide important operating efficiencies and improved quality of service to customers. They also proposed several guidelines for the regulation of those agreements, including that 'APEC member economies do not subject non-ratemaking agreements to a market share test based on pre-defined threshold levels.' I understand that that report, and the proposed guidelines, will be the subject of further discussion in Singapore this summer. My hope is that, as the E.U. and APEC proceed, they share with each other their research findings, economic concerns and policy perspectives. A multilateral perspective really is crucial.

Stability of supply of ocean shipping services and reliability of the supply chain to deliver on time are two key attributes shippers seek in their global supply chains, and these must remain

available if the trading interests of nations in this globalized business are to be maintained. Many shippers do not seek lowest cost services, but are concerned about consequential losses to production processes from delay or must quote prices with long lead times and are therefore more concerned with the negotiated price. In a global liner shipping market that could price more like the tramp market, neither of these would be easy to secure. Furthermore, the global nature of the liner business means that multilateral regulation is more important than ever and that, in the case of consortia, the U.S. position, and that of APEC's consultants, is the more reasonable one.

The removal of antitrust protection for consortia or the imposition of thresholds is a case of "be careful what you wish for." Without being able to disentangle the twin impacts of regulation and economic recession on liner prices and on price stability, the step of removing protection for consortia will be taken blind. The imposition of thresholds on consortia will send a 'chill' through the liner shipping community and likely result in less than optimal service patterns for trading interests as carriers fear retribution in the volatile and difficult-to-track area of route market share. Furthermore, the current economic climate dictates that now, when the industry is struggling to survive, is not the time to take this poorly researched step. Many of the carriers servicing global supply chains have made significant investments on the assumption of continuing regulatory acceptance of consortia; to remove that acceptance could force more bankruptcies than will be seen from the current recession.

Final Comments and Conclusions

With widespread use of open regimes and tonnage tax fiscal policies, the world is moving closer to regulatory harmony in liberalized international shipping markets. However, regulatory disharmony is the current state of play in many regional maritime transport markets. The key to understanding the impacts of regulatory harmony (or disharmony) is to first separate out the distorting elements. Dividing these components into two types is a useful exercise: first, there are those regulations that deny market access, and then there are those that support local industry or facilitate its growth. While both are distorting, the former has a different impact than the latter.

In the case of the former, denial of market access may result in very high costs and public policy benefits may not be obvious. The case of both New Zealand (Cavana, 2004) and the U.S. (ITC, 2002) confirmed the costs borne by the taxpayer for industry support. In the U.S. case, distortion arises from treating shipbuilding policy as part of shipping policy, when shipbuilding is a land-based manufacturing enterprise and should be seen as part of a nation's industrial policy, economic development policy, or a way of retaining intellectual property rights on strategic intelligence. Shipping, on the other hand, is an internationally traded service with access to global inputs, unless market access is denied. To deny market access by requiring 'own country of build' moves the cost burden of this distortion onto the backs of shipowners, and therefore ultimately cargo owners, rather than the general citizen who benefits from the economic development or industrial policy. Likewise, ship construction loans, state aids or other subsidies can distort the market as do tariffs or duties on vessels imported into a country. If the purpose of a duty on ships is to protect local shipyards, it fails in its objective; here the Canadian situation, already noted, is particularly instructive. Cargo preference laws may also be used to protect markets in a similar way. When market access is denied, local industry is protected but has little incentive to attempt to compete because it owns the market. Its sole competition comes from other equally protected firms and, if none choose to compete, no innovation or positive change takes place.

In the case of the latter—regulations that support local industry—greater competition may occur, particularly if the foreign competitor is aggressive, the domestic firm is not complacent, and the aids or subsidies are small or of very limited duration (as is the case when business development support is provided to start-ups on new routes). The key here is time-limited and specific support that fosters new route development or innovative investment or seeks to support transition. In other words, the impact may not be damaging if it is financial support for regional maritime transport that is pro-competitive in seeking market change.

In looking forward, the most critical issue in national maritime transport regulation is the definition of market boundaries—the overlap between domestic and international shipping markets, and between domestic shipping and land-based transport markets.

With respect to the former, the Canadian case highlights the problem of trying to have one regime for domestic shipping and another for international; the firewall between the two means that vessel right-sizing for a trade is difficult and so vessels may not be chartered-in or -out as markets shift but must be purchased. The Australian and New Zealand cases, where open access is a reality, illustrate that open access without regulatory equivalency (via tonnage tax or depreciation) leaves the home operator at a significant competitive disadvantage.

As for the latter, the Brooks, Hodgson and Frost (2006) identified that, in closed markets, asset utilization issues arising from restrictive cabotage regimes make the domestic shipping mode uncompetitive against road and rail alternatives. In all of the case studies, what is clear is that when short sea options are uncompetitive against their land counterparts, land transport bottlenecks arise. The market boundary question means that national shipping policy cannot really be divorced from continental shipping policy. Continental policies are already in place in Europe and, de facto, in the Australia–New Zealand market. It also means, from an environmental perspective, shipping policy must be seen in a larger context. These suggest that multilateral solutions need to be considered over the longer term.

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Appendix 1.

The State of Maritime Subsidies in 57 Countries in 1993

Country	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Australia*		X		X	X			X	X	X	X	X			
Belgium*		X		X		X		X	X	X	X	X	X		X
Canada*							X	X	X			X	X		
Denmark*		X		X		X	X	X	X	X	X	X	X		X
Finland*		X		X		X		X	X	X		X	X		
France*	X	X	X		X	X		X	X			X	X		X
Germany*		X	X	X		X		X	X	X	X	X	X		X
Greece*			X	X			X	X	X	X		X			X
Hungary**											X	X			
Italy*	X	X	X	X	X	X		X	X	X	X	X	X	X	X
Japan*		X	X	X		X	X	X	X	X	X	X	X		X
Korea**	X		X	X	X	X		X	X	X		X	X		X
Mexico**	X					X			X	X	X	X		X	X
Netherlands*		X	X	X		X		X	X	X			X		X
New Zealand*									X			X			
Norway*		X		X		X			X				X		X
Poland**											X	X			X
Portugal*	X	X			X	X			X	X		X			
Spain*		X	X	X	X	X		X	X	X	X	X		X	X
Sweden*	X			X		X			X	X		X			
Switzerland*				X					X						X
Turkey*		X			X				X			X			
United Kingdom*		X	X			X			X		X	X			X
United States*	X			X	X	X			X	X		X			X

Notes: All non-OECD countries have been removed from the original source document.
 * indicates membership in the Organisation of Economic Co-operation and Development (OECD) as noted by the original author.
 ** indicates OECD membership occurred after the 1993 data collection

Source: Shashikumar (1996), Table 3.1, pp. 68-69.

Key:

- | | | |
|----------------------------------|---|--------------------------|
| 1. Operating Subsidies | 6... Bilateral or Trade Agreements | 11. Government Ownership |
| 2. Construction Subsidies | 7... Scrap & Build Aids | 12. Cabotage |
| 3. Restructuring Aids | 8. Export Aids | 13. R & D Aids |
| 4. Financing Programs | 9... Tax and Depreciation Benefits | 14. Insurance Aids |
| 5. Cargo Preference Requirements | 10. Customs Duty, Levies & Requirements | 15. Other Aids |

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