



# NAFTA at 20: Time to open the internal borders of North American to cabotage



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## ABSTRACT

The deeply integrated North American economy depends on efficient freight transport systems. This essay examines cabotage in Canada, the U.S. and Mexico from an economic and policy perspective. Cabotage is restricted by a web of regulations in North America that remain pervasive and continue to impose significant restraints on freight transportation. Liberalizing cabotage could improve efficiency/productivity, increase trade opportunities and regional economic integration. Open cabotage could also reduce greenhouse gas emissions. However, reform is difficult because these regulations are linked to tax, immigration and other customs issues and because they protect the interests of domestic transport industries.

The creation of a North American trading bloc is a work in progress. While various initiatives since the North American Free Trade Agreement (NAFTA) have failed to advance cabotage, the authors of this report remain optimistic that freer trade in transportation is inevitable.

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## 1. Introduction

Twenty years ago, the governments of Canada, the U.S. and Mexico set out to negotiate a free trade agreement. In January 1994, the North American Free Trade Agreement (NAFTA) came into effect. From the start, NAFTA was a lightning rod for fears of globalization and a wide range of ills that affect modern society. But most informed opinion – given that it is difficult to disentangle the impact of the agreement from other events and developments – finds that the impact of NAFTA was overwhelmingly positive (Hufbauer & Schott, 2005). Between 1993 and 2013, total goods trade between the United States and its NAFTA partners grew from \$293.1 billion to more than \$1.2 trillion in 2012, an increase of 279%. Total services trade between the U.S. and NAFTA partners grew from \$44 billion in 1993 to \$82 billion in 2011 (latest data available for services trade), an increase of 86% (U.S. Embassy-Mexico City NAFTA Factsheet, 2013).

Despite the success of NAFTA, no one can deny that much still remains to be done before we can speak of truly free trade in North America. Among these tasks is harmonizing the web of regulations that continue to inhibit the efficient continental movement of goods, people and services (Hart, 2006). This essay examines one set of those regulations – non-tariff barriers to the free trade of transportation services within the external border of the NAFTA system.

Granting a foreign carrier permission to provide transportation services entirely within the host country's borders is called an extension of cabotage rights, or an open cabotage regime. This is different than cross-border transportation services in which a foreign carrier can carry a load either from an origin, or to a destination, across another country's border. Cabotage permits both the origin and destination of the transport service provided by the foreign carrier to be located within the granting country's internal market.

The term, cabotage, originates from the time, several centuries ago, when ships from northern Europe on route to the Mediterranean would stop along the Atlantic coast to drop off and pick up cargo and passengers. In an effort to protect their own sea trade, the Portuguese restricted this practice to vessels that were locally owned and operated.<sup>2</sup> As restrictions on cabotage spread to other nations, which also wanted to restrict foreign-flagged vessels from domestic maritime trade, these practices were extended to air and land forms of transport, too.

In this paper, cabotage in Canada, the U.S. and Mexico is examined from an economic and policy perspective. The next section sets out the economics of cabotage and how protectionism distorts transport markets. Regulations that raise barriers to trade reduce the efficiency of the entire trading bloc. This is followed by a discussion of trade agreements and efforts to liberalize trade within NAFTA. Subsequently, the state of cabotage for the individual transport modes is presented. The

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<sup>2</sup> The word, cabotage, was derived from the French *caboter*, meaning to sail along the coast. Much earlier, the Phoenicians originated the concept (if not the term) when they were the first to restrict foreign vessels from carrying goods among their ports.

penultimate section presents three directions for advancing cabotage within the NAFTA trading bloc.

## 2. The economics of cabotage

Not all transportation modes are affected equally by cabotage restrictions. In general, the impact of cabotage is inversely related to the network economies of the transport mode and to its ratio of fixed to variable costs. High fixed cost industries with increasing network economies of scale, like the railways and pipelines, are not as threatened by foreign competition. These two industries own their infrastructure and can permit or exclude domestic or foreign operators. The railways and pipelines cooperate with foreign counterparts to freely interchange traffic. In the case of the railways, foreign railcars move freely in both directions. Foreign train crews are restricted, but foreign railcars are used on a per diem basis.<sup>3</sup>

Industries that are subject to constant economies of scale and have a low ratio of fixed to variable costs are more open to foreign competition. Truckload (TL) trucking and bulk marine carriers are the two modes that are the most sensitive to cabotage competition because they do not own or provide any infrastructure. The fixed costs of infrastructure (roads and ports) are supported by the public. The efficiency of TL trucking and bulk marine does not increase with fleet size because the individual vehicles have virtually no interaction. Adding another vehicle to the fleet has minimal impact on average costs. As constant cost industries, they have minimal network economies to give them an advantage relative to foreign-owned trucks and ships.

Air transport, marine intermodal (containers) and less-than-truckload (LTL) trucking are only moderately sensitive to cabotage competition. Although the public provides their infrastructure, too, these modes have a higher ratio of fixed to variable costs and significant network economies. For example, the addition of another airplane service to a new destination can feed traffic to the entire network of the airline. Of course the quid pro quo of cabotage is reciprocal access to the markets of the participating countries. Consequently, all trucking, marine and air carriers are exposed to more competition if cabotage is permitted, but they can also extend their networks to bordering markets, too.

Cabotage and cross-border transport are often confused. Although both involve regulations that can affect the trade of transportation services, cross-border trade is already free in most jurisdictions, whereas cabotage is generally prohibited. Fig. 1 presents a chart developed by the International Civil Aviation Organization (ICAO) that illustrates the nine possible variations of air transport agreements. ICAO (2004) observes that only the first five freedoms of the air have been recognized in any treaties, and refers to the last four cases as “so-called freedoms”. The eighth and ninth of these freedoms are the only ones that involve cabotage.

Although some regulations impede cross-border transport, they do not prohibit the activity. Two examples that affect the marine sector are the U.S. Harbor Maintenance Tax (HMT) and the creation of new ports of entry. The U.S. applies the HMT to all imports arriving by water. Marine shipments from Canada and Mexico to the U.S. are forced to pay a tax that is not applied to other modes of transport. This causes a diversion of traffic and discourages ferry services, but does not prohibit cross-border marine service. Similarly, a new cross-border marine service must pay for the creation of new customs facilities on the U.S. side. Again, this is discriminatory relative to other modes of transport that are not charged for improvements at land border crossings. The cost of building a customs facility may be prohibitive for a marine operator to pursue a new route, but the legal process to expand the service does exist.

<sup>3</sup> “Railroads are less affected by cabotage restrictions, though they too incur additional costs because of the need to change crews at the border” (Lakshmanan and Anderson, 2007). Technically, equipment like railcars and intermodal containers are imported duty-free on a temporary basis, with a time limit for their re-exportation.

The main economic impacts of cabotage restrictions are the reduction of competition, inefficient routing or equipment relocation, and lost opportunities for regional integration. The reduction of competition is obvious because denying cabotage preserves the entire domestic transportation market solely for the national carriers of the country. In general, more competition is viewed as positive because it forces the market participants to search for efficiency and to provide better customer service (Monteiro & Atkinson, 2009). A priori it is difficult to estimate the benefits that cabotage could provide, but experience with other forms of economic deregulation provides evidence to suggest that shippers would have access to lower costs and new service offerings.

The impact of cabotage restrictions on routing efficiency can be illustrated by the fronthaul–backhaul model.<sup>4</sup> Round-trip movements are joint products. A vehicle cannot make a trip without generating a return trip. Hence, their production involves joint costs in which outputs are created in fixed proportions. Any vehicle operator has two choices. They can either search for a return load (the backhaul) or return empty.

Fig. 2 presents a fronthaul–backhaul joint product model (following Felton & Anderson, 1989). The fronthaul demand ( $D_f$ ) and the backhaul demand ( $D_b$ ) are added vertically to get the total demand ( $D_f + b$ ). The fronthaul is assumed to always be full, but the backhaul can be loaded or empty. The roundtrip costs are represented by  $MC_{f+b}$  in which the vehicle is loaded in both directions. The costs of taking a load and returning empty are  $MC_{f+be}$  while the costs of the loaded return are  $MC_{bl}$ . Given the large imbalance between the fronthaul demand and the backhaul demand, the roundtrip costs cannot be allocated economically. Competition from those who are willing to return empty would force the price down to  $P_f$  and  $Q_f$  trucks would be employed for the fronthauls. However, only  $Q_b$  loads would be returned at the price  $P_b$  that is necessary to offset the backhaul loaded costs. As a result, the difference between the quantity of fronthaul loads  $Q_f$  and backhaul loads  $Q_b$  represents the number of empty vehicle returns.

Transportation companies try to avoid empty moves when possible, for obvious reasons. One option is to search for triangular routes that provide two fronthaul legs and only one backhaul leg (Beilock, Dolyuniuk, & Prentice, 2006). A well-known example in trucking is illustrated in Fig. 3. In this case, Canadian truckers operating between Winnipeg and Toronto can take a lower value load first to Chicago, where they can obtain a fronthaul load to Toronto, followed by another fronthaul load back to Winnipeg. This is possible because the base of the triangle is in Canada (a domestic trip), and the other two loads are cross-border trips.<sup>5</sup>

Cabotage regulations make cross border triangulation difficult because the base of the “triangle” always has to be in the domestic market. Triangular routes across the Canada–U.S. border are limited, which forces many freight trucks to travel farther empty. This means that more trucks are on the road wasting fuel, worsening congestion (particularly at border crossings), generating unnecessary emissions and running up costs. Cabotage would permit Canadian and U.S. trucks to create routes with the base of the triangle in the opposite country. Fewer trucks could handle the same amount of freight, which would lower total costs to shippers and reduce congestion and environmental impact.

If a Canadian or US carrier cannot find a backhaul load to its home across the border, it must return empty. The impact is asymmetric – harder on Canadian carriers – because most Canadian markets lie within

<sup>4</sup> The terms fronthaul and backhaul do not refer to any particular direction. The fronthaul is simply the direction with the greater volume of shipments, and in a competitive market, the higher freight rates.

<sup>5</sup> Two other Canadian triangular patterns are Halifax–New York–Montreal and Calgary–Los Angeles–Toronto. In these two cases, the trucks are refrigerated. Seafood or potatoes are moved from Halifax to New York, followed by general merchandise loads (non-refrigerated) on the other two legs. From Calgary, refrigerated trucks take beef to California, then go to Toronto with fresh vegetables and subsequently a return trip to Calgary that may be refrigerated.

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