Chapter 15:
Border Crossing for Trucks Twenty Years after NAFTA

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In their presentation, Pilar Londoño-Kent (Londoño-Kent Associates) and Alan K. Fox (U.S. International Trade Commission) claimed that despite the liberalization achieved by the North American Free Trade Agreement (NAFTA) and substantial investments in infrastructure, technology, and equipment, significant barriers to efficient truck transport remain between the United States and Mexico. They also discussed the practical and economic implications of changes to the NAFTA border crossing system put in place after the terrorist events of September 11, 2001. They asserted that the new security measures have "thickened" NAFTA's borders, increasing costs and delays associated with border crossings.

Londoño-Kent and Fox laid out procedures used today and noted changes that have occurred to border processing since their earlier work on the U.S.-Mexico border (2013). They presented the institutional context in which barriers exist and border authorities' rationale for establishing new barriers or continuing preexisting ones. Drawing upon this information and the time and costs associated with cross-border freight movements, they used a CGE framework to estimate the welfare effect of these measures on the NAFTA economies. Their counterfactual assumes the implementation of a "seamless freight flow" system similar to Europe's *Transport International Routier* (international road transport) system, and calculated the time and cost differentials between such a system and the border status quo. They estimated the annual welfare gains for Mexico and the United States accruing from a seamless cross-border processing system to be approximately $8 billion for each country.

The Economics of Border Crossing by Truck

Border crossings are an important component of the global logistic chain. A logistic system, however, is only as efficient as its most inefficient link. Border crossings are the equivalent of a dam in the river: both delay the flow. Border crossings can cause, among other things, excessive stops, interrupting transport movement and making the cargo more susceptible to damage, loss, and tampering. In addition, excessive pollution is generated from diesel engines accelerating, stopping, idling, and starting under heavy loads. And security risks are greater in congested environments such as those created at a border crossing.

[28] The views in this article are solely the opinions of the authors and should not be interpreted as reflecting the views of the U.S. International Trade Commission or any of its Commissioners.

Moreover, manufactures often cross the border several times during the production process, creating a multiplier effect for gains and losses in border efficiency.

The NAFTA treaty did not specify how trade should be administered by the agencies of the NAFTA governments. Specifically, it assumed seamless border crossing—without detailing, however, how this would be achieved. This omission is a particular problem in the case of trucking, the most important mode of transportation among the NAFTA partners. Indeed, trucking is one of the most heavily disputed elements of the agreement. The treaty's implicit assumption was that it takes only one truck and minimum time to go from point A in the United States to point B in Mexico and vice-versa. In reality, however, it takes two days merely to go from Chicago to Laredo, Texas, a 1,600-mile trip. Crossing the border from Laredo, Texas, to Nuevo Laredo, Mexico—just across the Rio Grande—requires three to five days, at least four pieces of transportation equipment, and three or four drivers. Obviously, there is a large gap between the vision and the reality of NAFTA border crossing.

Despite the agreement, a complex border crossing system continues to prevail, introducing uncertainty and creating delays and extra costs that are nontariff barriers to trade. Uncertainty is the enemy of trust, investment, job creation, economic prosperity, and supply chain security.

Nature of the U.S.-Mexican Border Crossings

Under NAFTA, interregional trade flows have grown significantly over the last 20 years, from roughly $290 billion in 1993 to more than $1.1 trillion in 2012. The United States trades more goods and services with Mexico and Canada than it does with Japan, South Korea, Brazil, Russia, India, and China combined. Much of this growth has been due to increased trade between the United States and Mexico.

Trade between United States and Mexico nearly tripled in value from $27 billion in 1986—the year Mexico joined GATT—to an estimated $76 billion in December 1993, the year before NAFTA was signed. Since then, growth has been even more remarkable, multiplying sixfold since the agreement went into effect in 1994 to $461 billion in 2011, or over $1 billion per day. Meanwhile, bilateral trade with Canada has grown threefold, from $210 billion in 1993 to $620 billion in 2011.

The U.S.-Mexican border is the world's longest between a highly industrialized country and a developing one: it stretches 1,933 miles, traversing four U.S. and six Mexican states. And though it is still a developing country, Mexico is an economic player to be reckoned with. Its total population is over 120 million people, with 50 percent under 30 years of age. Mexico City, with a population of 28 million, has almost as many inhabitants as the whole of Canada. Optimizing transport movements and associated logistics of cross-border trade would substantially benefit both countries.

However, this border foregrounds sharp differences in economic development, political and legal systems, language, culture, and race. The diversity in culture, language and race, together with armed conflicts in the past—including a war in which Mexico lost half its territory to the United States—differentiates this border from that between the United States and Canada. These issues have presented serious challenges to Mexican and U.S. negotiators in their efforts to harmonize trade facilitation policies across borders.

Trucking is the primary form of transportation in the trade between the two countries, representing over 70 percent of the freight bill and 85 percent of the merchandise traded by value. Trucking is, thus, vital to these countries' prosperity. In fact, the trucking provisions of NAFTA, if implemented, would have the equivalent economic effect of moving Mexico northward by shrinking the economic distance of the Rio Grande to something nearer its actual physical dimension[29].

The development of road facilities to handle the sharp increase in U.S.-Mexican trade has been impressive. In particular, the border crossing between Laredo, Texas, and Nuevo Laredo, Mexico, handles more trade than all other U.S.-Mexican border crossings combined. Laredo's World Trade Bridge alone carries 45 percent of Mexico's exports to the United States and 64 percent of Mexico's imports from the United States and Canada.

In spite of this state-of-the-art infrastructure, many barriers to efficient border crossing persist. One reason for this is that a number of government institutions and other interest groups benefit from the border crossing inefficiencies. These include: the Mexican brokers, the Laredo-Nuevo Laredo drayage industry, the U.S. banks that finance the construction of warehouses, state and municipal governments on both sides who receive a share of toll payments, the Mexican states that receive a share of customs tax collections, and the entire regional economy that provides jobs, goods and services. Nonetheless, U.S. trade with Mexico will continue to increase and truck transportation will dominate the transport of high-value commodities.

It is interesting to note that the nature of the U.S.-Canada border used to be quite different, thanks to mostly shared language, cultural heritage, legal and political systems, and level of economic development. Important U.S.-Canada trade agreements such as the Auto Pact predate NAFTA. Before the events of 9/11, the U.S.-Canada border was a good example of seamless border crossing, with shippers covered by a bond or insurance. After 9/11, though, there is evidence of median border delays rising from

[29] Thanks to a much simpler border crossing system, rail has increased its participation in land freight transportation from 4 percent to 17 percent, mostly to serve the automotive industry.

30 minutes to 4 hours and costs rising 1-3 percent; others have concluded even these cost increases have been greatly underestimated. The reality is that today the U.S.-Canada border looks more like the U.S.-Mexico border in terms of delays and extra costs.

Macroeconomic Effect of Border Crossing Inefficiencies

Londoño-Kent and Fox estimated the costs of the current border crossing system using the Global Trade Analysis Project (GTAP) economic model to quantify the effects of reducing identified border frictions among the NAFTA partners. The discussion here focuses principally on border frictions between the United States and Mexico.

Barriers at the border take two forms: wait times and broker expenses. In the analysis, time lost waiting at the border is treated as a deadweight loss, while the additional burden of paying Mexican brokers at the border—especially for southbound trade—is modeled as an import tariff for U.S. goods transiting into Mexico or an export tax on Mexican goods headed to the United States. The policies are applied to the sectors where trucking dominates. The southbound deadweight loss is 3 percent and the northbound loss 0.25 percent. The southbound tariff equivalent of the Mexican brokers is an additional 2 percent, while the northbound broker effect is 0.25 percent.

In addition to the Mexican broker effects, the analysis also considered the higher security costs induced by 9/11. Following the literature, Londoño-Kent and Fox considered a low estimate of 1 percent and a high estimate of 2 percent. These are treated as deadweight losses and are applied to intra-NAFTA trade on most goods and services, with the exception of fossil fuels and electricity. Welfare effects of friction removal are shown in table 1, and table 2 shows the associated change in imports.

Table 1: Welfare Effect of Border Friction Removal (millions $2011)

Sim	Description	USA	Mexico	Canada	Non-NAFTA	World
1	Broker effect, no security	2,764	4,513	-272	-2,310	4,695
2	Broker effect, baseline security	8,066	7,956	4,177	-5,663	14,537
3	Broker effect, high security	12,999	11,312	8,251	-8,837	23,725

Source: Authors' calculations from GTAP model.

Table 2: Import Effect of Border Friction Removal (percent)

Sim	Description	USA	Mexico	Canada
1	Broker effect, no security	0.2	0.6	-0.1
2	Broker effect, baseline security	0.5	1.6	1.0
3	Broker effect, high security	0.8	2.6	2.0

Source: Authors' calculations from GTAP model.

The cost of the Mexican brokerage system alone is $4.5 billion annually for Mexico and over $2.7 billion for the United States. Broader security expenses raise costs for the United States and Mexico to about $8 billion and for Canada to $4 billion. Assuming higher security costs annually adds another $5 billion to U.S. costs, $3 billion to Canada's costs, and $4 billion to Mexico's. Removing frictions associated with the Mexican brokerage system and streamlining border security systems to reduce time lost at the border offers substantial gains to all three NAFTA partners.

In concluding, Londoño-Kent and Fox noted that reducing border frictions from Mexican brokerage systems and streamlining security offers substantial benefits to the NAFTA partners. Mexican brokerage reform could be worth $2.7 billion annually for the United States and $4.5 billion for Mexico. Security streamlining is estimated to yield at least $4 billion annually for each of the NAFTA partners. Reducing frictions promotes better utilization of transport equipment and savings on other capital investments, infrastructure construction, maintenance, and pollution.

References

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