Implications for Transportation of the North American Free Trade Agreement

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The North American Free Trade Agreement (NAFTA) promises to increase trade among the United States, Canada, and Mexico and could considerably liberalize freight carriage across borders. Signed at the White House in December 1992, NAFTA could ensure that U.S. trucks and trains have competitive access to the market of more than \$50 billion in U.S.-Mexican trade that is moved by land. The U.S. Congress must now approve or reject the agreement; similar approvals will be required in Canada and Mexico. If NAFTA is approved more or less as drafted, one of the first steps for liberalizing trucking will occur three years after the signing of the agreement, at which time U.S. and Mexican truck operators will be allowed to transport international cargo to the border states of the other country.

When Arnold Oliver, the Executive Director of the Texas Department of Transportation (TxDOT), addressed the TRB Executive Committee in June 1992, he conveyed the state's clear economic interest in further linking the economies of Texas and Mexico as well as his own anxieties about the transportation problems caused by increased trade. Among the first problems to be addressed are where to provide new capacity and how to pay for it. How much increased trade will there be, how much will be moved by truck as opposed to rail, and where will the trucks go? Add to these uncertainties the fact that Mexican trucks already sometimes run illegally at 120,000 lb gross vehicle weight or more in and around the Interstate Commerce Commission (ICC) border commercial zones within Texas and it is apparent why Oliver has reason to be worried.

Oliver also has reason to be excited. According to Robert Z. Lawrence, of the John F. Kennedy School of Government at Harvard University, Mexican exports account for only 6 percent of total U.S. imports. When he spoke to the TRB Executive Committee in June, Lawrence also pointed out that Mexico will one day become a major market and trading partner and no longer be just a manufacturing locale. "The long-run benefit," said Lawrence, "of access to a market that today has 80 million people and is growing rapidly is great." Jan Rich and David Hurlbut, policy analysts at the Lyndon B. Johnson School of Public Affairs at the University of Texas at Austin, have written that Texas may benefit more than any other state from expanded trade with Mexico. They also concluded that infrastructure improvements are crucial to realizing these benefits (*1*).

In addition to infrastructure bottlenecks at border crossings, other institutional and regulatory barriers have inhibited cross-border transportation. There are shortages of customs inspectors and capacity (including lack of automation for paperwork and inconsistent procedures across borders) and inconsistent regulations governing motor carrier sizes and weights. These problems have been compounded by Mexican policies prohibiting U.S. or Canadian ownership of highway

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Maquiladoras

In the mid-1960s, Mexico began allowing foreign-owned firms to operate on its border if they agreed to export all their goods in order to generate foreign exchange, provide jobs, and increase demand for domestically produced inputs to the foreign plants, which are known as maquiladoras. Subsequently, maquiladoras were allowed to operate within Mexico, but most are still on the U.S.-Mexican border. A large share of trade between Mexico and the United States, variously estimated at more than half, is related to the maquiladoras.

The maquiladora "industry" is booming. In 1967, there were fewer than 100 plants employing 4,000 workers. Current estimates vary between 1,500 and 2,000 maquiladoras employing 350,000 to 450,000 workers. About half of the plants export automotive and electronic parts. Most of the inputs come from the United States, and the outputs are destined for U.S. markets. Labor cost is the main attraction. A skilled Mexican welder at a Chrysler plant in Toluca earns \$1.75/hour, whereas his counterpart at a plant in Michigan earns \$16/hour. *Fortune* magazine noted that top executives at Fortune 100 firms in Mexico "rave about the quality of their work forces." Ford's award-winning Hermosillo factory produces cars of equal quality to those of the Japanese.

and railroad companies operating in Mexico and operation of foreign carriers in Mexico.

The NAFTA provisions governing transportation services would sweep away the latter restrictions. In addition to opening trucking service in international cargo to the border states three years after the agreement is signed, NAFTA would allow service to all points in all three countries in the sixth year after it takes effect. In the seventh year, Mexico would begin allowing up to 51 percent ownership by U.S. and Canadian companies of Mexican truck and bus companies that provide international cargo service and in 10 years would allow 100 percent ownership. Railroads would be able to market their own services in Mexico, use their own locomotives to carry run-through trains, build and own terminals and spur lines, and finance rail infrastructure. The three nations will continue consultations to make compatible their domestic highway and rail safety standards, but regardless of progress made on this front, drivers operating in the United States must meet U.S. driver qualifications, and vehicles must meet U.S. safety standards. (Aside from liberalizing investment opportunities in Mexican port facilities, freight transportation by water and air is not addressed in NAFTA and, though potentially significant, is not addressed in this article.)

Background on Freight Transportation Issues with Canada and Mexico

Although a successful agreement to reduce tariffs would improve trade among the three nations, even if NAFTA is not passed, many barriers to trade were lowered by the 1989 bilateral agreement between the United States and Canada, and substantial progress has been made between the United States and Mexico independent of NAFTA as well. Trade is increasing among the three nations and is having an impact on the transportation system.

United States and Canada

Similarities between the Canadian and U.S. societies and economies have facilitated trade between the two nations. Even before the U.S.-Canadian Trade Agreement (USCTA), the two nations were each others' largest trading partners. In 1985, for example, more than 90 percent of Ontario's exports were destined for the United States; two-thirds of the exports were transported by truck (2). Overall, the United States accounts for about 70 percent of Canadian exports and imports. About two-thirds of the value of these shipments is moved by truck.

USCTA took effect January 1, 1989; it either eliminated or began a phased reduction in most tariffs on agricultural and other goods produced domestically in either country (3). The agreement includes criteria for "domestic content" to prohibit a third country with low tariffs with either the United States or Canada from taking advantage of the free trade with the other. (This is a central issue in NAFTA as well.) Export taxes were banned. Customs and agricultural inspection procedures were harmonized. (Driver and vehicular safety standards were harmonized separately through the U.S.-Canada Motor Carrier Consultative Mechanism.)

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Motor carrier size and weight limits were not part of the agreement. Hence, the longer and heavier trucks permitted in the Canadian provinces are not allowed on U.S. federal-aid highways. This continues to be a sticking point for Canadian carriers accustomed to operating larger rigs; many argue that they were disadvantaged by USCTA. For a complex set of reasons—including the current exchange rate—Canadian truck operating costs in transborder trade are somewhat higher than those enjoyed by U.S. carriers (4). Canadian owner-operators, feeling disadvantaged by USCTA—along with deregulation in Canada and other issues—protested in 1990 by blocking several international border crossings. They subsequently demonstrated on Parliament Hill in Ottawa in 1991.[1]

Even though by recent estimates Canadian firms still account for half of cross-border trade, one U.S. trucking executive has argued that the advantages are so much greater for U.S.-owned carriers operating in Canada that in 10 years all trucking firms in U.S.-Canada trade will become U.S.-owned (5). Although this may be music to the ears of U.S. shippers, it is not likely to play well in Ottawa: Canadian for-hire and private trucking firms engaged in cross-border trade employ 26,000 Canadians.

The transportation issues that have arisen between U.S. and Canadian carriers since USCTA indicate other transportation policy issues that may arise after NAFTA. For example, as Canadian-Pacific Railroad gained a direct link to the Port Authority of New York and New Jersey by being allowed to purchase a small U.S. railroad, Canadian ports began protesting that they would lose additional freight to U.S. gateways. There is also debate about whether some U.S. agricultural producers suffer from Canadian subsidies to their railroads for the movement of bulk agricultural goods [see, for example, work by Meyer (6)]. These kinds of debates are likely to continue as the pressures of global competition mount and shippers look to freight carriers, regardless of national origin, to cut costs.

United States and Mexico

Whereas the United States shares many similarities with Canada, the U.S.-Mexican negotiations portend increasing trade between a developed and a developing economy. The Mexican economy was savaged by the collapse of world oil prices in 1982. During the 1980s, its gross domestic product declined 15 percent, and real wages declined 40 to 50 percent. More than 40 percent of the population lives in poverty by World Bank standards (7). Even in the industrialized border zone, average wages are about $1/hour. With a heavy burden of foreign debt and reduced earnings from petroleum exports, Mexico is in great need of foreign exchange. Under the leadership of President Salinas de Gortari (a Harvardeducated economist), Mexico has fundamentally reoriented its economy toward exports and is anxiously pursuing further openings with the United States. According to Lawrence, NAFTA will give Mexico the credibility it wants for its altered, market-oriented policies—a credibility it needs to improve its trading status with the rest of the world.

The NAFTA proposals on tariffs are similar to those of USCTA. Tariffs would be eliminated or phased out for most goods, and export taxes would be eliminated. The domestic content rules are a major issue because many automobile manufacturers have built or are planning to build assembly factories in Mexico for export of automobiles to the United States. The U.S. automobile industry does not want Japanese and European companies to ship parts to Mexico for final assembly and thereby gain any additional advantage over U.S. firms (*8*). U.S. automotive firms, of course, are already shipping parts from the United States for assembly in Mexico, a practice made possible in part by innovations in the U.S. transportation industry, such as just-in-time delivery (*9*).

On other points, however, the U.S.-Mexico issues are quite different from those raised by the U.S.-Canada negotiations. U.S. labor representatives greatly fear additional job losses to a low-wage economy. Some motor carriers fear that they will be disadvantaged by having to compete with Mexican carriers that pay much lower wages. Environmental issues play a much bigger role. Considerable environmental degradation already occurs at maquiladora factories along the border (see box), and some in the United States believe that additional industries will move to Mexico to escape more stringent U.S. environmental regulation (*10*). Any delay in NAFTA, however, will have relatively little effect on the rapid growth in the maquiladora factories. Trade barriers for the maquiladoras are already so low that NAFTA may have relatively little effect on the location decisions of international firms and the amount of cross-border trade (*11*). Roughly 80 percent of U.S. cross-border trade with Mexico is moved by land. Although NAFTA may or may not substantially increase the volume of cross-border trade (about $65 billion in 1991) (Figure 1), it will surely allow U.S. railroads and trucks to compete for a larger share.

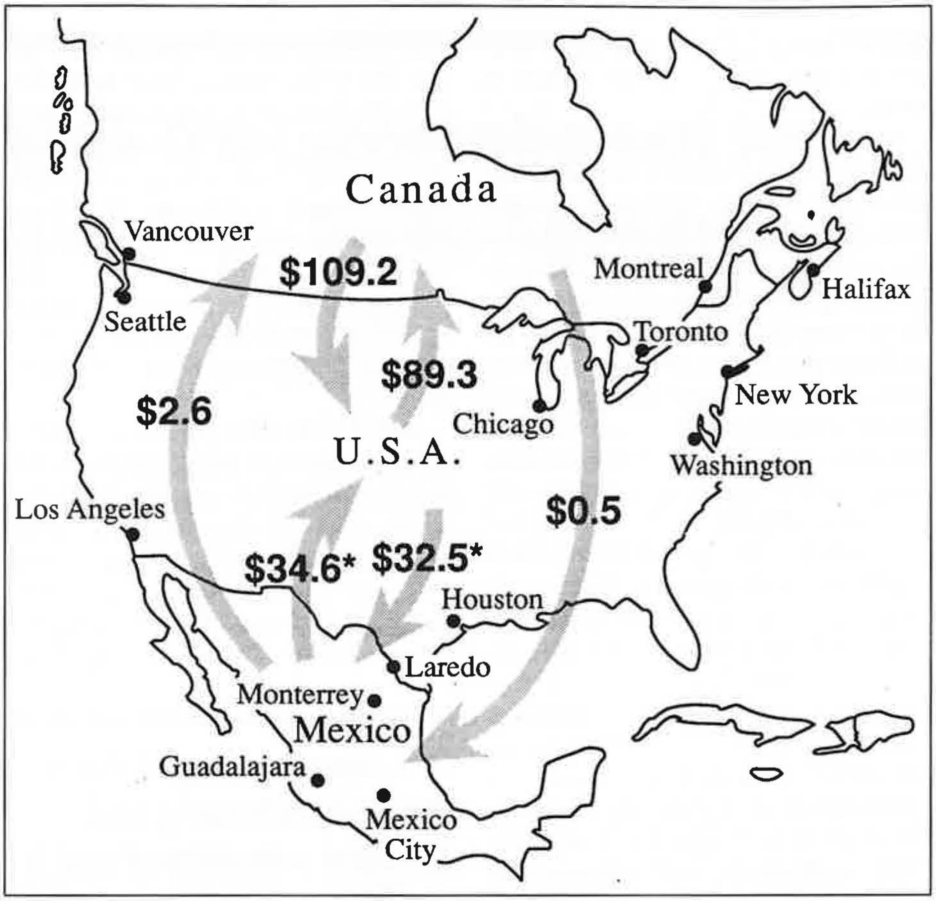

FIGURE 1 Trade among United States, Canada, and Mexico (1991 data, in billions; asterisks indicate 1990 data). *(U.S. Department of Commerce; Statistics Canada.)*

Transportation Issues Independent of NAFTA

Much has been happening independent of NAFTA to improve transportation services between Mexico and the United States. In July 1989, Mexico deregulated its heavily regulated and inefficient trucking industry (*12*). In November 1991, the U.S. Secretary of Transportation and his Mexican counterpart signed a new bilateral aviation agreement that liberalized passenger and air cargo service.

Since 1987, the United States and Mexico have been engaged in discussions on many of the transportation issues through a "transportation working group" of transportation officials from both sides. This group has made significant progress on a number of fronts to improve surface transportation efficiency, remove barriers, and increase safety standards. Also independent of NAFTA, U.S. railroads and less-than-truckload (LTL) motor carriers have been allowed to offer service in Mexico (*13,14*).

The transportation working group is also addressing such issues as truck size and weight and vehicle emission standards in talks that parallel those of NAFTA. The truck size and weight issue is controversial (*15*). U.S. truckers are increasingly using 53-ft trailers. At least 25 percent of new trailers manufactured in the United States are 53-ft. Mexico, however, recently began enforcing a regulation that prohibited their use, even though some carriers had been handing them off at the border for use in Mexico for several years. Mexico may be prohibiting the 53-ft trailers in hope of getting an increase in the U.S. 80,000-lb gross weight limit in exchange. As evidenced by the longstanding and contentious debates about truck size and weight limits in the United States, these cross-border issues will be difficult to resolve.

Border infrastructure issues have also been getting attention independent of NAFTA. Congress has funded additional U.S. Customs Service facilities ($357 million), and the Border Trade Alliance (a group of trade and industry associations operating on the U.S.-Mexican border) recently issued a detailed capital plan to improve roads and bridges. In the Intermodal Surface Transportation Efficiency Act of 1991, Congress called on the Secretary of Transportation to conduct two studies of border transportation issues and infrastructure needs and report back to Congress in 1993. Mexico is mounting a $20 billion capital plan to improve its infrastructure, but success will depend largely on whether its plans for privatization attract sufficient private investment. Mexico's internal road system is inadequate, and the few improved highways that have been built are poorly maintained. Road congestion in and around urban areas is worsened by inadequate design for large trucks and little urban planning; many factories are surrounded by densely populated residential areas. Even if ultimately successful, improvements in Mexico's surface transportation infrastructure will come slowly.

Implications for TxDOT

Arnold Oliver sees many issues for TxDOT. Those 120,000-lb Mexican trucks loom large on the horizon. Texas businesses are prepared to help fund the needed infrastructure to allow such trucks to serve specific facilities in Texas, but this raises a host of questions. Texas is served by some 18 international bridges crossing the Rio Grande, many of which may need to be improved to handle a larger volume of heavy trucks. Which routes would these trucks use? Should the gas tax revenues raised from Texas drivers be used to help fund such improvements? Would making provision for heavier Mexican trucks open the door to higher limits statewide?

Some of these issues will be addressed by the U.S.-Mexican transportation working group in ongoing talks and by other public and private cross-border negotiations, but the state clearly has authority over truck weight limits and will ultimately decide whether and how to modify its policies. Once limits are set, they must be enforced, and enforcement is already a problem. Efforts of officials to enforce current U.S. safety and vehicle operating standards in the ICC border commercial zones can result in retaliatory work slowdowns at Mexican customs offices. This causes further congestion and increases complaints from businesses on both sides of the border.

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TxDOT is being proactive. A special office for international relations staffed by bilingual professionals is already involved with the international committees and agencies that oversee border crossings and bridges. The DOT border districts have developed ongoing relations with their counterparts in the bordering Mexican states. The Transportation Commission has already approved construction of ramps at what will be the location of an interchange at I-10 for the traffic expected from a new border crossing in the southeast corner of New Mexico near El Paso, Texas. Through activities such as these, Oliver hopes to have facilities ready when the border is further opened, but the task is daunting. Oliver estimates some $2 billion in infrastructure is needed during the next decade on the Texas side of the border alone. The amount of funding needed is almost as big a challenge as the many federal, state, and international authorities that are involved in the planning. "The challenges we face are demanding," says Oliver. "It won't be easy. But each challenge is also an opportunity to contribute to improving communications and increasing cooperation. These two things, communications and cooperation, will move us toward international regional transportation planning."

Broader Implications for Transportation

When members of Congress consider ratification of NAFTA, they will be concerned about whether freer trade between the United States and Mexico will be in the interest of the United States. Their choices involve complex issues about free trade and the consequences for U.S. jobs and the environment. Regardless of whether NAFTA is passed, trade across North American borders will continue to grow. The United States already has a free trade agreement with Canada, and trade with the maquiladoras will continue to escalate. The question for the transportation sector is how—not whether—it will be affected by growing trade.

Infrastructure issues, particularly the need to upgrade Mexico's rail and road system and the border infrastructure, will be among the first to be addressed. A number of additional cross-border transportation policy issues will be confronted. Vehicle size and weight and driver and vehicle safety standards and enforcement are already issues. The increased competition among U.S., Canadian, and Mexican firms for cross-border freight will raise debates about which country's carriers are advantaged by domestic transportation policies, the appropriateness of current policies designed to protect domestic maritime and aviation carriers, and whether to allow the carrier of another nation to move domestic freight solely within the border of another nation (referred to as cabotage).

Many of these issues are already being studied in each nation. The difference for the future is that as the North American economies become increasingly interdependent, choices made by political and transportation officials in Canada and Mexico will directly affect producers, carriers, and consumers in the United States (and, of course, U.S. decisions will have ramifications in Canada and Mexico). This additional political dimension will complicate issues already made complex by divergent state and federal priorities and authority over transportation within each nation. Improved communication and cooperation across borders may not be sufficient to solve these problems, but it will surely be necessary. Many of these issues were raised in sessions at the 1993 TRB Annual Meeting; the TRB Executive Committee is evaluating how TRB can expand its international involvement to help address them.

Note

[1]Canadian carriers in all modes complain that U.S. carriers enjoy more favorable treatment in property taxes, depreciation schedules, and fuel taxes, among others (according to the National Transportation Agency of Canada *1990 Annual Review* and the Minister of Supply and Services Canada, 1991). Studies by Transport Canada suggest that both Canadian and U.S. trucking firms have tax advantages not enjoyed by the other which tend to cancel each other out. U.S. carriers nonetheless had a cost advantage of about 6 percentage points in 1990–1991, apparently because of lower input costs (4).

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