

Southwest Economy



Michael Short

Beating Border Barriers in U.S.-Mexico Trade

Over the past 15 years, U.S. trade with Mexico has increased 400 percent—from \$48 billion to \$239 billion (*Chart 1*)—yet neither Mexico nor the United States has made the adjustments necessary to handle the growing traffic. Unlike U.S. commerce with any other nation but Canada, U.S.-Mexico trade is mostly truck trade. Whether truckers use busy Texas, California or Arizona crossings, they face congestion and long waits usually associated with government inspections and customs processing.

Restrictions on cross-border trucking add to the problems. Because the United States refuses to open its border to Mexican long-haul trucks—despite commitments it made under NAFTA—shippers have to rely on short-haul trucks to shuttle cargo across the border. These trucks haul in one direction only, clogging bridges, roads and inspection stations with empty trucks. It doesn't help that the clearing of trucks is still paper-based and the various government agencies operate independently.

As a partial solution, transportation researchers have recommended a prototype border facility that would involve electronic preclearing of northbound

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A Note to Our Readers

The three feature articles in this issue were written before the tragic events of September 11. The delays at our borders with both Mexico and Canada subsequent to September 11 underscore the thrust of the article on U.S.-Mexico trade. And the sharp decline in stock prices the week of September 17, when the markets reopened, reinforces John Duca's conclusion that the stock market plays a very important role in the U.S. economy.

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How Does the Stock Market Affect the Economy?

Stock wealth plays a role in most mainstream econometric models of the U.S. economy. For example, according to the Federal Reserve Board's model, a 20 percent decline in stock prices lowers GDP by about 1.25 percent after one year. Nevertheless, economists disagree about the extent to which lower stock prices directly slow growth and the extent to which they simply reflect worsening fundamentals that are slowing the economy.

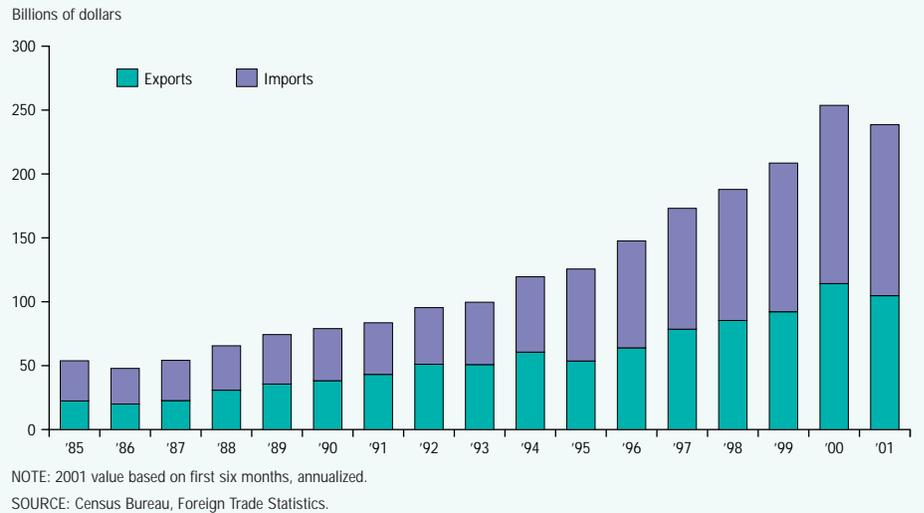
This article briefly addresses the controversy surrounding these issues. First, I review how stock prices may affect firms and discuss some of the uncertainties about these effects. Then, I turn to the effects of stock wealth on households' consumption, discussing the mainstream view and several criticisms of it. Although some of these criticisms have validity and there is uncer-

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Surface trade with Mexico continues to be markedly more expensive than trade with Canada, our other NAFTA partner.

Chart 1

U.S. Trade with Mexico Surges



trucks and their cargo as well as better coordination between U.S. agencies at the border. While the prototype promises greater efficiency, researchers admit that its implementation is still years away, and thus, after almost seven years of NAFTA, old processes persist. The result is that surface trade with Mexico continues to be markedly more expensive than trade with Canada, our other NAFTA partner.

The costs of trade, as well as the benefits, are felt most in Texas since it

bears the brunt of U.S.–Mexico trade. In fact, 40 percent of the total value of U.S.–Mexico overland merchandise trade passes through just one Texas city, Laredo. On the Texas–Mexico border as a whole, 15,000 commercial trucks, 205,000 vehicles and 97,000 pedestrians cross each day. As a result of the growing trade, the transportation, distribution, warehousing and federal government sectors have expanded rapidly on the U.S. side of the border. The strong peso and growing northern Mexico popula-

Chart 2

Texas Border Job Growth Outpaces Nation

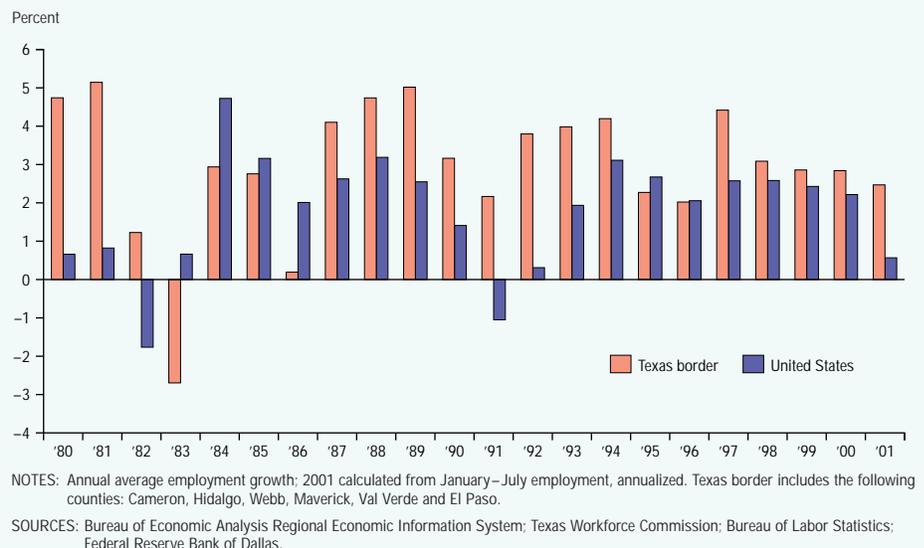


Table 1

Top Ten U.S. Imports from Mexico: 1983 Versus 2000

Rank	1983	2000
1	Crude oil	All motor vehicles
2	Telecommunications equipment	Crude oil
3	Oil (not crude)	Telecommunications equipment
4	Internal combustion piston engines	Automatic data processing machines
5	Vegetables, roots and tubers	Equipment for distributing electricity
6	Crustaceans	Special purpose motor vehicles
7	Natural gas, whether or not liquefied	Parts and accessories of motor vehicles
8	Equipment for distributing electricity	Television receivers
9	Silver, platinum and other platinum group metals	Special transactions not classified by kind
10	Electrical apparatus for switching or protecting	Electrical apparatus for switching or protecting

NOTE: Rank based on customs value.

SOURCE: U.S. Department of Commerce, International Trade Administration, U.S. Foreign Trade Highlights.

tion have also driven retail trade, as increasing numbers of Mexican residents cross the border to shop in U.S. stores. Chart 2 shows rates of Texas border job growth since 1986 outstripping the nation in every year except 1995 and 1996, when Mexico was still recovering from the 1994 peso devaluation.

Changing Trade

Before opening up to trade in the late 1980s, Mexico exported mostly raw materials. As shown in Table 1, its top exports included oil, natural gas, vegetables, seafood and silver. Since then, Mexico has moved far up the chain of production. Besides oil, Mexico's top exports now include world-class manufactured goods such as motor vehicles and electrical equipment. In the late 1980s, the elimination of Mexico's import substitution policies spurred profound transformation and growth in Mexico's manufacturing sector. Trade protectionism had nurtured inefficiency and widespread manufacturing quality-control problems, but after Mexico joined the General Agreement on Tariffs and Trade (GATT) in 1986, trade became a quickly growing share of the Mexican economy. Between 1986 and 2000, the exports share of Mexican GDP rose from 16 percent to 29 percent, with almost 90 percent of Mexican exports destined for the United States.

Liberalized trade and other economic reforms meant foreign investment began to flow into Mexico. Many foreign firms set up manufacturing and assembly plants known as maquiladoras. As Chart 3 shows, foreign direct investment along with ma-

quiladora employment began to trend upward in 1986 and more steeply in 1994, coinciding with the signing of NAFTA. Maquiladoras—which were initiated by the Mexican government in the 1960s—import inputs duty-free and produce or assemble goods for export. Because of special U.S. regulations, these firms pay tariffs only on the value added by assembly of the products re-exported to the United States. Under NAFTA, the value added to maquiladora output is typically excluded from duties, while inputs have to be of North American origin to be duty-free.¹

The changing nature of U.S.–Mexico trade, as well as the growth and agglomeration of the maquiladora industry, determines the nature of cross-border trade flows. Where the maquiladora industry is heavily concentrated, as it is in Ciudad Juárez (across from El Paso) and Tijuana (across from San Diego), maquiladora trade accounts for as much as 80 percent of import trade with Mexico.² At crossings in Texas' Rio Grande Valley and in Arizona—where agricultural imports are still prevalent—maquiladora trade accounts for about 50 percent of import trade.

Maquiladoras determine both the volume and type of trade through their corresponding ports of entry. Where electronics producers dominate, as in Tijuana, trade inflows consist largely of electrical appliances such as televisions and sound equipment. In Ciudad Juárez, where maquiladoras are also part of the auto and apparel industry, maquiladora trade consists of motor vehicle parts, motor vehicles, electronics and clothing.

After Mexico joined the General Agreement on Tariffs and Trade in 1986, trade became a quickly growing share of the Mexican economy.

As truck trade has grown, congestion has been magnified because the increase in shipments has been mirrored by an increase in empty trucks.

The port of Laredo, because of its strategic location along the main highway leading to Mexico City, is unique. Although Nuevo Laredo has its share of maquiladoras, the majority of trade through Laredo is coming from or going to the Mexican interior. More than 80 percent of the southbound trade through Laredo goes to the Mexican interior, principally to Mexico City.³

Barriers to Trade

Despite the impressive gains in volume and composition of U.S.–Mexico trade, barriers to trade persist and even multiply as new obstacles are erected.⁴ The restricted movement of commercial vehicles across the border, Mexican customs broker practices, limited agency staffing and inspection facilities, and cumbersome U.S. customs processing and inspections all cost shippers time and money. These transactions costs reduce the volume of trade and increase the price of traded goods. Both producers and consumers bear the burden of higher transactions costs.

On the Southwest border, clearing international freight entails many steps. The extent of transactions costs, however, depends on the direction of trade. In general, northbound trade incurs more costs from U.S. government inspections, many of which are meant to deter the entry of illegal drugs and unauthorized immigration. Southbound trade, although

also subject to government inspections, is most encumbered by Mexican customs broker practices. In both cases, transactions costs include duties, broker and customs user fees, value-added taxes, freight forwarding and short- and long-haul service costs, bridge tolls and wait times for inspections.

Empty Trucks Everywhere. As truck trade has grown, congestion has been magnified because the increase in shipments has been mirrored by an increase in empty trucks. A March 2000 General Accounting Office (GAO) study notes that 47 percent of 3.6 million containers that crossed the border from Mexico in fiscal year 1998 were empty.⁵ As shown in Chart 4 for northbound shipments, all major ports of entry had at least 25 percent empty trucks and most had greater than 40 percent. The GAO study points out that government officials must process empty trucks as they do loaded ones to ensure compliance with U.S. laws and regulations. The large number of empty trucks is ostensibly slowing down cross-border trade.

The empty trucks are mainly short-haul carriers, either returning from or on their way to shuttling a load across the border. The requirement that Mexican customs brokers preclear trucks coming into Mexico—and the fact that they do so on the U.S. side of the border—is an important cause of short-haul trucking. This does not, however, entirely explain

Chart 3

Mexico Foreign Direct Investment and Maquiladora Employment Rise

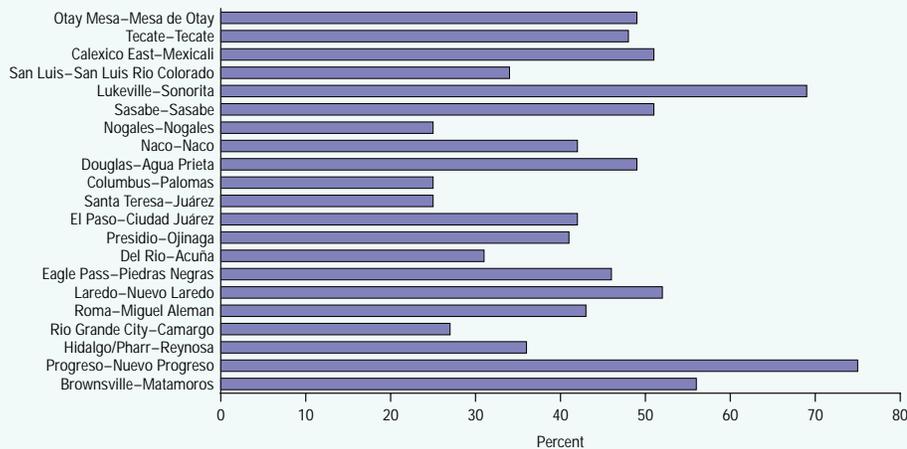


NOTE: Foreign direct investment data are quarterly, seasonally adjusted.

SOURCES: Banco de México; Instituto Nacional de Estadística, Geografía e Informática.

Chart 4

Empty Containers Are a Big Share of Border Truck Traffic



NOTE: Northbound trucks, fiscal year 1998.

SOURCE: "U.S.-Mexico Border: Better Planning, Coordination Needed to Handle Growing Commercial Traffic," General Accounting Office, March 2000 (<http://www.gao.gov/cgi-bin/gettrpt?rptno=NSIAD-00-25>).

the practice of returning without a load. In the trucking industry, backhauling—the practice of hauling a load on the return trip—is the most efficient mode of operation. Competitive markets should make truck operators efficient, that is, induce them to find backhauls. The lack of backhauling on the border suggests the short-haul, or drayage, market is not very competitive. Mexican customs broker practices may be a contributing factor.

Mexican Customs Broker Practices.

Because of unique Mexican customs laws that place liability on the broker and not the importer, the process of overland cross-border trade depends heavily on the practices of the Mexican customs broker. The broker's main function is to provide a document called a *pedimento*, which is required for all shipments entering and leaving Mexico. The broker must also handle the payment of import duties, which are due at time of crossing. These laws have several implications. Legal liability implies brokers have powerful incentives to detain cargo and conduct detailed inspections. Also, since they are the only agents allowed to forward freight into and out of Mexico, Mexican customs brokers face no competition from U.S. brokers and have considerable pricing power, as well as control over when and how goods are transported.⁶

As an example, a southbound truck typically drops its load at a border termi-

nal. A Mexican customs broker sends a freight forwarder to bring the cargo to the customs broker's warehouse, where it is unloaded, inspected, appraised and classified.⁷ The paperwork, duties and fees are completed and paid. Usually the load is stored in the warehouse while the freight forwarder and the customs broker make preparations for the crossing. A short-haul truck then takes the shipment over the border and through Mexican customs and government inspections. The drayman then drops the load in a lot on the Mexican side and returns empty to the United States. The load is eventually transferred onto a Mexican truck that completes the delivery. In sum, the load is transferred at best twice but, most likely, three times involving three to four parties. A report by the U.S. Department of Transportation recently estimated that this process adds three to five days to a southbound move.⁸

The bottom line is that Mexican customs brokers are closely allied with freight forwarders and drayage carriers, and competition between these service providers is limited. Inspection, storage, freight forwarding and drayage all earn brokers a monetary return, so they have little incentive to minimize these activities to expedite processing. Border cities also earn substantially more revenue in bridge tolls as a result of the empty truck traffic.

In contrast, U.S. and Canadian brokers play a limited role in the border-

Mexican customs brokers face no competition from U.S. brokers and have considerable pricing power, as well as control over when and how goods are transported.

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crossing process. Since U.S. trucks can deliver to Canada, direct lining implies brokers don't have to arrange for the transfer of cargo. Also, they can operate in each other's countries—U.S. brokers can cross into Canada to forward freight back into the United States and vice versa. The competition keeps fees down. Moreover, the government doesn't hold brokers liable for the freight they handle, and the paperwork is less onerous. Finally, in the United States and Canada, duties don't have to be paid at the border. Importers can pay duties by invoice for up to 10 days after importation.

Cumbersome Inspections. On both sides of the U.S.–Mexico border, the sheer volume of commercial trucks has overwhelmed government agencies charged with inspections and exacerbated inefficiencies in the inspection processes. In its border traffic study, the GAO found six primary factors that contribute to northbound congestion at the border. “They are multiple inspection requirements, difficult staffing and human resource problems, limited use of automated management information systems for processing commercial traffic, insufficient inspection space, inadequate roads connecting ports of entry, and limited coordination and planning among U.S. inspection agencies and between the United States and Mexico.”⁹

The study notes that the lack of coordination between agencies within countries, as well as across countries, stands in the way of reducing shippers' transactions costs. Agencies in the United States and Mexico generally do not share facilities, but operate at different locations and during different hours. Depending on the type of load, trucks have to pass through customs, agriculture, drug, immigration and safety inspections. With 50 to 100 percent increases in commercial vehicle traffic since 1994, government funding for additional staff and facilities has fallen behind. Processing is still paper-based as federal agencies have also been slow to adopt new “intelligent transportation” technologies that could drastically reduce processing times.

Solutions for Better Border Trade

The cumbersome processing of northbound shipments could be improved by better cooperation among U.S. govern-

ment agencies and greater use of available technology. The GAO recommends that the customs commissioner oversee the entire processing function to better coordinate inspections for northbound trucks. The customs commissioner should also work with the State Department's Border Liaison Mechanism to help coordinate activities, such as operating hours, with the Mexican side. The GAO report also recommends using this joint effort to determine how technology could improve efficiency. Another suggestion is collecting data on wait times to better model the border congestion problem and potential solutions.

Regarding the adoption of advanced technology, researchers at the Texas Transportation Institute at Texas A&M University and at the Center for Transportation Research at the University of Texas at Austin have developed a prototype inspection station for northbound traffic that heavily utilizes new technologies.¹⁰ The prototype station combines the use of the International Trade Data System, a consolidated electronic database currently under development by the Treasury Department, and Intelligent Transportation Systems, which transpond data back and forth from truck to border processing agent. By digitizing the paper trail, the system promises to significantly reduce delays without compromising the objectives of U.S. law enforcement and other government agencies. Rather than retrofit an existing border port, the researchers hope to apply the prototype to the next new border facility completed along the Texas–Mexico border.

Another important improvement would be to enforce the NAFTA trucking agreement and allow Mexican trucks to transport goods directly into the United States and likewise for U.S. trucks into Mexico. It would increase the incidence of direct lining and decrease the demand for drayage, storage and warehousing. The reduction in drayage carriers would cut costs to shippers and, since these carriers normally do not backhaul, would reduce congestion on the border by lowering the number of empty trucks. At the same time, however, the demand for backhauls—which increases with distance traveled—would likely increase the demand for certain transportation brokerage services.¹¹

Are Mexican Trucks Safe?

Implementation of the NAFTA trucking agreement is surrounded by controversy over the safety of Mexican trucks. Existing data suggest that while there are plenty of unsafe Mexican trucks, it is unlikely that those trucks will be used for long hauls into the U.S. interior once the border is opened.¹

The most widely cited claim that cross-border trucks are unsafe is based on a 36 percent failure rate of Mexican short-haul trucks chosen for inspection at border crossings in fiscal year 2000.² There are two problems with applying this number to the trucks that would come into the United States under open borders. First, short-haul trucks—since they don't have to go very far—are older and more faulty. Long-haul trucks would necessarily be newer and in better condition. Second, because inspections are nonrandom, the trucks not chosen for inspection have lower failure rates than those that are selected. In California, for example, where inspections are more frequent and rigorous, the failure rate is only 26 percent. This number compares favorably with a 24 percent nationwide failure rate for U.S. trucks.³

There are some data on Mexican long-haul trucks that operate in the United States, although again, these are not based on a random sample. These trucks are either circulating illegally or belong to companies with special arrangements—like those granted operating authority during a brief period of open borders between 1980 and 1982. In any case, Mexican trucks that enter the U.S. interior actually have lower failure rates than U.S. trucks: 19 percent versus 24 percent.⁴

To sum up, the argument that cross-border Mexican trucks would represent a safety hazard is overblown. Implementation of the NAFTA trucking agreement, in combination with adequate funding for systematic truck safety inspections, would ensure that the benefits of open borders to trucks far outweigh the costs.

Notes

¹ See Russell Roberts, "How Safe Is That Trucker in the Window?" The Library of Economics and Liberty, March 2001, <http://www.econlib.org/library/Features/Robertstruck.html>.

² Office of the Inspector General, "Interim Report on the Status of Implementing the North American Free Trade Agreement's Cross-Border Trucking Provisions," U.S. Department of Transportation, Report no. MH-2001-059, May 8, 2001.

³ Ibid.

⁴ Office of the Inspector General, "Mexico-Domiciled Motor Carriers," U.S. Department of Transportation, Audit Report no. TR-2000-013, November 4, 1999.

Opening the border to trucks, however, will not change things overnight. James Giermanski, a border transportation and logistics expert and professor at Belmont Abbey College, argues that initially the implementation of the trucking agreement would probably only affect northbound shipments, as some Mexican trucks take advantage of the new rules and travel to their final destination in the United States.¹² For southbound shipments, Giermanski predicts the Mexican customs laws will allow brokers to continue to delay shipments, making it unprofitable for the long-haul shipper to wait for preclearance; thus, the drayage system will continue. In addition, the poor road quality; expensive tolls; lack of service, parts and repair facilities; expensive fuel; and high incidence of hijacking will all deter a large or sudden incursion by U.S. trucking firms into the Mexican interior.

One hopeful development is the creation of foreign trade zones within Mexican border states.¹³ Giermanski believes more foreign trade zones, along with

recent questions concerning the U.S. federal tax liability of Mexican customs brokers who operate in the United States, may begin to shift Mexican customs broker operations south of the border.¹⁴ This movement would significantly reduce southbound drayage and empty truck crossings. Giermanski concludes, "If all goes really well...I expect we can see the reduction and eventual elimination of drayage as we know it within two to three years of the border opening, which will concomitantly put pressure on the Mexican broker system to relocate to the Mexican side and enhance the development and use of Mexican foreign trade zones, especially along the border."

Conclusion

U.S.–Mexico trade has grown quickly since Mexico joined GATT in 1986 and NAFTA in 1994. As trade has grown, the nature of trade has changed as well. Through the strong growth of the maquiladora industry, Mexico and the United States are now engaged in a

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sophisticated system of production sharing that has contributed to economic growth on both sides of the border. The increased trade has generated some improvements in processing and inspections; however, significant border barriers remain. Shippers face many unnecessary costs, and steps can be taken to improve the situation.

Solutions to bottlenecks in cross-border transportation require changes in both government and business practices. The cost to border cities may be less growth in the transportation and warehousing sector. The payoff, however, as local resources are put to more efficient use, will be reduced air pollution and congestion and a competitive edge in attracting shippers, shoppers and new industrial firms. The ultimate return, however, will go to U.S. and Mexican consumers as prices of traded goods fall.

— Pia M. Orrenius
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Notes

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¹ For more detail on the rules that affect maquiladora operations and how those have changed under NAFTA, see Lucinda Vargas, "NAFTA, the U.S. Economy and Maquiladoras," Federal Reserve Bank of Dallas *Business Frontier*, Issue 1, 2001.

² See the study "Facilitating Trade and Enhancing Transportation Safety," Intelligent Transportation Systems, U.S. Department of Transportation, April 2001.

³ In 1995, more than half Laredo's exports (51.4 percent) were destined for Mexico City and the state of Mexico, 33.7 percent for other interior states and 14.9 percent for the border states of Tamaulipas and Nuevo León. (Source: "Maquiladora Ports Information Report," Border Trade Institute, Texas Center for Border Economic and Enterprise Development, Texas A&M International University).

⁴ The U.S. Congress' recent moves to block implementation of the NAFTA trucking agreement are an example of new barriers. See the box titled "Are Mexican Trucks Safe?"

⁵ See "U.S.–Mexico Border: Better Planning, Coordination Needed to Handle Growing Commercial Traffic," U.S. General Accounting Office, March 2000, p. 4. The report can be accessed on the Internet at <http://www.gao.gov/cgi-bin/gettrpt?rptno=NSIAD-00-25>.

⁶ For a detailed description of the role of the Mexican customs broker, see Mitch McGhee and James Giermanski, "Mexican Customs Brokers and Their U.S. Freight Forwarding Interests: Is the Broker Personally Liable for U.S. Federal Income Tax?" *Tax Notes International*, January 22, 2001.

⁷ See James Giermanski, "Texas to Mexico: A Border to Avoid," *Journal of Borderlands Studies* 10 (2), 1995, pp. 33–53.

⁸ See the Department of Transportation study "Facilitating Trade and Enhancing Transportation Safety."

⁹ See p. 14 of GAO study. Interestingly, few border trade studies cite a lack of bridges. Spending on bridge infrastructure has been robust, and several reports highlight bridges that are currently underutilized. For example, see Keith Phillips and Jay Campbell, "Border Bottlenecks Hamper Trade," Federal Reserve Bank of Dallas *Southwest Economy*, Issue 5, September/October 1998, pp. 9–10; Keith Phillips and Carlos Manzanares, "Transportation Infrastructure and the Border Economy," in *The Border Economy*, Federal Reserve Bank of Dallas, June 2001; and the Giermanski article cited in Note 7.

¹⁰ See Brian Bochner, Bill Stockton, Dock Burke and Robert Harrison, "A Prototype Southern Border Facility to Expedite NAFTA Trucks Entering the United States," paper no. 01-1406, December 8, 2000. The paper is available at http://bordercross.tamu.edu/about/trb_paper_01-0406.stm.

¹¹ The increase in the demand for transportation property brokers has been a defining trend since deregulation of the domestic trucking industry in 1980. These brokers consolidate loads and, more important, arrange for pickup and delivery. The greater incidence of backhauling since deregulation has been key in increasing efficiency in the U.S. trucking industry over the past 20 years. See John T. Jones, *The Economic Impact of Transborder Trucking Regulations*, 1999 (New York: Garland Publishing).

¹² Comments by James Giermanski were taken from "Inefficient Imports and Expensive Exports: The Limitations of Drayage," presented at "The Road Most Traveled: Texas Trade Corridors in the New Economy" conference sponsored by the San Antonio Branch of the Federal Reserve Bank of Dallas, August 3, 2001.

¹³ A foreign trade zone is an area in which imported goods are legally exempt from customs duties. Thus, foreign trade zones along the Mexican side of the border allow imported goods to enter Mexico before being inspected and before customs duties are paid.

¹⁴ See source in Note 6.