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# SURFACE FREIGHT TRANSPORTATION IN MEXICO POST NAFTA

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One of the significant expressed objectives of NAFTA was the improvement of cross-border transportation to enable a more efficient and cost effective flow of goods among Mexico, Canada and the United States. This article examines the changes that have taken place in surface freight transportation between Mexico and the U.S. since NAFTA was signed in 1993.

## INTRODUCTION

One of the major expressed objectives of the 1993 North American Free Trade Agreement (NAFTA) was to facilitate the cross-border movement of goods and services between the territories of Canada, Mexico and the United States. Another objective was to increase trade among the three countries by removing tariffs, quotas and other trade restrictions. A review of the increases in trade volume since 1993 provides ample evidence that the later objective has been achieved. For example, the number of commercial trucks carrying U.S. exports to Mexico increased over 407% from 1990 to 2000 while the number of trucks transporting Mexican exports to the U.S. increased 328% over the same period. There were a reported 2.26 million commercial truck crossings into Mexico from Texas in 2000 and another 2.38 million truck crossings from Mexico into Texas (TAMIU, 2002). In the same report, the Texas Center for Border Economic and Enterprise Development, reported the number of freight railcars transporting goods into Mexico more than doubled from 1993 to 2000 from 147,216 to 298,919 (TAMIU, 2002). However, in the ten years since NAFTA's passage there has

been little improvement in the cross-border movement of goods between Mexico and the United States.

Commercial truck movements into each country's interior remain a time-consuming, inconvenient process, largely unchanged since 1990. Neither country yet allows foreign trucking beyond a twenty-mile commercial zone. As a result, the promised benefits of improved transportation, such as faster transit times, reduced pipeline inventories and better reliability of shipment delivery, have not yet been realized. While cross border movement of goods remains as cumbersome, inefficient and unpredictable as it was prior to NAFTA, there have been several significant improvements in Mexico's transportation infrastructure since NAFTA's passage. The purpose of this article is two fold: to examine the progress Mexico has made in modernizing its rail and highway transportation modes and to outline the reasons why there has not been much improvement in the cross-border flow of goods between the U.S. and Mexico. This article also reviews major economic policy changes in Mexico and makes recommendations on how Mexico and the United

States might achieve a better flow of goods across their shared border.

## **RAIL IMPROVEMENTS IN MEXICO**

### **Privatization**

Ferrocarriles Nacionales de Mexico (FNM), Mexico's national railroad, was established in 1873. It was owned and operated by the central government of Mexico from 1937-1994. Over the course of this 57-year period, Mexico's rail system suffered from neglect and severe lack of capital funding (Barrera, 1999). As a result, Mexico's national railroad became slow, unreliable and highly inefficient. The lack of required track replacement and track maintenance caused frequent derailments. By 1980, 75 per cent of Mexico's existing track dated back to pre-revolution days before 1910 (Barrera, 1999). Train robberies by organized gangs of armed bandits were also commonplace during this period. Approximately one in every five trains was boarded and robbed as recently as the late 1980's (Kaufman, 2001).

Beginning in 1994, the Mexican government began to address the need for significant improvement in its freight rail system by deciding to privatize the entire 16,500-mile network. In the same year, the first of FNM's three major railway regions was sold to the Transportation Ferroviaria Mexicana (TFM) consortium for \$1.4 billion. TFM's winning bid gave TFM partners the right to operate the 2,661-mile Northeast system for 50 years with an option for an additional 50 years (Vantuono, 1999). TFM's line is the most important of the major FNM (Ferrocarril del Noreste) rail regions because it provides the primary rail route in Northern Mexico and links the industrial areas of Mexico City and Monterey with the United States at Laredo, Texas. Approximately 60% of all the trade between Mexico and the United States crosses the border at Laredo/Nuevo Laredo (TAMIU, 2002). Although the Northeast system controls less than 19% of the total Mexican trackage it moves 40% of Mexico's domestic freight (Vantuono, 1999). For the past

four years the three TFM partners have been the U.S.-based Kansas City Southern Industries Corporation (37%), its Mexican affiliate, TMM/Grupo Service (38.5%) and the Mexican government (24.5%). By law, Mexico's four privatized rail systems must be at least 51% owned by Mexican-based investors, which has required U.S. investors to find Mexican partners. The privatization of all four parts of the FNM was completed last year under this ownership rule.

The second rail freight system to become privatized was the Ferrocarril line, a 4,052-mile Pacific-North line and the 938 mile Ojenaga-Topolobampo railroad. The new owner is Grupo Ferroviario Mexicano Mexican Railways, a newly formed alliance of two large Mexican companies and the U.S.-based Union Pacific Corporation. The Ferrocarril line connects Calexico, California and El Paso, Eagle Pass and Brownsville, Texas (House, 1999).

A third section, the 1,000-mile Southeast section, is now owned by a group of Mexican investors. The Southeast Railroad connects Mexico City with several important ports along the Gulf coast including Veracruz and Coatzacoalcos. This line has the lowest revenues currently but the highest growth potential because it links several of Mexico's busiest seaports. Railcars are currently being ferried between Coatzacoalcos and Mobile, Alabama by GulfLink Marine. There is also reported interest in the Southeast line by the Canadian National (CN) Railroad. With its recent acquisition of the Illinois Central Railroad, CN currently provides cross-border service between Canada and the U.S. and has routes to the Mexican border (Kaufman, 2001).

### **Improvements Since 1994**

With privatization has come a much needed infusion of capital to replace obsolete rolling stock, buy new locomotives, repair and upgrade track and install computerized control systems. Most of the improvements have been to the Northeast section owned by TFM and underwritten with capital provided by Kansas

City Southern Industries. TFM spent \$90 million for infrastructure improvements within a year of winning the operating bid and another \$600 million by the end of 2001 (KCSI, 2002). The money has gone to purchase over 2,800 new pieces of rolling stock, and 150 new locomotives. TFM has also negotiated a new labor agreement, rebuilt the main line between Mexico City and Laredo, built a new service center and a new computerized railroad operation center (KCSI, 2002). The investment appears to be paying off, at least as of year ending in December 1999 versus the previous year. The 1999 revenue from railroad operations was \$524.5 million, an increase of 22 percent over 1998 while the operation ratio improved from 85.5% to 76.6% (KCSI, 2002).

Mexican Railways has also invested heavily in infrastructure movements to improve their 4,052-mile rail network. By the end of 1999, they had spent nearly \$400 million to rebuild track, build new sidings and modernize their fleet of railcars (Kaufman, 2001). Both new major system owners have also beefed up security. Mexican railways has hired 1600 security officers, put up new fences and lighting and covered all railcar hatch covers with fiberglass. TFM has hired over 1000 security personnel, reducing the number of train robberies (House, 1999). As a result, train theft no longer appears to be a major problem as it was before rail privatization.

The benefits of privatization are beginning to be realized by shippers. Vantuono (1999) reports that Mexican Railways shipped 30 percent more grain and other agricultural commodities in 1999 than it did in 1998. The Northeast rail line experienced similar growth from 1998 to 1999 and reduced its average transit time from Laredo to Mexico City from 60 hours to 36 hours. As a result of capital improvements and better track maintenance, the newly privatized Northeast rail line can offer shippers transit times equal to motor carriage at lower rates. Rail privatization has also helped cross-border transportation.

Products moving by train from the U.S. to Mexico's interior can now be moved on a single through bill of lading. Formerly, rail shipments from the U.S. into Mexico had to be rebilled at the border, which was often a very time-consuming process. Railcars must still be switched to Mexican locomotives at the border but since the operations are now frequently under the control of the same company, the switching is much more efficient than it was before rail privatization (House, 1999).

### **Remaining Problems in Cross Border Rail Freight**

Incompatibilities in the customs clearance procedures between the United States and Mexico remain, even though the new railroads have built customs processing yards to facilitate clearance. Both the TFM Railroad and Mexican Railways have built processing yards several miles from the main border crossing at Nuevo Laredo, but the railroads are only capable of improving processes under their control. The governments of the United States and Mexico have done little to reduce the paperwork and bureaucracy inherent in the customs clearing process (Ross, 2001). One improvement would be to make the shipper of record the company with whom customs officials deal, not the railroad or the freight-forwarder. There is often not enough shipper involvement in the clearance process to clearly identify who the shipper is and what is being shipped. This issue has become a matter of national security since 9/11.

Another problem facing the Mexican railroad industry is a shortage of intermodal facilities throughout the country. According to McCosh (2001), intermodal service has improved since rail privatization, but is still slow and inefficient. Mexican Railways and the Northeast Railroad are planning new intermodal facilities in Mexico City and Guadalajara, among other places. The Pantaco terminal in Mexico City is incapable of handling much more traffic, but the new facility is expected to triple the current lift capacity in

Mexico City. Intermodal movements using rail for long hauls are expected to grow over the next few years.

## **MEXICAN TRUCKING**

The Mexican trucking industry currently accounts for approximately ninety percent of all goods transported within Mexico (Ross, 2001). Cross-border trucking by Mexican carriers, however, continues to be restricted to a twenty-mile commercial zone along the American-Mexican border. This restriction contradicts the North American Free Trade Agreement which stipulated that Mexican trucks would be allowed free access throughout the border states of California, Arizona, New Mexico and Texas by 1995. The North American Free Trade treaty also stipulated that by January 1, 1999, trucks from either country would be allowed cross-border access to any point in the other country. By 2000, foreign investment in trucking companies would be allowed up to fifty-one percent of the company and by 2003, 100-percent ownership would be allowed. To date, neither country is in compliance with these provisions. The United States government has not given Mexican trucks access to the United States because of safety and labor concerns. Opposition in the U.S. has been led by organized labor and highway safety lobby groups. The Mexican government has reciprocated by not allowing American trucks access to Mexico.

### **U.S. Opposition to Open Borders**

The International Brotherhood of Teamsters, U.S. consumer groups, and U.S. insurance underwriters have combined to create a powerful political coalition that opposes opening the border to Mexican trucks. The teamsters opposed the idea of NAFTA from its inception based on the belief that American union members would lose their jobs to less expensive Mexican truckers. James Hoffa, the president of the Teamsters Union, has been a strong and outspoken opponent of opening the border to Mexican trucks predicting that it would cost several thousand union jobs (Hall, 1999).

Consumer groups, including Citizens for Reliable and Safe Highways (CRASH), have cited Department of Transportation (DOT) statistics that show commercial trucks account for a significant and disproportionate number of highway accidents and fatalities in the United States. For example, in 1997 the DOT reported 444,000 large-truck (greater than 10,000 pounds) accidents in the United States, resulting in 5,355 deaths and 133,000 injuries (Leming, 1998). Twenty percent of the reported injuries were catastrophic, meaning loss of limbs, brain damage, or paralysis requiring long-term medical care.

The lack of an adequate number of U.S. truck safety inspectors at the border has also been well documented. For example, only four full-time truck safety inspectors are assigned at the main border crossing at Laredo, Texas which processes an average of 3,850 Northbound trucks a day (TAMIU, 2002). The insurance industry is also concerned about the lack of hours-of-service limits in Mexico and the incompatibility of weight restrictions. In Mexico, trucks are allowed to weigh up to 130,000 pounds, compared to the United States where the limit is only 80,000.

The Teamsters union claims that Mexican trucks are unsafe and that Mexican trucking will eliminate American jobs are questionable. The Government Accounting Office (GAO) published a safety study in 1996 which reported that 45% of inspected Mexican trucks did not pass safety tests while 28% of American trucks failed the same tests. In 2000, the GAO reported that the number of Mexican trucks that failed safety inspections had fallen to 36%, compared to 24% of American trucks (GAO, 2000). The 2000 report suggested that the percentage of Mexican trucks failing the safety inspections might be linked to the twenty-mile limit placed on Mexican trucks entering the United States. According to a study by Ross (2000) Mexican firms do not use their best trucks for short trips across the American border into the commercial zone. Rather, the best Mexican trucks are reserved for long haul trips, which prevents

them from being used in cross-border trade. This would tend to indicate that the overall safety record for all Mexican trucks might be better than that reported by the U.S. Department of Transportation. This discrepancy is supported by a U.S. DOT study which reported that, of 500 Mexican trucks caught making illegal long haul trips into the United States in 1999, fewer than 30% failed rigorous safety tests (Mongelluzzo, 2000).

The Teamsters Union's claim that American jobs will be threatened is also questionable. Mexico has about 375,000 registered commercial trucks and 15 large motor freight carriers as compared to approximately 7,000,000 commercial trucks and over 400 large carriers in the United States (Mongelluzzo, 2001). While it is possible that Mexican trucks could secure some truckloads of merchandise in Mexico for delivery into the United States, Mexican carriers would need a sales and marketing presence in the United States to secure backhaul loads. Without backhauls, Mexican trucks would be driving many empty, unprofitable miles. It is highly unlikely that only a small number of Mexican motor carriers with modern vehicles and well-trained drivers would be able to successfully compete with American trucking industry inside the United States.

### **Progress Toward Open Borders**

Since 1987, the United States government has invested approximately \$370 million for capital improvements to help facilitate cross border truck movements. The vast majority of this federal money has gone to the border states of California, Arizona, New Mexico and Texas to build new ports of entry and improve/expand existing ports of entry. New truck inspection facilities have been built with this money and highways near the border have been widened (GAO, 2000). In addition new customs procedures have been developed and implemented.

The U. S. Customs Service is now using a system called the Automated Targeting System at five

border locations. The purpose of this new computer-based technology is to expedite the flow of Mexican imports by identifying "problem" shipments before they arrive at the port of entry. Non-problem shipments are then processed faster by U.S. Customs. This new system is linked to another U.S. Customs innovation called the Border Release Advance Screening and Selectivity Program. This program is designed to speed up imports made by companies who regularly import through a given port of entry more than fifty times a year using the same truck and the same driver. The GAO (2002) estimates this program applies to ten percent of the truck traffic entering the U.S. from Mexico. While these improvements have provided better border inspection facilities and in some cases, better customs procedures, inadequate border staffing by federal agencies including the U.S. Customs Service, DEA, USDA, and the Immigration Service continues to be a limiting factor for cross-border transportation. The lack of adequate manpower at the U.S.-Mexican border has been exacerbated by the requirement to shore up law enforcement and security forces along the U.S.-Canadian border following the 9/11 terrorist attacks. While homeland security has become the most important border issue facing the Bush Administration, President Bush appears committed to complying in full with the NAFTA trucking provisions.

The Bush Administration appears to be much more inclined to push for an opening of the U.S. to Mexican trucking. President Bush has made it very clear that he supports the implementation of the NAFTA provisions despite opposing views from the Democratic Party in Congress. In August of 2001, the Senate voted to impose stringent safety requirements on Mexican trucks that travel on American highways (Samuel, 2001). These requirements include mandatory inspections at the United States border and insurance provided by an U.S. licensed insurer. The Bush administration has pointed out that Canadian trucks are not forced to meet these standards, which has led to claims of discrimination from the Republican Party. Former Republican Senate Minority leader,

Trent Lott, has called this bill "anti-Hispanic." President Bush has promised to veto the pending transportation bill if these standards are required of Mexican trucks. However, this issue has become moot in view of recent developments.

On November 27, 2002, the U.S. Department of Transportation (DOT) announced that the Bush administration would begin allowing Mexican-domiciled trucking companies to apply to the DOT for operating authority from Mexico into the United States (Gamboa, 2002). In so doing, President Bush modified the 1982 congressional moratorium on Mexican trucking in the U.S. and fulfilled U.S. obligations under NAFTA. However, before any Mexican trucking company can begin cross-border freight service, its service proposal must be approved by the DOT's new Federal Motor Carrier Safety Administration (FMCSA).

Secretary Mineta has said the FMCSA now has adequate border inspection facilities and trained personnel in place to insure Mexican trucks and drivers entering the United States comply with the same safety standards U.S.-domiciled trucking companies are held to (Longo, 2002). These standards include drug and alcohol testing, a limit on operating hours without rest and logbooks. In addition, Mexican drivers who operate in the U.S. must possess a *Licencia Federal*, the equivalent of the U.S.'s Commercial Driver's License (CDL). Mexican trucking companies granted operating authority under this new process will be allowed to deliver goods originating in Mexico to any destination in the United States and will be allowed to back-haul freight to Mexico. Under the terms of NAFTA, Mexico is obligated to extend the same opportunities to U.S.-domiciled trucking companies.

### MANAGERIAL IMPLICATIONS

The improvements that have occurred in Mexico's rail freight system and the recent decision of President Bush to open the U.S. to Mexican motor freight transport have implications for many sectors of both the U.S.

and Mexican economies. As of November 27, 2002, 130 Mexican-domiciled motor carriers had applied to operate beyond the border commercial zones in the United States (Longo, 2002). The DOT estimates that about 60 of these motor carriers have met the basic requirements and are ready for a FMCSA safety audit (Longo).

Based on these numbers it would appear the initial impact of Mexican trucking on shippers and competing U.S. motor carriers will be minimal. Most Mexican motor carriers are small and lack the capacity of the average U.S. international trucking company. Since most U.S. truckload carriers are larger and more experienced in competitive markets, they will likely benefit more than their smaller, less experienced Mexican counterparts. Truckload shippers in the United States will have more service choices in moving their freight to Mexico which may result in lower rates. It is unclear at this point what rates Mexican motor carriers will offer on backhauls but with lower operating costs, it is safe to assume selected rates will be lower than current rates being offered by U.S. motor carriers. U.S. motor carriers like Schnieder and Contract Freighters, Inc. (CFI) who have significant trucking operations to and from the Mexican border will be most affected. While most of the attention over NAFTA and cross-border transportation has focused on motor freight, the recent improvements in Mexico's rail industry have much broader implications for the long term.

Rail freight transportation offers the lowest cost alternative for many Mexican and international companies who ship large quantities of finished goods from Mexican assembly plants (*Maquiladoras*) to U.S. and Canadian destinations on a regular basis. Large volume shipments of heavy manufactured goods like automobiles and durable household goods are best suited for rail transport. In the past, the Mexican National Railroad was not an effective mode for either domestic shipments or cross-border shipments. Over the last ten years privatization of Mexico's railroads has brought about many service improvements. In addition,

several large U.S. and Canadian railroad companies are now major partners with Mexican rail interests. As intermodal improvements are implemented, the number of carloadings and containers moving by rail between the U.S. and Mexico will continue to increase at a rapid pace. In fact, under a new U.S. initiative stimulated by NAFTA called the "Borders and Corridors" program, the U.S. has authorized over \$140 million a year in grants to facilitate efficient cross-border rail freight movement (Hamberger, 2001). With federal encouragement, it is likely modern freight trains will travel from Mexican cities to U.S. cities as easily as international rail service between the U.S. and Canada. This, of course, will benefit North American shippers and lower the cost of imported goods for many North American consumers. It is likely international rail service will provide stiff competition for motor carriers on selected high-density routes over 500 miles much like the case now in the United States.

### CONCLUSION

The railroad industry in Mexico has made great progress over the past eight years. Beginning in 1994, operating rights for the state-owned National Railway were auctioned to private companies. The dilapidated state railroad was divided into three main sections: the Northeast Railroad, Mexican Railways, and the Southeast Railroad. The remainder of the railroad was divided into five small sections, the rights to which were also auctioned to the public. Private companies have invested hundreds of millions of dollars on rolling stock, infrastructure, security,

and locomotives. Efficiency has been improved by reducing the labor force, eliminating cabooses, building needed customs clearing yards close to the border, and by streamlining operations. Mexico has improved its railroads to the extent that they are now competitive with the nation's trucking industry, which until recently carried ninety percent of the country's freight.

Although the railroads have made dramatic improvements, trucking remains the most dominant mode of freight transportation in Mexico. The trucking industry in Mexico has improved to the point where the Bush Administration has agreed to allow Mexican-domiciled motor carriers to apply for operating authority into the United States on a regular scheduled basis. The Department of Transportation, beginning in the Clinton Administration, refused to allow Mexican trucks to penetrate beyond fifty miles into the country despite the provisions of the North American Free Trade Agreement, which specifically stated that Mexican trucks could deliver to any point in the United States beginning in 1996. The U.S. Department of Transportation has said it is now ready to process the applications and perform the safety audits necessary to insure safety requirements are met. Many economists believe that the operation of Mexican trucks in the United States will pose no threat to American jobs. It is more likely that U.S. domiciled motor carriers will be able to expand their international routes and manpower and take advantage of reciprocal operating rights to and from internal Mexican markets.

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