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Maquiladora Prospects in a Global Business Environment

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The Mexican in-bond assembly, or maquiladora, manufacturing sector has taken its fair share of lumps in recent years. Difficulties it has faced include currency market fluctuations, a business cycle downturn in the United States, intermittent border closures due to international terrorism, higher tax burdens, fiscal uncertainty, the China syndrome, and national legislative gridlock. Border infrastructure constraints Collectively, these factors have helped cause payrolls in this export-oriented segment to shrink in recent years (see Figure 1). While double-digit rates of expansion are not likely to occur as often in the future as they did in the past, overall prospects for maquiladora operations remain generally favorable but far from optimal.

Although frequently overlooked by many, the primary source behind much of the most recent boom in direct foreign investment flows to maquiladora plants was the December 1994 devaluation of the peso. Popularly known as the “Tequila Effect” devaluation, in-bond assembly industrial parks in Northern Mexico never even came close to suffering from the subsequent hangover that swamped much of Latin America and other developing regions of the world. As shown in Figure 2, the number of factories in operation increased from approximately 2.1 thousand in 1994 to more than 2.7 thousand in 1997. Strong growth also continued to be observed even after the peso strengthened, at least partially as a consequence of greater investor confidence in Mexico and its status as a member of the North American Free Trade Agreement (NAFTA).

While maquiladora wages are paid in pesos, manufactured products from those plants are sold for dollars. Direct foreign investment in this sector was spurred during the mid-1990s by sharply lower dollar-denominated wage bills. As detailed in Figure 3, average hourly wages dropped by nearly 35 percent in dollar terms in 1995. They remained below \$2.50 per hour for four consecutive years before the peso strengthened substantially in 1999. Since 1999, the dollar wage rates for maquiladora workers have climbed substantially above the levels observed in 1994, a year in which the number of plants in operation fell by nearly 4 percent (Christman, 2003). Consistently strong performance by the peso against the dollar has reinforced that trend.

Given the real appreciation of the peso versus the dollar, it is no surprise that the industry did not sustain the torrid rates of expansion that characterized the mid- to late-1990s. A number of other problems also hampered industrial performance during this period and contributed to the well-publicized offshore movements of some companies away from Mexico. Infrastructure overload in areas such as housing, public transportation systems, and the water and sewer system grids contributed to high rates of employee absenteeism and workforce turnover. Continually changing fiscal rules and import regulations, plus additional tax treatment threats, also complicated matters during the late 1990s.

Another major problem emerged in early 2001 when the United States economy slid into a recession. That development had a chilling effect on the maquiladora sector for the simple reason that almost all of its output is produced for north-of-the-border sales and distribution. Once United States industrial activity subsided in early 2001, it was

quickly followed by a “Michigan echo effect” throughout many of the in-bond assembly industries in Mexico (Millman, 2001). As soon as the recession hit north of the border, the ubiquitous help-wanted banners that flew outside major maquiladora industrial parks disappeared without a trace.

Impacts associated with the 2001 recession were complicated even more by the events of 11 September 2001. The border closures and subsequent security inspections caused innumerable delays at border crossings from Brownsville to San Diego. In response, many warehouse operations began to send cargo shipments north once trucks held 20- or 30-percent loads, well below the 100-percent loads that helped reduce transportation costs. In addition to higher operating costs, the delays and intermittent closures wreaked havoc on a number of just-in-time inventory management systems and created ongoing headaches for logistics managers. These complications generated large-scale changes in cross-border traffic patterns in El Paso and other ports-of-entry (Figures 4 and 5).

While international business cycles and global terrorism cause obvious difficulties, maquiladora managers have also been forced to deal with the specter of fiscal uncertainty (Cañas and Coronado, 2002). Tax proposals of many guises have appeared in recent years at federal, state, and municipal levels of government in Mexico in recent years. Some of the most worrisome have been measures that would have resulted in double-taxation at the federal levels in Mexico and the United States. In several cases, tax laws enacted since 1997 have resulted in substantially higher collections. Examples include federal social security taxes, federal retirement taxes, and state payroll taxes in Chihuahua. During this same period, transfer price accounting regulations in Mexico have also varied enormously.

While large numbers of tax code changes have been adopted, revoked, proposed, changed, and distorted in recent years, surprisingly little has occurred in other regulatory areas that affect the private sector in Mexico. The national labor code dates from the presidency of Lázaro Cárdenas in the late 1930s. This document is nominally designed to protect worker rights. As in other parts of Latin America, however, the rigidity it imposes on the labor market increases underemployment and causes the economy to fail to reach its potential in terms of output and incomes (Heckman and Pagés-Serra, 2000).

Similar to the labor code in Mexico, municipal regulatory burdens also make it difficult for maquiladoras and other businesses to operate efficiently. Business registration red-tape is enormously complex. Navigating those labyrinths is both tortuous and tricky. Once an operation is legally registered as part of the “formal economy,” costs of operations remain higher than necessary due to the impacts of other administrative regulations that in-bond assembly plants must satisfy (Freije, 2002). Ultimately, the failure to obtain congressional approval for those and other market oriented, structural adjustment reforms has increased the attractiveness of other geographically distant markets.

The most prominent example, but certainly not the only one, of a geographically distant competitor that has emerged is China. Fears of the so-called “China Syndrome” are probably exaggerated. Mexico still enjoys important competitive advantages with respect to merchandise transit time, transportation costs, labor force quality, communications infrastructure, intellectual property protection, and access to the United States market (Watkins, 2002). Nonetheless, while direct foreign investment in maquiladoras slowed in the early 2000s, it accelerated in the Chinese manufacturing sector. A logical question to ask, therefore, is whether more than just cyclical factors are at play?

A principal source of Mexico’s traditional comparative advantage in global production sharing is geographic proximity to the United States. Relatively low wages made labor-intensive manufacturing in Mexico a natural extension for many industries facing import competition in the United States. As managerial experience with offshore assembly management grew, multinational corporations began to seek other potential plant sites in low-wage countries such as Honduras, El Salvador, or the Dominican Republic. Eventually, China began to attract attention as well.

While China has undeniably low wages, the fact that a nominally communist country could trigger plant closures in Mexico caught many by surprise. A major factor in this turn of events has been ongoing deregulation of the Chinese economy during a multi-year period of congressional gridlock in Mexico. Essentially, Mexico’s failure to continue introducing market-oriented, structural adjustments has allowed China to play catch-up and shrink the erstwhile regulatory gap between the two economies (Anderson, 2003). Geography has, to a certain extent, been overcome by excess regulatory burdens in Mexico. Even if congressional refusal to allow Mexico’s economy to operate more efficiently remains in tact, maquiladoras are not necessarily headed into an East Asian sunset.

There are several reasons for that assessment. One is that for relatively heavy products with high transportation costs, Mexico is still hard to beat. A second is that in-bond assembly work has given way in many segments to more skilled manufacturing processes that rely upon an experienced labor force such as Mexico’s. Another is that Mexico has relatively good physical transportation and telecommunications infrastructure (Watkins, 2002). It should be noted, however, that Mexico’s self-inflicted erosion in the erstwhile regulatory gap will increase the relative attractiveness of China for products that are not bulky and whose warehousing requirements are fairly easy to predict.

An additional cause for limited maquiladora optimism is the prospect for an eventual business cycle recovery in the United States. Payrolls in Ciudad Juárez, home to the largest concentration of maquiladora activity in the country, historically begin responding within 60 days or less to changes in industrial activity on the northern side of the border (Fullerton and Schauer, 2001). Although a return to rapid growth in the United States is not currently forecast, any type of cyclical acceleration will almost assuredly generate an expansionary “Michigan echo” effect when it occurs. The slow recovery currently projected for the United States is projected to result in roughly 15

thousand new maquiladora jobs, 5 additional plants, and nearly \$260 million of increased value-added in Ciudad Juárez and Chihuahua alone in 2003 (Fullerton and Tinajero, 2002).

Dire predictions of the immediate demise of the maquiladora industries in Mexico are clearly premature and greatly exaggerated. In-bond assembly and maquiladora export service companies do, however, remain hampered by excessive red tape and fiscal uncertainty. Given the fractious natures of both chambers of the national legislature in Mexico City, that situation is not likely to improve measurably at any point in the foreseeable future. Unfortunately, that circumstance is likely to cause Mexico's economic dynamo to perform at less than full capacity for many years to come.

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Figure 1
National Maquiladora Employment

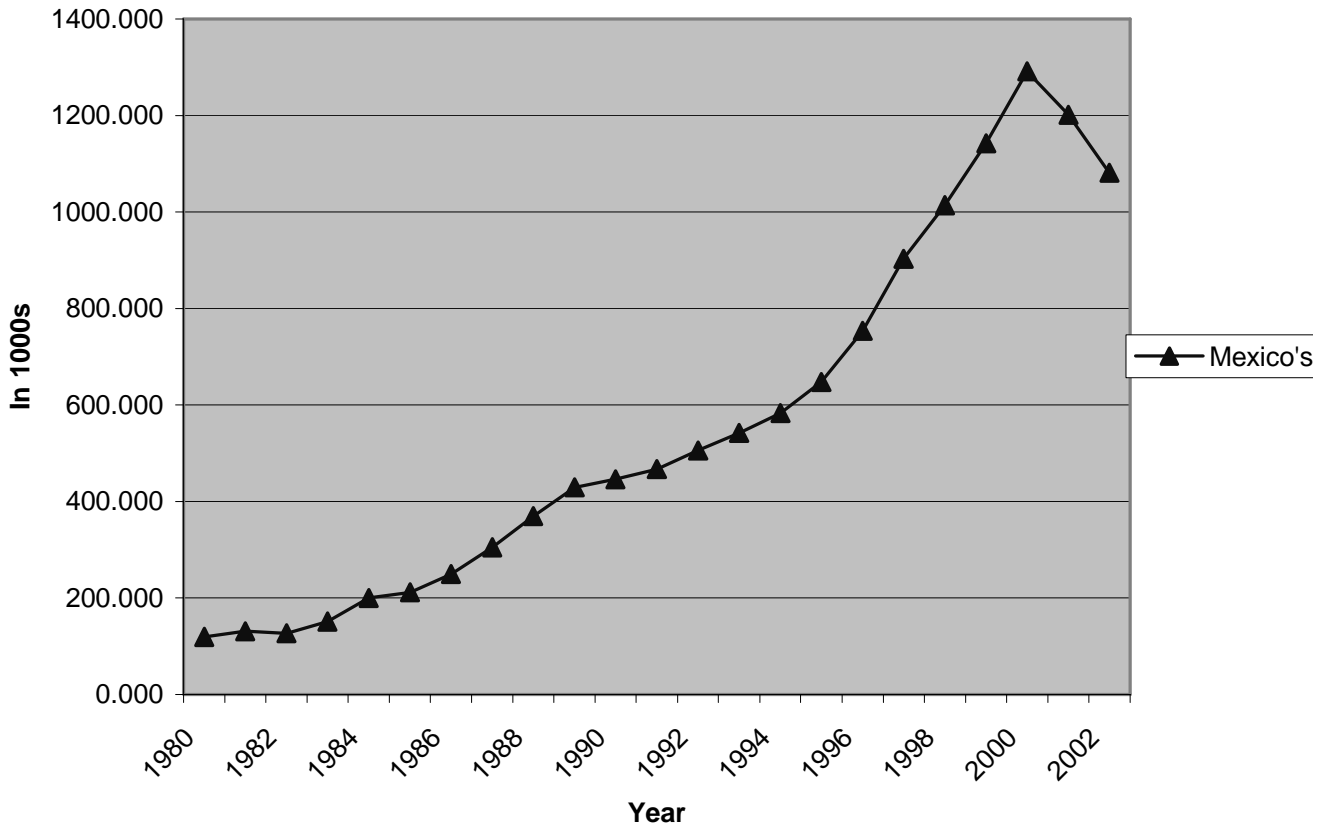


Figure 2
Maquiladora Plants in Operation

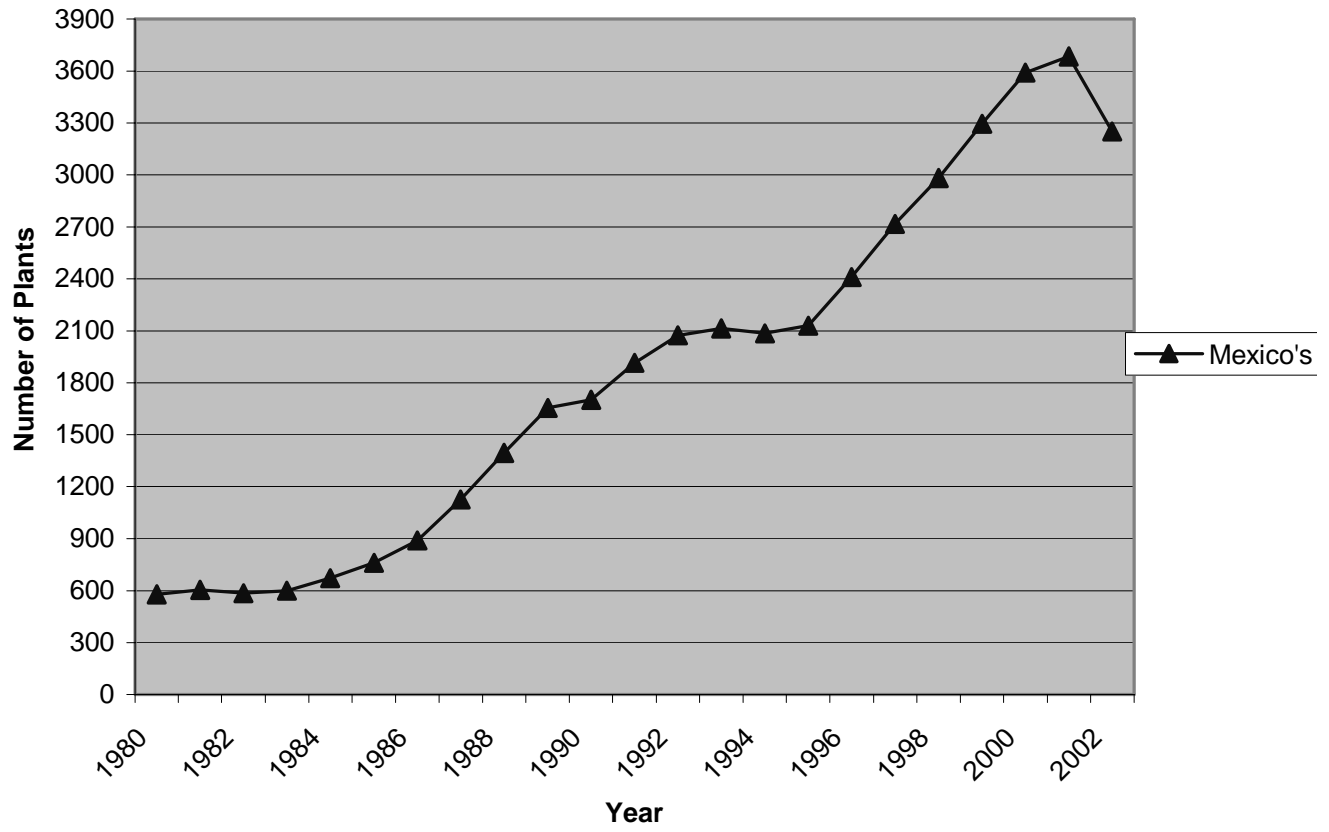


Figure 3
National Maquiladora Hourly Wages

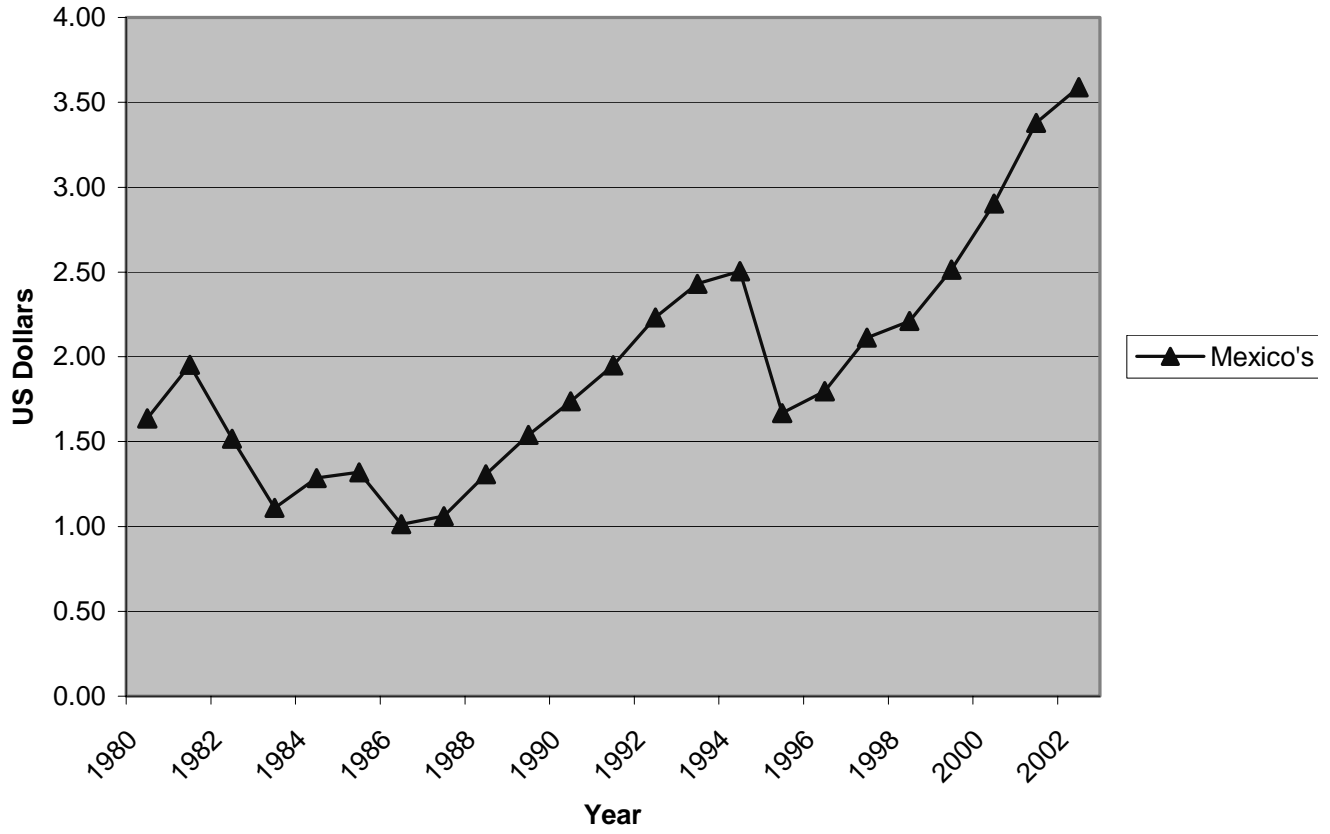


Figure 4
El Paso Bridge Crossings

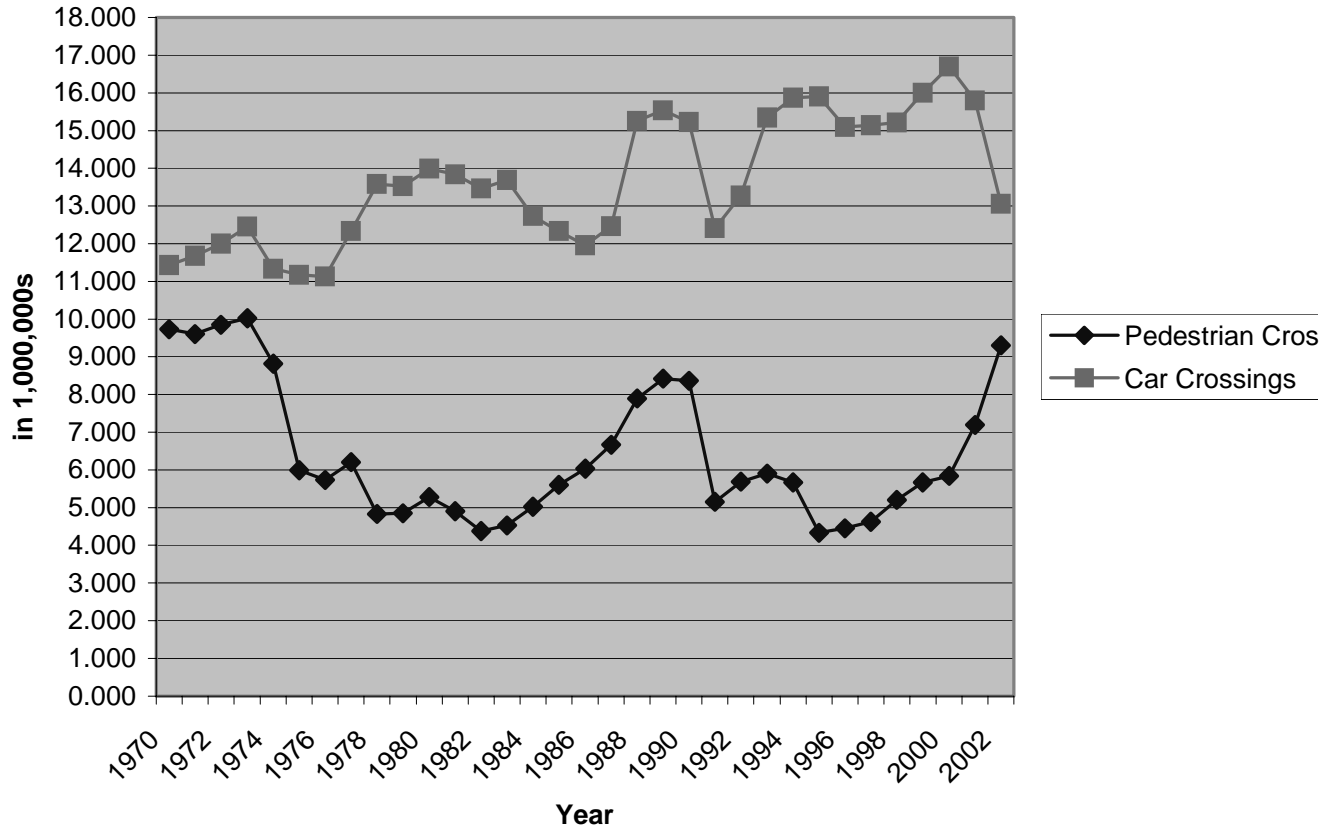


Figure 5
El Paso Cargo Vehicle Crossings

