JAPANESE INVESTMENT IN THE BORDER REGION OF THE UNITED STATES AND MEXICO

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Working Paper No. 54

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This paper is a preliminary draft of a presentation made at the Association of Japanese Business Studies in Honolulu, HI on January 4th, 1991. Please do not cite or quote without permission of the author.

Working Paper Series
Center on Japanese Economy and Business
Graduate School of Business
Columbia University
August 1991

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Introduction

Dramatic improvements in communication and transportation technologies along with the growing similarity of countries, fluid global markets, and increased competition have all contributed to the global expansion of industry (Robock & Simmonds, 1989). In an effort to enhance competitiveness, multi-national corporations (MNCs) often locate manufacturing or assembly operations wherever the mix of labor, materials, transportation, and distribution of customers could be optimized. For instance, MNCs frequently place labor intensive operations in the developing countries of Asia, in part, to reap cost savings from the significant wage differentials between those countries and their markets in more developed countries. In more recent years, however, a number of MNCs have spurned the developing countries of Asia in favor of the border region between the U.S. and Mexico.

The U.S.- Mexico border area, stretching from the Pacific ocean to the Gulf of Mexico, extends nearly 2,000 miles and represents the world's longest border between a major industrialized country and a developing one. Today, an estimated 1,000 (Kuzela, 1987) to 1,400 (Rohan, 1988) assembly or manufacturing operations of foreign MNCs, often called 'maquiladoras,' exist on the Mexican side of the border. These firms employ some 310,000 Mexicans and according to one study, could employ as many as 3 million workers by the year 2000 (Castro, 1987). While the overwhelming majority of the maquiladoras are owned by U.S. companies, MNCs from a number of other countries, in particular Japanese, have been active in establishing manufacturing and assembly plants in this region. According to a recent study by the International Trade Commission, Japanese MNCs will invest up the $1.5 billion between 1991 and 1994 in maquiladora operations, opening an average of 100 plants a year.

Given the increasing presence of Japanese firms in this region, the purpose of the current paper is to provide the following - First, some background information on the development of the border area between the U.S. and Mexico. Second, a short survey of Japanese investment in this region. Third, outline factors that have influenced Japanese MNCs to invest in this region. Fourth, a brief comparative analysis of some of the differences between Japanese and American investment. Fifth, an outline of some of problems faced by investors in this region. Finally, the current paper presents future prospects for this region, as well as, a set of questions that need scholarly attention.

Development of the Border Region

In 1965, as an effort to combat high unemployment in its frontier region and to generate much-needed dollars for foreign exchange, the Mexican government established the Maquiladora[1] program. As with other offshore export processing zones (EPZs) it was the Mexican government's desire that by offering certain incentives, MNCs would establish

1 The word maquiladora comes from the spanish word maquila which in colonial Mexico was the charge that millers collected for processing grain.

manufacturing or assembly operations within their side of the border with the United States. These maquiladora plants, often called 'in-bond' plants, operate under tariff concessions from both the U.S. and Mexican governments. The term 'in-bond' comes from the fact that those components which are brought into Mexico, be it raw materials, parts, or production equipment, are imported under a bonded status. These 'imports' are not sold in Mexican markets, but are processed and re-exported for sale in foreign markets, usually the United States. On the American side, tariff charges on the goods shipped backed to the U.S. apply only on the value added, specifically the value of the imported good minus the cost of any original American components.

Initially the Maquiladora program restricted participating firms to those urban areas within 12 1/2 miles of the border between the U.S. and Mexico. However, in 1972 the regulations were revised to authorize operations throughout the interior of Mexico. In 1983, another major revision in the program made it legal for a maquiladora operation to sell up to 20 percent of its production capacity in the domestic Mexican market (after appropriate Mexican government approval) without payment of duties (McCray & Gonzalez, 1989).

Technically a maquiladora is a Mexican corporation but with special legal status that allows it to bypass some of the limiting restrictions of the Mexican foreign investment law. For example, maquiladoras are exempt from the requirement that least 51 percent of the ownership be a Mexican national. Also, maquiladora ownership can be established as a non-Mexican wholly owned subsidiary or as a joint venture with Mexican or non-Mexican partners.

To further encourage investment, the Mexican government recently authorized a debt for equity swap whereby Mexican government bonds are traded in the market at a price 55 to 60 % lower than face values. When foreign companies buy the bonds, the Mexican government will repurchase them with pesos at a price of 75 to 100% of the face value. This process makes it easier for foreign companies to invest the surplus in operations within Mexico. Originally set up to favor foreign auto companies and tourism related companies, a number of foreign MNCs have utilized this program for raising capital for their maquiladora operations.

Other features of the maquiladora program include: 1) six month renewable visas, allowing multiple entries to non-Mexican management and technicians who work in maquiladora operations; 2) while certain expenses of the company must be paid for at a controlled rate of exchange, fixed asset acquisitions may use funds converted at the free market rate of exchange; 3) a 'shelter program' making it possible for foreign businesses, particularly smaller firms, to use maquiladoras without the risk of making a major investment. Under this program, a local developer is in charge of supplying the building, electricity, water, and labor. All that is needed of the foreign business is to supply the raw materials, equipment, as well as, the management. Finally, only about one third of the maquiladora plants have organized labor, primarily those in the Mexican state of Tamaulipas, adjacent to the southern Texas border.

There are almost no restrictions on what can be produced in a maquiladora. Primarily, these plants manufacture labor intensive electrical, mechanical, and sewn products such as television components, oven timing devices, carburetors, and seat covers for new cars. However, such items as waterbeds, toys, and trombones are also produced.

From 1965 until 1982 the number of maquiladoras grew steadily. At the end of 1965 there were approximately 12 maquiladora plants in the border region employing about 3000 workers. By 1970 the number of plants had grown to 120 and the number of workers to about 20,327. By 1975, the number of plants had grown to 454 and the number of workers to 67,214. However, since 1982 there has been an explosion in the number of establishments. Ironically, the accelerated growth of the maquiladora industry has been attributed to, at least in part, to the general economic decline in Mexico and the devaluation of the peso in 1982 both of which were cause by the nearly $100 billion in debt accumulated by Mexico after the drop in oil prices in the early 1980s.

Today, with over $3 billion in foreign exchange, maquiladora manufacturing is Mexico's second biggest export earner, after oil but ahead of tourism (Jacobson, 1988). The maquiladora industry now accounts for about 10 percent of Mexico's total foreign exchange earnings, one percent of the total labor force and two percent of total mexican wages. In fact, while the Mexican economy created almost no new jobs in the latter part of the 1980s, employment in the border plants grew by an average of 18% per year.

Japanese Investment in the Border Region

Mexico and Japan have a long relationship, reportedly dating as far back as 1613 when the first official representative of Japan visited Mexico (Pearce, 1987). In modern times, diplomatic relationships between the two countries was established in 1888 (Pearce, 1987). Today, with 6.5% of the total investment, Japan is the third largest foreign investor in Mexico after the U.S. and West Germany (Business Latin America, 1988). And Mexico ranks third behind Brazil and Panama in terms of Japanese investment in Latin America (Business Latin America, 1988). Specifically, as of March 1987, Japan's total investment in Mexico was $1.56 billion, with roughly 59% in manufacturing and another 33% in raw materials processing. The remainder is in a range of service sectors, including tourism and trading.

Investment by the Japanese in the maquiladora industry has come much later than their U.S. counterparts. Prior to 1986 there were only eight Japanese maquiladoras. However, given Japan's growing role in the world economy, the Mexican government recognized that Japan should become a major player in the maquiladora program. As such, the Mexican government announced in July of 1987 that it established a special binational committee to encourage Japanese firms to invest directly in Mexico. This committee's responsibilities include: 1) supplying information on possible investment sites 2) consulting specific investment plans, e.g. the matching of a business partners for joint ventures, and 3) offering capital management.

Today, by various estimates, the number of Japanese maquiladoras range from two percent (Toyo Keizai, 1989) to ten percent of the more than 1200 maquiladoras currently in operation. As many as one third of the Japanese maquiladoras are concentrated in one city, Tijuana, which is located just south of California. In Tijuana, Japanese maquiladoras employ as much as 30% of that city's 25,000 maquiladora workers (Fortune, 1986). Interestingly, this concentration of operations tends to give outsiders the impression that Japanese firms dominate the maquiladora program.

Despite having a relative minority position in the program, Japanese maquiladoras have made a significant impact on several industries. For example, as one of the first Japanese firms to venture into the maquiladora program, Matsushita opened up a plant in Tijuana employing 1700 workers in the production of color televisions. This was followed by similar plant openings by Sony and Sanyo. These three plants in aggregate produce some five million televisions annually. In fact, Japanese maquiladoras produce so many televisions that Mexico has become the third largest exporter of televisions, behind Taiwan and the republic of Korea (Economist, 1988).

Historically, Japanese companies have set up two basic types of maquiladora operations, electronic assembly plants and auto-part assembly plants (Business Mexico, 1987). However, similar to their U.S. counterparts, Japanese maquiladoras produce a diverse set of products including furniture, toys, and sporting goods.

Factors Influencing Japanese Investment in Mexico

A number of factors have attracted Japanese[2] firms to Mexico in general and to the border region in particular. These include - 1) significantly lower labor and energy costs; 2) advantages due to Mexico's geographic location; 3) a more relaxed legal and regulatory environment.

Labor and energy costs. The most obvious driving force behind a decision to invest in the border region is the potential access to low wages. Today, depending on the geographic area and the devaluation-wage-hike cycle, the minimum wage along the Mexican side of the border ranges between 50 cents an hour to $1 an hour, including benefits such as holiday pay, meals, housing, bus rides, attendance bonuses, and childcare. Many companies offer production incentives that boost wages by 30 percent to 100 percent, but the total is still one of the lowest in the world (Jacobson, 1988). On average, the companies save $16,000 per worker each year. and that figure goes up for more specialized workers - many companies are saving as much as $25,000 per year per employee (Tolan, 1990).

In addition to low wages, a MNC opening a maquiladora operation can expect significant reduction in energy expenditures. Although not always dependable, gas and electric utilities fees are significantly lower than across the border in the United States

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2 A significant number of Japan's investments in the border region do not originate directly from Japan but instead are incorporated as subsidiaries of Japanese operations in the United States.

(Business Latin America, 1988). This could be a major factor in some firm's decision to locate in the border region. For example, Kyocera set up a maquiladora, in part, because the lower power costs in Mexico could translate into significant savings, given that the energy-intensive aspect of the production process involves high-temperature firing of ceramic products (Business Latin America, 1988).

Geographic Advantages. Having nearly a 2,000 mile border with a developed country and the world's largest consumer market, Mexico is strategically located to serve as a platform from which Japanese firms, or for that matter American, can launch products. Because most of the maquiladora operations are very near to the Mexican-U.S. border, a company can easily link its operation to the U.S. either by highway, rail, air, telephone, or telex services. Transportation costs from Mexico to the U.S. may be only one tenth the cost of transportation from developing countries in the Far East to the United States. Also, shipping time is greatly reduced. Items can usually be shipped from the Mexican border to anywhere in the U.S. within three days. The shipping time from the Far East is usually two to three weeks. Because the transportation time is reduced, inventory costs are much lower. In addition, transportation costs often make it uneconomical to fabricate heavy or bulky products in Asia for shipment to the U.S., such problems are of less concern with operations along the U.S. - Mexican border.

A second advantage of its geographic proximity to the U.S. is that a wide variety of equipment, including often critical industrial supplies such as complex motors and cutting tools, can be made available in a timely fashion. This availability of supplies is important in that it may prevent lengthy production delays which may be more commonplace in operations located in more remote developing countries. In addition, raw materials of excellent quality are readily available in the United States. Finally, Japanese companies have found the border region to be particularly attractive, vis-a-vis other developing countries, since expatriates working at the plants are able to live on the American side of the border thus securing better education, housing, and medical attention for their family.

A Relaxed Legal and Regulatory Environment

As mentioned earlier, a special provision of the Mexican tariff code allows duty-free movement of goods across the border from the U.S. so long as the items are assembled for products that are re-imported to the United States. In addition, as special provision of the U.S. tariff codes, tariff charges on the goods shipped backed to the U.S. apply only on the value added.

The opportunity to circumvent the tax, environmental and labor laws in the U.S. is also seen as a strong motivated for MNCs to establish an operation on the Mexican side of the border. For instance, many of the environmental and labor laws in Mexico are less stringent than those in the United States. Further, Mexican laws that do exist, such as those that are meant to protect the environment, often suffer from relaxed enforcement. This has allowed many MNCs to evade the stricter, and often more costly, environmental codes of the United States. For example, officials suspect that some maquiladora operations are dumping millions of gallons of toxic chemicals into sewer each year (Tolan, 1990). Many of these chemicals are imported into Mexico and are severely regulated in the United States. Moreover, according to surveys taken by the Colegio de Sonora, a research institute in Hermosillo, many workers regularly handle toxic chemicals without proper safety clothing or adequate training. However, relaxed enforcement of safety codes often allow such violations to continue unfettered. Further, this lack of enforcement played an important role in campaigns by industry officials to lure companies to Mexico (Tolan, 1990).

Finally, some Americans believe that the Japanese are interest in the U.S.-Mexican border region because it offers them a backdoor into the U.S. economy. There is a claim that many Japanese firms take advantage of the maquiladora program to evade U.S. trade sanctions. For example, when the retaliatory tariffs on Japanese semiconductors were announced in April 1987, Japanese semiconductor firms operating in Mexico were not subject to those penalties.

Differences between Japanese and American Investment

While the maquiladora operations of Japanese and American firms are similar in theory, in reality, there are several notable differences. For example, one significant difference, industry analysts say, is that the Japanese, backed by the strong yen, have broken ranks with their US counterparts by offering salaries considerably higher than the industry average. This is most prominent in the Tijuana area, where many of the Japanese plants are located. In this region, wage rates in Japanese maquiladoras have risen to 150% of the industry norm.

A second industry trend led by the Japanese is the increased use of locally based suppliers - although not necessarily Mexican.[3] Recently, Japanese and Korean supply firms with long-established ties with major Japanese MNCs, e.g., Sony and Toshiba have gradually started setting up local operations. Some analysts see this trend as the second wave of Japanese investment in the border region since as many as 200 suppliers are either scheduled to open up a plant in the border region or preparing to make the move in the next year or two.

Third, compared to American plants which tend to keep a low profile in Mexico, the Japanese do not seem to hesitate to stand out (Nikkei Sangyo Shimbun, 1989). For example, many Japanese maquiladoras prominently display their company logo at the site of their operations. Fourth, although there is no data to support their judgments, anecdotes from industry experts suggests that Japanese maquiladoras are run more efficiently than their U.S. counterparts. For instance, at a Panasonic plant in Tijuana, staple guns go off in a rapid-fire staccato; whereas they pursue a more leisurely pace in American-owned plants (Fortune, 1986). Fifth, although perhaps less than 100 of the 1200 maquiladoras are Japanese affiliated, the Japanese plants tend to be bigger than those that are U.S.-owned

3 At present less than 5% of parts and raw material inputs are locally sourced.

(Economist, 1988). The average Japanese plant has 550-650 employees, double the industry average (Business Latin America, 1988).

Sixth, most big U.S. manufacturers prefer the Mexican towns along the Texas portion of the U.S.-Mexican border whereas, as mentioned earlier, the majority of Japanese maquiladoras have tended to concentrate in Tijuana in the west. There are two reasons for this pattern of dispersion. First, by having their plants near the Texas border region, U.S. affiliated maquiladoras are closer to their midwestern industrial bases. The Japanese, on the other hand have preferred Tijuana because it is a pacific port, and as such, closer than Texas to their source of raw materials coming from the far east (Wiegner, 1987).

A second reason for this pattern of dispersion is that the flat open countryside of eastern Mexico also permits construction of American-style industrial parks, preferred by many of the U.S.-owned maquiladoras. For instance, in Ciudad Juarez just south of El Paso, some 200 U.S.-owned plants are concentrated in a half dozen big industrial parks. However, to the consternation of Mexican developers, the Japanese have eschewed locating in these huge parks, preferring to either to build their own stand alone units or to develope their own parks to house maquiladoras set up by other Japanese (Business Latin America, 1988). The Japanese have gone so far as to bring in their own contractors, landscapers, builders, and engineers, rather than use local developers. This has been a source of tension between the Japanese and the local Mexican business community.

Seventh, some Japanese operators are more willing than others to make outlays to improve roads and property surrounding their plants. In part, this is a function of the large scale of Japanese operations as well as their location. For instance, many Japanese operations are in Tijuana, where there is a greater problem with the infrastructure, e.g., water and electricity supply problems. Finally, the Japanese have shown a greater propensity to enter into a long-term commitment to manufacturing and not just to assembly.

Problems Faced by Japanese Investors in the Border Region

Like their U.S. counterparts, investments by the Japanese in the border region are affected by inefficiencies in the sector, including an inadequate infrastructure and problems in human resources. Japanese maquiladoras are further hampered by cultural differences between themselves and Mexican workers and by a deteriorating image in the U.S. market.

Inadequate infrastructure. One problem facing all maquiladora operations is the lack of a solid infrastructure. The rapid growth in some border areas have strained government services, such as water, power, transportation, and sewerage and wastedisposal facilities. For example, in Tijuana, water pumps supplying homes and factories have routinely shut down and power outages and brownouts have been common (Fortune, 1986). In addition customs delays in importing materials or components can also present problems at some border crossings.

Human Resource Problems. One of the major drawbacks to operating a maquiladora plant is the historically high turnover rates, as high as 130% per year among blue collar workers (Business Latin America, 1986). This has had a significant impact on the operating efficiencies of these plants. For example Fashion Enterprises, Inc. a coat factory in Ciudad Juarez, employed 1,100 workers and spent about $450,000 a year training new arrivals (Fortune, 1986). In addition, some Japanese worry that the high turnover rate among maquiladora workers might adversely affect product quality.

Tokyo Cabinet Kogyo, specializing in making cabinets for TVs and stereo sets and speakers, discovered that many workers come from poor big families, and quite a few have to stay home frequently in order to take care of their younger brothers and sisters (Nikkei Sangyo Shimbun, 1987). However, while the average monthly rate of turnover is 10 to 20 percent, among people staying at the plant for more than three months, the rate of leaving drops sharply. Another problem for operators of maquiladoras is the scarcity of well-trained Mexican engineers (Fortune, 1986). Finally, many maquiladoras suffer from an epidemic of pilfering of raw materials and products from the plant by workers.

Cultural differences. Many Japanese clash with Mexicans over work habits. The Japanese, said one Mexican lawyer, think "one Japanese is worth eight mexican (Business Week, 1987)." Mexicans, on the other hand, awed by the Japanese penchant for intense fact-finding, planning and detail, sometimes refer to the new investors as "the little ants"

(Wiegner, 1987). Some Japanese firms have found that due to these cultural differences, management in Mexico is much more difficult than in Southeast Asia. A manager for Yazaki Sangyo, which has operated two plants in Ciudad Juarez since 1982, says that the first two years of operation met a series of troubles and that it took five to six years to implement a system of quality control, cost and sales management. Even after this period, management was still not satisfied with the level of quality and efficiency, levels that are often far below the standards passable in Japan (Nikkei Sanguo Shimbun, 1987).

Image Problems. There is a concern among Japanese MNCs, with maquiladora operations, about a potential clash of interests between the U.S. and Japan over their investments (Nikkei Sangyo Shimbun, 1987). Unions in the U.S. remain outraged as plants close in the US and simultaneously reopen in Mexican. American trade unions argue that the maquiladora program is siphoning off jobs from the U.S. and being used as a threat to hold down wages. However, advocates of border plants claim many benefits, including: 1. the border plants use parts made in the U.S. and 2. much of the payroll comes back to the US in spending for goods (Rohan, 1988). Still, organized labor has rejected those claims, noting, for example, that most US goods are too expensive for $4-per-day workers. Further, Victor Munoz, chairman of the El Paso Central labor union also claims that border plants contribute to illegal immigration by attracting large numbers of Mexicans from the interior (Rohan, 1988). These concerns, and others, have stimulated discussions among certain congressional caucuses to revoke the special provisions of the tariff codes given to the maquiladora industry.

The Future

Several elements play an important role in determining the future of the border region. One is the growth of the U.S. economy. The second is the capacity of Mexico to sustain its competitive labor situation with respect to the Asian countries in which in-bond plants also operate. Third, is the general economic performance of Mexico, particularly its success in maintaining the stability of the country, keeping inflation down, and supplying the infrastructure needed in the communities along the border with the United States.

As for Japanese investment, by 1996, according to the International Trade Commission estimates, Japanese firms could employ one million workers, although these estimates are probably a little high, considering the cautious nature of the Japanese toward the politics of trade in both Mexico and the U.S. (Jacobson, 1988). Unlike U.S. firms, however, the future direction of Japanese in-bond investment in Mexico is clearly toward the interior. For MNCs from Japan, the interior offers a potential solution to the immense problem of worker turnover, which remains the chief operational burden of border in-bond plants.

Finally, even though Japanese investment in the U.S.- Mexico border region still represents a small fraction of the total amount, the increasing Japanese presence in this area raises a number of important speculative questions. First, what will be the impact of Japanese investment on the growth and development of Mexico in general, and the U.S. - Mexico border region in particular? How will the changes in the trilateral relationships among Japan, Mexico and the U.S. affect the climate for further investment in the border region by Japan? In particular what will be the potential impact of the proposed U.S. -

Mexico Free Trade pact on continued Japanese investment? What possible changes in government policies within each of these three nations could stimulate or dampen continued investment in the border region? For example, what would be the affect of changes in the tariff charges of products imported back to the United States? What impact does the apparent significant gap in cultures have in the ability of Japanese MNCs to transfer Japanese management practices to their subsidiaries in Mexico? These questions, as well as a host of others, need the attention of future research projects.