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**Mexico's Maquiladora Industry: Where  
Strategic Human Resource Management  
Makes a Difference**

**CEO Publication  
G 91-18 (203)**

**M. Teagarden  
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WHERE STRATEGIC HUMAN RESOURCE MANAGEMENT MAKES A DIFFERENCE

Cost cutting is a challenge increasingly confronting managers. Chasing cheap labor, especially through use of offshore manufacturing in developing and newly industrialized Pacific Rim countries has become a popular response to this challenge. The luster of traditional offshore manufacturing sites like Singapore, Hong Kong, Taiwan, and Korea, however, is fading. Rising labor and other factor costs coupled with political instability in Pacific Rim countries have forced production cutbacks and delivery delays which in turn have challenged managers to seek alternatives to these traditional offshore sites. Through the maquiladora option, Mexico--which shares a 2000 mile border with the US--has become an increasingly attractive "offshore" manufacturing site for these very firms seeking global competitiveness. Large US firms like General Motors and Ford, and smaller US firms like Pulse Engineering have used maquiladoras for at least two decades. US firms like General Electric, Honeywell, International Rectifier, Fisher Price, Mattel, Kendall and American Home Products have followed suit. Global competitors like Sony, Sanyo, Matsushita, Hitachi and Lucky Goldstar have also recently established maquiladoras. In light of passage of the "fast track" initiative, part of the Bush Administration's effort to establish a free trade zone with Mexico, Mexico's attractiveness as an offshore manufacturing site is expected to increase dramatically.

Following, we offer a description of the origin and development of the maquiladora industry, a perspective deemed necessary to

understand the commonly cited "people problems" faced by managers operating in these settings. Specific strategic human resource management challenges created by these special problems will then be identified. Finally, we pool our findings and offer recommendations for designing maquiladora systems that effectively accommodate Mexican workers and achieve the strategic objectives of managers.

#### A MAQUILADORA BY ANY OTHER NAME...

In colonial Mexico a maquila, from which the term maquiladora is derived, was the charge that a miller collected for processing grain. Today's maquiladoras are still processing facilities: they process and assemble myriad products--consumer and industrial electronic goods, automotive components, wood, leather and clothing, toys and medical supplies to name a few. Maquiladoras (ma key'luh door ahs) are frequently referred to as maquilas (ma key'luhs), and the terms are used interchangeably.

The maquiladora program, also known as the "twin plant," "production sharing" or "in-bond" program, is targeted at labor intensive manufacturing processes that assemble components into finished or semi-finished goods. However, some maquilas also process paperwork--the labor intensive sorting of grocery discount coupons, for example. The twin plant and production sharing terms stem from early anticipation of the establishment of manufacturing plants in physical proximity on the US and Mexican sides of the border (twin plants) in which the labor intensive production processes would occur in Mexico and the rest of the processes in

the US (production sharing). The anticipated emergence of twin plants has not occurred--as of 1991 only about 10% of maquila plants have a twin on the US side. Materials for manufacture are imported into Mexico for assembly under a bond that guarantees the finished product will be exported, thus the in-bond term.

#### Maguiladora Roots: The Border Industrialization Program

Mexico laid the groundwork for the maquila option when it partially relaxed restrictive foreign investment policies in 1965 through establishment of the Border Industrialization Program (BIP). At that time, the "Bracero" program, which allowed the seasonal entry of up to 500,000 Mexican workers into the US, had been terminated by the US. Mexican officials saw the BIP as a vehicle to employ male agricultural workers who had been displaced as a result. The BIP permitted establishment of maquilas, "off-shore" manufacturing plants for assembly, processing, or finishing of foreign material and components, located in specially designated regions along the US-Mexico border. The program also allowed duty-free import of all equipment, machinery, raw materials, and other components needed in production, as long as the resultant products were to be exported.

In October, 1972, the program was expanded to permit establishment of plants in the interior of Mexico, excluding highly industrialized areas such as Mexico City. Less than 20% of the maquilas, however, have exercised the option of locating inland. Although the number of maquilas has steadily increased, the rate of increase was greater following the 1982 and subsequent devaluations

of the peso when Mexican labor went from being relatively expensive to one of the least expensive in the world. Growth has slowed somewhat during 1991. In December, 1989, the Mexican government further backed the maquila option with the "Decree for the Promotion and Operation of the Maquiladora Export Industry," which increases the proportion of maquila products which can be sold in Mexico from 20 percent to 50 percent of total production. Nevertheless, some maquila managers complain that it is still difficult to sell maquila products in Mexico because of difficulty in accessing channels of distribution and pressure from Mexican business to encourage import substitution.

The goals for the BIP have remained the same since its establishment: to increase Mexico's level of industrialization, especially in the border region; to create new jobs; to raise the domestic income level; to facilitate absorption of technology and skills--technology transfer; and to attract much-needed foreign exchange. In turn, the program provides foreign investors an array of benefits including cost saving, especially regarding labor, energy and rent; 100% foreign ownership, if desired; and proximity to US markets and suppliers. Maquilas are especially suitable for the manufacture of mature products with a labor content greater than 30% as are found in the garment, automotive supply, electronic assembly and wood working industries. A TRW Electronics manager observed that maquilas can reduce production costs up to 50% compared to Asian "little dragon" off-shore manufacturing sites.

Maquila managers are permitted to staff key management and technical support positions with expatriates--who often live in the US and commute to Mexican border plants daily. Some maquilas claim that they are able to attract and retain better expatriates than is possible for their more distant offshore manufacturing sites since many of the hardships associated with an offshore assignment are avoided. Expatriates (and their families) do not have to live in the foreign country, they just work there. In addition, costs associated with maintaining an expatriate and family are greatly reduced. Proximity to the US significantly increases a company's ability to control their "off-shore" manufacturing site.

Maquilas enjoy special treatment under both US Customs regulations and Mexican foreign investment regulations. Favorable US import laws, instituted in 1965 and modified over time, require manufacturers using maquilas to only pay duty on the value added to the product in Mexico when it reenters the US. Value added is usually determined by cost of the labor content, a relatively small amount. In addition, Mexico imposes no local content requirements on goods manufactured in maquilas that are destined for export. In 1990, Mexican exports to the US under US Customs production sharing tariff codes accounted for more than 54% of all developing country (LDC) exports to the US in this category. This was a significantly higher percentage than Singapore (15%), Taiwan (8%) or Hong Kong (6%)--other popular offshore manufacturing sites.

Is there a Maquiladora Industry?

Despite being commonly referred to as the maquiladora "industry," the "industry" is actually an agglomeration of manufacturers from various industrial sectors, including among others, the automotive supply, computer, television and other electronic-based industries, medical supply, wood working, furniture manufacture, and garment industries. These manufacturers use wholly owned subsidiaries, joint ventures, and shelter agreements (subcontracting agreements) to take advantage of maquila benefits. Plant sizes range from over 1800 employees in some automotive and electronic assembly plants to 6 to 8 person job shops, more common in woodworking and garment operations. Mexican officials estimate that about 20% of the maquilas use robotics in assembly operations which are considered "state-of-the-art" in their respective global industries. The Sony television maquilas and both Ford and General Motors auto supply maquilas are cases in point. Generally, automotive suppliers cluster in the El Paso/Juarez region, while electronics-related industries, wood working and furniture making, and garment industries cluster in the San Diego/Tijuana region. Table 1 shows the locations and industry distribution of maquilas.

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Insert Table 1 about here  
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US investors account for over 90% of the value of maquila investment, and control the largest number of maquilas. US multinationals (MNEs) such as Ford, General Motors, Eastman Kodak,



Caterpillar, Hewlett Packard, and Westinghouse use maquilas. In addition, there is an increasing presence of "third country" maquilas. For example, and perhaps most notably, Japan is rapidly increasing its maquila presence. Japanese MNEs such as Sony, Sanyo, Fujitsu, Matsushita, and Hitachi use maquilas, and some of these have encouraged their suppliers from Japan--for example, Sanoh and Tocabi--to follow. While Japanese maquilas are small in number, they are large in size, employing about 15% of the maquila workers. Japanese maquilas locate predominantly in Baja California Norte adjacent to California where they have US affiliates.

Korean MNEs such as Samsung, Lucky Goldstar and Hyundai have also recently established maquilas. A small number of other "third country" maquila users include MNEs from West Germany (whose total foreign direct investment in Mexico surpasses that of Japan), France, Finland, Canada and Taiwan. The ownership of maquilas by country as of 1990 shows that the US dominates with 68% of the facilities followed by Mexico (25%), Japan (4%), ED (2%) and other Asian countries (1%). Interestingly, Mexican firms are allowed to own maquilas, and run many of the shelter programs.

#### Maquila Dynamics and Contributions

Mexico's border area with the US has experienced a tremendous increase in activity from maquilas with investment currently growing at about 15% a year, and is expected to grow further with the recent passage of the "fast track" initiative. Maquilas provide jobs for one tenth of Mexico's workforce, and are its most dynamic sector while accounting for four-fifths of Mexico's

manufactured exports and two-fifths of Mexico's total exports to the US. Mexico is the third largest US trading partner: Canada is number one and Japan is number two. The maquila industry is Mexico's second largest source of hard currency surpassed only by petroleum sales. At the end of 1989, the total Mexican value-added in maquilas exceeded US\$ 1.4 billion. More than 427,000 Mexican workers--over two-thirds women between the ages of 16 and 21--were employed in the industry, and approximately 1,650 maquilas were in operation. By the end of 1990, the total Mexican value-added in maquilas exceeded US\$ 1.6 billion. More than 487,000 workers--over two-thirds women between the ages of 16 and 21--were employed in the industry, and approximately 1,880 maquila plants. The dynamic growth of maquilas in terms of value-added, number of plants and number of employees is shown in Table 2.

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The border between the US and Mexico is the longest border between a developed and a developing nation in the world. The major maquila venues are pairs of economically interdependent cities on each side of the US-Mexico border: Tijuana, Baja California Norte/San Diego, California; Nogales, Sonora/Nogales, Arizona; Reynosa, Nuevo Leon/McAllen, Texas; Ciudad Juarez, Chihuahua/El Paso, Texas; and Matamoros, Tamaulipas/Brownsville, Texas. The Ciudad Juarez/El Paso area employs the largest number of maquila workers, while the Tijuana/San Diego area has the fastest

growth rate and the most maquila plants.

### Maquiladora Controversy

The largest controversy surrounding maquila operations involves workforce utilization issues. Specifically, US MNEs using the maquila option have come under fire from organized labor who criticize the MNEs for taking jobs away from US workers, and for the perception that maquilas exploit workers because of low pay, and poor working conditions. Some Mexicans claim that maquilas disrupt the traditional Mexican social system. Additionally, some Mexican charge that maquilas do not meet the originally intended purpose of employing displaced male agricultural workers.

Japanese maquilas are all formed by the US affiliate of the Japanese MNE, and these maquilas have been criticized for attempting to take advantage of favorable trade laws available under the BIP, originally designed to benefit US MNEs. Studies by Wharton, the US Department of Commerce, and others, however, concluded that use of maquilas by US corporations (with either US or Japanese parents) at worst create as many jobs in the US as they eliminate, and at best have a slight net positive effect on US jobs. This does not mean that maquilas do not create displacement--jobs can be lost in Detroit and St. Louis, and created in San Diego and El Paso.

### Why Managers Opt for Maquilas

The realities of a dynamic, interdependent global economy drive MNEs to seek low cost manufacturing alternatives in an effort to increase their competitiveness. "Off-shore" manufacturing,

manufacturing outside the MNE's home country, is one option commonly used to reduce costs--labor and so called "other factor" costs such as energy costs, and plant and equipment expenses. In the Asia Pacific Rim, historically, Taiwan, Singapore, South Korea, and Hong Kong--the "little dragons"--have been the preferred low-cost off-shore manufacturing sites for MNEs. As wages and "other factor" costs have risen in the "little dragons", the People's Republic of China, Thailand, Malaysia, Indonesia, and to a lesser extent Viet Nam, have become increasingly attractive, alternative off-shore manufacturing sites.

Low wage rates are the most often cited benefit of off-shore manufacturing, and new Asian entrants have very low wage rates. Nevertheless, recent studies indicate that Mexico's fully-fringed wage rates are lower than Pacific Rim countries such as Hong Kong, Taiwan, Singapore, Korea; lower than Latin American countries such as Brazil; and lower than European Community countries such as Spain and Portugal. However, it is the cumulative effect of rising manufacturing costs--rising wage rates, labor shortages, upward pressure on "other factor costs;" the loss GSP (General System of Preferences) duty free privileges among the "little dragons" as of January 1989; and the hidden costs associated with recent and persistent political turbulence in Asia Pacific Rim countries--that have induced MNEs to seek alternative low cost manufacturing sites. Mexico's maquiladora option has emerged as an attractive alternative--called a "bargain" by some. To illustrate this point, wage rate trends, tariff status, political stability and labor avail-

ability in popular off-shore manufacturing sites are shown in Table 3.

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Insert Table 3 about here  
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In addition to low wage rates, low factor costs, and proximity to US markets and US suppliers Mexico offers an abundant labor source: Mexico's population is relatively well-educated and the second youngest in the world. As indicated above, these benefits combine to make Mexico's maquila option attractive to MNEs seeking low-cost, off-shore manufacturing alternatives. Some analysts go so far as to suggest that San Diego/Tijuana will replace Hong Kong/Canton as the preferred low cost off-shore manufacturing site after 1997 when Hong Kong reverts to the People's Republic of China (PRC). Despite these substantial benefits, maquila managers repeatedly cite people problems as problematic. As we enter the decade of the 1990s, among the most persistent of those problems encountered are human resource management (HRM) problems. Use of Mexico's maquiladora option presents any foreign parent with significant strategic International Human Resource Management (IHRM) challenges.

STRATEGIC INTERNATIONAL HUMAN RESOURCE MANAGEMENT  
CHALLENGES IN MAQUILAS

Labor costs are a function of the hourly wage rate and worker productivity or output. Since "cheap Mexican labor" is a primary maquila benefit, HR issues have come into sharp focus since IHR

specifically targets the productivity side of the equation. Our research, coupled with a synthesis of case studies and the scant literature available, begins to map strategic IHRM challenges in maquilas. Key components here include a workforce comprised of young, "green hands" (workers without previous manufacturing or other meaningful work experience), often from rural Mexico; significant cross-cultural challenges; abundant unskilled labor; labor law influences that commonly favor the worker; and family management issues that spill over to the workplace.

#### Young "Green Hands"

Although most maquilas are located along the US-Mexico border, many workers have migrated to the area from the interior within the last 5 years, and are usually without family in the local setting. The average age of the Mexican population is sixteen. Two-thirds of the maquila assembly workers are women between the ages of 16 and 25 with little manufacturing-related work experience. Most workers have completed between six and nine years of education.

Maquila employers, especially in electronic manufacturing, explain that young women are best suited to assembly processes requiring high levels of fine motor skills and manual dexterity which these women possess; that women are better suited to the tedious work, and that they are more stable than men. Culturally-based arguments are also used by employers to explain the prevalence of young women. For example, employers argue that assembly jobs are not seen as sufficiently "macho," and thus are avoided by men. These "cultural" arguments are seen as specious by some

researchers who assert that young women are hired because they are docile, compliant, and hard to unionize.

Gender-related maquila employment trends, however, are changing. For example, the employment of men in maquilas is increasing, from fifteen percent of the workforce in 1965 to forty-four percent of the workforce in 1990. Men are more prevalent in wood working and furniture manufacture, leather processing, and automotive supply sectors of the maquila industry. Nevertheless, men are often seen as using maquila employment merely as a stopover on their way north. Sanoh's personnel manager commented that he asks prospective male employees, "How many times did you cross the border?" If they have done it two or three times and have been sent back, he "knows it [is] a good time to hire them because they'd stay a while."

#### Cross-Cultural Challenges

Cultural differences are also found among local supervisors and management. "Machismo," mentioned earlier, is a trait closely associated with Latin American men and is characterized by behaviors such as pride, reluctance to admit error or ignorance, and an unwillingness to do "women's work." "Machismo" is sometimes found among supervisory personnel, as cited by M.E DeForest, an automotive industry consultant, in the following example:

Recently, an American manager of a Mexican maquiladora producing automotive parts was proud that his final inspection reports received 98% or 99% quality ratings. However, he was puzzled. Production efficiencies were low and raw-material costs inexplicably high.... Determined to find out why, he was aghast to learn that the supervisors [all male] secretly threw out the bad pieces every night. He was unaware that the Mexican supervisors

were too proud to "confess" they did not know how to adjust the malfunctioning equipment. So they chose to discard bad pieces.

The importance of family and the family structure to Mexican workers is significant. As Oscar Lewis commented, "Without his family, the Mexican individual stands prey to every form of aggression, exploitation, and humiliation." Mexicans value an extended kinship system in which relatives, clans, and organizations are expected to look after, or care for, the individual and in exchange the individual owes absolute allegiance and loyalty.

In the maquila, paternalism is expected--management's role is to take care of the workers. Managers and supervisors are expected to be the authority--their status is respected, and in return the worker's status is also respected. From this perspective with workers as manager's "extended family" the manager is the patron (pah'trone) or father figure. The expectation that managers take care of workers was strongly voiced in one survey we conducted. When maquila assembly workers were asked what they would change if they were supervisors, responses included encouraging workers to share problems so that supervisors could make necessary or appropriate changes to solve them; helping the workers actually do their jobs; creating a more sociable work environment; holding social events; not making workers nervous; and allowing workers to work at their own pace. The manager's role is greatly enlarged when compared to expectations in the US.

#### Abundant, Unskilled Labor

Maquilas are assured the right to determine their staffing



needs, and to recruit and fire personnel on their own, unlike, for example, the PRC where staffing can require absorption of an unwieldy number of excess employees. Union influence is strong in some regions (especially the Eastern Mexican Border region), however the influence is seen by most maquila employers as having a positive effect on maquila effectiveness: unions tend not to be militant and supply a pool of readily available labor. According to one employer, "We announce fifty openings on Friday, and by Monday we have five hundred applicants," some of whom will "jump" from other maquilas to shorten a commute or to get marginally better working conditions. Rapid growth of maquilas had caused some temporary labor shortages along the Texas border, but most employers now report that this is no longer a problem.

The abundance of applicants allows employers to select those most suitable for assembly jobs. Mexican workers are willing to participate in such screening because of the relatively good wages and benefits available in maquilas as opposed to other local employment opportunities. Maquilas do, however, have a difficult time recruiting skilled labor. Maquila managers who express satisfaction with their operations commonly engage in extensive, and often costly, training to accommodate skilled labor staffing needs.

#### Strong Labor Law Influences

Mexico's labor law has a strong influence on firm HR practices. It specifies vacations and holidays, acceptable reasons for termination, provisions for pregnant and nursing mothers, and

seniority premium pay, among other things. Mexico controls minimum wages which vary by region and employment classification. The work week is 48 hours, but many maquila employees work five nine hour days (45 hours) and are paid for 48 hours. Benefits such as holiday pay, meals, housing, childcare, and production incentives can boost wages 30 percent to 100 percent above the minimum wage, although many of these benefits are optional. One week of vacation after the first year of employment is required, and this increases two days for each additional year of employment until two weeks of vacation are reached. A 25% premium is paid on vacation pay.

Generally when a worker is hired, the employer has four weeks to evaluate his or her performance. After that point, the worker becomes permanent under a system that generally favors the employee. Since Mexico does not have a termination at-will doctrine, termination can be costly. Mexican employees with permanent status have work contracts with their employers that require payment of severance pay upon termination or lay-off. Maquila managers suggest that some workers work until they build up a sufficient amount of guaranteed severance pay benefits to see them through the year, then they take the balance of the year off.

#### Family Management Issues

It is not uncommon for workers to leave on vacation or for the Christmas holidays and fail to return to work as scheduled. "Family reasons" are the most often cited reason for failing to return as scheduled. "Family reasons" are also the most common reason for absenteeism, and are often cited as the principal reason

for other turnover. "Family reasons" include, among other things, the need to take care of small children, sick children, brothers and sisters, and elderly parents and relatives. If the workers family is located in the interior, taking care of "family issues" may involve returning home to resolve the problem. As discussed above, family is very important to the Mexican worker, and from their perspective "family reasons" is a legitimate excuse for absence.

Despite these "add-ons" and entitlements, maquila workers remain among the lowest paid in the world. However, some maquilas face turnover approaching 30% per month, and very high absenteeism; factors which greatly increase labor costs. In addition, many maquilas must do extensive training of unskilled workers in order to assure minimum levels of competence in competitive production environments. Many foreign and local managers lament that maquila employees just "work to live" and are simply not committed to the job. Nevertheless, some firms have made very effective use of the maquila option, and IHRM responses to effectiveness challenges are at the heart of their reported successes.

#### MEETING STRATEGIC CHALLENGES THROUGH IHRM

##### Recruitment and Selection

Recruitment. Turnover upward of 30% can be the result of ineffective recruitment policies. Employees are commonly recruited via word of mouth, or by signs hung outside of the maquilas announcing openings. It is common for family members to seek employment for relatives. Some have suggested that maquila

managers should use money budgeted for advertising job openings through public media like advertisements or radio, and use these funds as bonuses for employees who recruit others. Regardless of the recruitment approaches detailed above, firms should consider the true use of recruitment strategies, namely the generation of a qualified labor source in sufficient numbers to insure effective employee selection. Maximizing this selection ratio allows maquila managers to stabilize what can be dramatic fluctuations in the workforce.

Selection. Prospective employees are interviewed in Spanish, and a limited number of those interviewed go through additional screening. Effective maquilas make extensive use of screening--physical examinations, intelligence and dexterity tests--in the selection process prior to hiring. Although the evidence is anecdotal, maquilas using extensive screening processes report turnover rates lower than industry averages. Workers who stand out on intelligence tests, but not on dexterity tests, are often channeled into clerical and administrative positions. However, many young female workers only work until they marry and start a family; and many men use maquilas as a stopover on the route north, thus retention remains an issue despite selection practices.

### Training

Most entry level maquila workers are "green hands" who have come from an agrarian background where there is a lack of social infrastructure that supports industry, punctuality and regular attendance for example are not emphasized. Thus, training is

needed to develop social skills necessary in a manufacturing environment. On the job training is the primary vehicle used to familiarize workers with job requirements, and initial orientation stresses "basics" like safety issues and the importance of punctuality and regular attendance. Personal contact with newly hired workers is reported to enhance training. In addition, total quality control and quality circles are common training topics in the electronics and automotive industries, and welding and soldering training are also common in the electronics industry.

Training is considered a highly desired reward by many maquila workers. In addition to job-related training, some employers offer on-site general education courses. Workers who come from the interior are removed from the social environment with which they are most familiar, and as mentioned earlier, personal problems are brought to the workplace. General education courses that target these needs include courses in budgeting family finances and basic health care practices. US and Japanese companies, like Ford and Sony, have invested heavily in additional training for key technical personnel which often includes sending maquila workers back to manufacturing facilities in the US and Japan. Maquilas that offer training, both job-related and general, report lower turnover rates than industry averages, and higher productivity. Again, however, these reports are largely anecdotal.

#### Reward Systems

While wages are higher in maquilas than in other Mexican manufacturing alternatives, there is considerable pressure from

domestic non-maquila employers to keep maquilas wages low. Consequently, perquisites are used to enlarge the compensation package. Some maquilas have reduced turnover and absenteeism dramatically through use of additional perquisites targeted at specific employee needs. Allen Bradley, Pulse Engineering, Sanyo, and others, offer perquisite combinations which may include transportation from central urban and rural locations to the plant; employee funds based on hours worked and distributed on a scheduled basis; quality and punctuality bonuses; on-site health care clinics for workers and their families; cafeterias that serve traditional Mexican food, often free; free beverage dispensers; shower facilities for those who do not have these available at home; on-site education (in addition to work-related training); athletic activities; and packages of food and make-up for women workers.

Use of these types of rewards is reported by maquila managers to enhance overall effectiveness in these manufacturing sites. The benefits of using reward system interventions is reported to positively influence overall MNE effectiveness to the degree that they are able to maintain low manufacturing costs. These reports, however, are largely anecdotal. There has been little systematic research that explores the range and frequency of the IHRM interventions used in maquilas, nor evaluates the effectiveness of specific interventions.

A critical issue here is, "Are the rewards received by maquila workers tied to performance?" To the degree that the extensive array of entitlements and perquisites provided are seen as rewards,

a key problem develops: every time you give a "reward" for something other than performance--for example, just showing up for work (the punctuality bonus)--you give the employee one less reason to perform. Our observations indicate that worker expectations about the roles of employer and employee have a strong influence here: maquila workers perform because the employer is providing expected entitlements thus, filling the role of patron. However, performance is higher in maquilas where rewards, such as punctuality bonuses, are directly tied to quality and output performance targets.

#### Appraisal

The apparent, or at least dominant, function of appraisal in maquilas at the present time seems to be very traditional. Specifically, the systems track for internal promotion purposes those individuals with the greatest demonstrated ability to supervise the efforts of other maquila workers, or to simply perform adequately on the job. However, a more strategic look at the appraisal function provides additional and useful potential. In light of the high turnover rate experienced by most maquilas, the performance appraisal setting provides a unique opportunity for supervisor and employee to engage in a number of developmental activities. The loyalty maquila workers feel toward the firm is strongly influenced by their attitude toward their immediate supervisor.

Content analysis of open-ended responses to surveys administered in maquilas indicated rather clearly that the typical Mexican

worker chronically complained that their supervisors and managers did not view them as people or as individuals, simply as workers. Modern, strategic views regarding the performance appraisal process indicate that the performance appraisal offers a context in which many of such misperceptions or myths can be dispelled or modified. Given the limited ability of most maquilas to offer added wage incentives, and the increasing levels of competition between maquilas, positive gains could be realized when simple procedures like performance appraisal are altered to appeal to the developmental needs of employees.

#### Family Issues Management

Problems associated with the management of family issues have perhaps the most insidious influence on maquila effectiveness. As stated, family issues are the most often cited reason for both turnover and absenteeism. Effective maquilas have addressed these issues in various ways. For example, some maquilas provide on-site health care facilities for workers and their families; others have developed or coordinated childcare facilities; and others make small loans to workers to help in a financially troubled times. All of these options contribute to the overall cost of labor, but the firms using these options feel the benefits of stabilizing the workforce outweigh the costs of the programs, and that offering these perquisites make them more attractive employers.

#### Career Issues

To the degree that the maquila industry remains unstable with such heavy turnover, the initial recommendation regarding career



issues is simple--why bother? For several reasons, however, it is important to bother. First, many workers we have surveyed indicate clearly that their principle interests are in being provided with career advancement opportunities. In particular, a group of workers interviewed and surveyed in the Tijuana/San Diego area indicated their preference for learning more about what their American counterparts did on the job, even if that meant foregoing salary or wage increases. Second, indications exist that the maquilas in some border regions are beginning to stabilize. For example, in the Tijuana/San Diego area, the rapid growth seen over the past decade, which reached as high as 30 percent per year, has slowed to between 16 and 18 percent per year. Furthermore, growth is projected to remain stable, or decline only slightly, over the next several years even with full implementation of the North American Free Trade Agreement (NAFTA). In order to remain competitive with what will become an increasingly "in demand" resource, organizations should begin now to invest in career development for their workers to create opportunities and build in incentives for longer-term commitment.

#### SPILOVER BENEFITS OF STRATEGIC IHRM

Effective IHRM design has implications for MNEs and for Mexico that reach far beyond the maquila. To the degree that culturally appropriate and effective HRM systems can be developed and implemented in maquilas, Mexico is the recipient of valuable "soft" technology--HRM technology--which spills over to other maquilas and to remaining portions of its domestic industry. As the application

of effective HRM practices is diffused throughout the maquila industry, maquilas become an increasingly attractive off-shore manufacturing site for MNEs, thus increasing the likelihood that higher levels of direct foreign investment will occur. In addition, MNEs are willing to transfer more technology-intensive manufacturing processes when they believe their affiliates are effective. Thus, effective maquilas serve as a magnet for more technology-intensive manufacturing processes which also spill over to domestic industry.

MNEs benefit in several ways as well, some obvious and some not so obvious. To the degree that maquilas represent an effective off-shore manufacturing option, MNEs enjoy the benefits of low labor and other factor costs; proximity to US markets and suppliers--thus, low transportation costs; control enhanced by proximity to the parent firm; and preferential treatment on reimported products which all contribute to global competitiveness. In addition, use of maquilas offers "third country" maquilas a quasi "insider" status in US markets because "third country" MNEs benefit from the same laws on both sides of the border as do US MNEs. For example, Japanese products produced in maquilas are not counted against Japanese import quotas.

To conclude briefly, we must realize that as the decade of the 1990s continues to unfold, the Canada-US-Mexico Free Trade Agreement (North American Free Trade Agreement) moves closer to reality, especially with recent passage of the "fast track" legislation. Through this agreement US and Canadian manufacturers will gain

increased access to Mexican labor, and to a large, potential market of 86 million people, 20 million of whom currently have the buying power of average US consumers. The envisioned region created by the NAFTA will be more populous than the European Community (EC) and not far behind the EC in industrial output and gross national product. Both Mexican and US officials continue to assure manufacturers that maquilas will continue to receive preferential treatment on both sides of the border after the NAFTA is implemented. Maquilas represent an excellent incremental expansion opportunity for US and Canadian based MNEs who plan to take advantage of the benefits of the NAFTA.

Finally, there are even greater benefits from effective maquila use that can accrue to MNEs, benefits that have implications for the MNE's long-term global competitiveness. Effective management of a maquila represents significant challenges to the MNE's ability to manage global diversity--the myriad cultures and contexts in which MNEs operate. As MNEs learn to be effective maquila managers, they also learn how to be effective managers of global diversity. Other cultures and contexts the MNE encounters may well be very different, but the processes they use to be effective managers in the face of this diversity are the same. We suggest that ultimately, those MNEs that master the management of global diversity--those who can best leverage their human assets--will be the MNEs that win the global competitiveness challenge.

Table 1

Maquila Industry Activity-1990

Industry Sector	Border Region		Interior Region	
	Plants	Employees	Plants	Employees
Apparel, Textiles, Footwear & Leather	15.7%	9.0%	29.3%	22.2%
Furniture & Fixtures Wood/Metal Products	14.8%	5.9%	-	-
Transportation Equipment & Accessories	9.8%	21.0%	8.2%	13.6%
Electric & Electronic Machinery, Equipment & Apparatus	7.1%	16.1%	7.5%	13.4%
Electric & Electronic Parts & Accessories	24.5%	26.9%	13.7%	23.6%
Other Manufacturing*	23.7%	16.3%	37.3%	24.1%
Service	4.5%	4.7%	3.7%	3.4%

\* Other Manufacturing include Food; Chemicals; Toys & Sporting Goods; Non Electrical Equipment, Parts & Apparatus among other things.

Sources: Instituto Nacional de Estadística, Geografía e Informática; Business Mexico, March 1990.

Table 2

## Mexico's Maquiladora Industry 1978-1990

Year	Number of Plants		Value Added (\$US Millions)		Number of Employees
	(% Change)		(% Change)		(% Change)
1978	457 ( - )		452 ( - )		90,704 ( - )
1979	549 ( 20.1)		638 ( 41.2)		115,014 ( 26.8)
1980	620 ( 12.9)		772 ( 21.0)		123,897 ( 7.7)
1981	610 ( -1.6)		976 ( 26.4)		130,102 ( 5.0)
1982	588 ( -3.7)		832 (-14.7)		122,493 ( -5.8)
1983	629 ( 6.9)		828 (- 0.5)		173,128 ( 41.3)
1984	730 ( 16.1)		916 ( 10.6)		208,512 ( 20.4)
1985	842 ( 15.3)		1,028 ( 12.3)		250,000 ( 19.9)
1986	981 ( 16.5)		1,181 ( 14.9)		280,000 ( 12.0)
1987	1,125 ( 14.6)		N/A*	( - )	305,000 ( 8.9)
1988	1,490 ( 32.4)		N/A*	( - )	380,000 ( 24.5)
1989	1,632 ( 9.5)		1,444 ( - )		427,900 ( 12.6)
1990	1,880 ( 13.2)		1,590 ( 10.1)		487,000 ( 13.8)

\* Data not available

Sources: Secretariat of Planning and Budget/Latin American Monitor, Mexico 1990: Annual Report on Government, Economy & Business, p. 99; Instituto Nacional de Estadística, Geografía e Informática; Banco Nacional de Comercio Exterior (BANCOMEXT).

Table 3

Offshore Manufacturing Site Benefit Profiles

AVAILABLE LABOR	AVERAGE INDUSTRIAL MONTHLY WAGE			DUTY STATUS	POLITICAL RISK
	1984	1988	CHANGE		
SOUTH KOREA (SHORTAGES)	\$302	\$633	+110%	MFN*	SOME
TAIWAN (SHORTAGES)	\$325	\$598	+84%	MFN	SOME
HONG KONG (SHORTAGES)	\$363	\$544	+50%	MFN	MEDIUM
SINGAPORE (SHORTAGES)	\$416	\$547	+32%	MFN	SLIGHT
PRC (ABUNDANT)	\$ 53	\$ 76	+43%	GSP	HIGH
MEXICO (ABUNDANT)	\$144	\$109	-24%	GSP#	SLIGHT

\* MFN = Goods imported from countries with Most Favored Nation status are charged duties averaging 5-10% based on product classification.

# GSP = Goods imported are exempt from duties under the General System of Preference.

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