

Strategic Management of Worker Health, Safety, and Environmental Issues in Mexico's *Maquiladora* Industry*

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Conflict arising from differences in business practices, standards, values, and norms guiding behavior are inherent in international business. These conflicts are evident in Mexico's maquiladora industry, particularly relating to issues of worker health, safety, and environment. This article extends a model of conflict management; illustrates the model's dimensions with case study examples; discusses strategic human resource management implications of the model's various outcomes; offers recommendations for managing worker health, safety, and environment issues; and identifies directions for future research. © 1993 by John Wiley & Sons, Inc.

INTRODUCTION

Mexico is a country ripe for worker health, safety, and environmental abuse. Economically, the country is striving aggressively to attract investment and create jobs. Geographically, it shares a 2000-mile border with the United States, whose more stringent pollution regulations make Mexico a tempting destination for factories running away from environmental restrictions; for manufacturers looking for a cheap, albeit illegal, toxic waste dump; and whose strict worker health and safety regulations "encourage" firms to flee to Mexico to exploit less rigorous enforcement. Against these forces are, for example, barely 100 industrial pollution inspectors and a 4-year-old law covering emissions of 12,000 substances—versus the 75,000 regulated in the United States. To compound the legal and inspection issues, there is the classic enforcement problem that comes with underpaid civil servants and wealthy violators: bribery. Final approval of the impending North American Free Trade

* An earlier version of this manuscript received the Minerva Education Institute Irwin/Proctor & Gamble Award for Research Contributions to Worker Health, Safety and Environment at the 1992 National Academy of Management Meeting, Las Vegas, Nevada.

Human Resource Management, Winter 1993, Vol. 32, Number 4 Pp. 479–503

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CCC 0090-4848/93/040479-25

Agreement (NAFTA), which has already been signed by the leaders of Canada, Mexico, and the United States, intensifies the importance of these environmental issues.

Conflict arising from differences in business practices, business standards, values, and norms guiding behavior are inherent in international business. These differences are particularly evident when comparing business activities in developed countries to those in developing countries, and perhaps stand in sharpest contrast when examining issues of worker health, safety, and environmental issues. Multinational Companies (MNEs) commonly face settings in which the "rules of the game" are far more ambiguous, contradictory, and dynamic than they are in domestic contexts. The strategies MNEs use to manage the conflict inherent in these cultural and contextual asymmetries have a significant impact on organizational effectiveness. Human resource management (HRM) practices can be used to align MNE norms, values, standards, goals, and objectives with host-country affiliate dynamics. The strategic use of HRM, a view based on a long-range future, extends this alignment into the future in an effort to ensure a major positive impact on both affiliate productivity and effectiveness.

This article begins with a discussion of strategic HRM and identifies the relationship of HRM to the reconciliation of conflict such as that identified above, using Mexico's *maquiladora* industry as a case study. Briefly, *maquiladoras* are assembly, manufacturing, or processing facilities located along the border zone between Mexico and the United States. Due principally to the availability of an inexpensive labor force, *maquiladoras* have increased dramatically in number during the last decade, as is discussed in greater detail below. An overview of Mexico's *maquiladora* industry and the impending North American Free Trade Agreement (NAFTA) is provided, and related worker health, safety, and environmental issues are highlighted. These discussions are followed by the presentation of a conflict management model and case examples that illustrate its dimensions. Finally, recommendations for managing worker health, safety, and environment conflicts in the *maquiladora* context are offered, and general implications from a strategic HRM perspective are discussed.

STRATEGIC HUMAN RESOURCE MANAGEMENT AND CONFLICT

Strategic human resource management, defined as the design of the human resource systems to support the firm's short- and long-term strategic objectives, provides a compelling rationale for reconciling conflict. From a long-term perspective it complements development of a capable, effective workforce. In the increasingly competitive global marketplace there appears to be a convergence of many manufacturing techniques,

those traditional areas where competitiveness has been enhanced by increasing efficiencies. The techniques (and advantages) of Total Quality Management, Integrated Manufacturing and Design, Just-in-Time Inventory Control, Process Mapping, Benchmarking, and Best Practices are rapidly diffused as compared to "soft" techniques such as human resource management (Von Glinow & Teagarden, 1988). The emphasis on such innovative techniques results in increased expectations of high quality and productivity as the new bases of competitiveness: the level of the playing field is rising. The advent of many of these techniques suggests, at a minimum, the need for a more strategic focus on recruitment, selection, and training issues. Those MNEs able to incorporate *and* move beyond these rapidly diffused techniques to develop effective approaches for managing human resources will win the competitiveness challenges of the future.

The predominant theme in strategic HRM literature concerns the need to fit HRM strategy to the larger organizational context, specifically, to the firm's business and functional strategies. Strategic HRM is believed to promote productivity *and* overall organizational effectiveness (Devanna, Fombrun, & Tichy, 1984). The attainment of the objectives associated with strategic HRM is accomplished in part by increasing worker satisfaction and investing in worker development. In contrast to the traditional view of HRM which is typically reactive, control-oriented, and productivity focused, the strategic orientation advocated by many authors (e.g., Teagarden, Butler, & Von Glinow, 1992) is decidedly proactive in nature. Specifically, the importance of viewing traditional aspects of HRM—recruitment and selection, training, appraisal, compensation, and employee relations—from both short- and long-term perspectives affords an organization the opportunity to gain or maintain competitive advantage.

For enterprises operating internationally, HRM serves additional, important purposes. International strategic HRM practices are used to enhance MNE control in foreign affiliates and as a mechanism for bridging cross-cultural issues (Milliman, Von Glinow, & Nathan, 1991; Dowling & Schuler, 1990; Adler & Ghadar, 1990). Consequently, in an international setting, strategic HRM is concerned with strategic fit issues, control issues, and cross-cultural issues.

From the short-term perspective, *maquiladoras* represent a source of "cheap labor." The "cheap labor" concept, however, deserves closer inspection. If "cheap labor" were the only criterion, then less industrialized countries such as the People's Republic of China (PRC), India, Thailand, or Viet Nam would offer more attractive manufacturing sites. Mexico offers more additional benefits such as proximity to the United States and higher levels of productivity—both output *and* quality—than do these alternatives. MNEs that compete on cost, but are not sensitive to issues of worker health, safety, and environment, run the risk of increased costs: in the short term these come in the form of turnover,

absenteeism, and time lost due to illness; in the long term they risk increased regulation (cf. Barrera Bassols, 1990).

Over twenty percent of *maquiladora* production is done in plants using world-class, state-of-the-art technology that affords high-quality and manufacturing flexibility. Ford, General Motors, Hewlett Packard, and other MNEs identify Mexican plants as their highest quality producers in the world. This is echoed by some Japanese MNEs (although they decline to be identified). German MNEs like Mercedes Benz are opening Mexican operations to take advantage of high quality at a relatively low price. Even *maquiladoras* that use lower levels of production technology are challenged by the need to produce low-cost, high-quality products. The strategic challenge for MNEs who compete using differentiation is to produce relatively low-cost, high-quality products with sufficient speed to meet consumer demands.

To meet this challenge, well-trained, loyal, committed workers are critical *maquiladora* resources. MNEs do not develop such workers by implementing short-term HRM thinking. Such development requires HRM programs that enhance individual performance through training, development, and attention to culturally appropriate reward systems—all dimensions associated with strategic HRM thinking. Devanna, Fombrun, and Tichy (1984) identify four types of assumptions about people that underlie HRM system design: (1) the nature of the employment contract, (2) the degree of participation in decision-making, (3) internal versus external labor markets, and (4) group versus individual performance. We have contrasted and extended traditional and strategic *maquiladora* HRM characteristics using these categories, as shown in Table I.

As is amply shown in Table I, *maquiladoras* which embrace the strategic perspective of MNEs invest in the development of human assets, workers who contribute to strategic objective attainment. For example, they implement training and development programs, make higher use of culturally appropriate reward systems, and develop internal labor markets. Additionally, issues of conflict management regarding worker health, safety, and environment move to the foreground and are proactively managed when viewed through this strategic HRM lens. The next section will introduce the *maquiladora* industry, and identify issues relating to worker health, safety, and environment conflict.

AN OVERVIEW OF THE MAQUILADORA INDUSTRY

The Mexico–United States border is longer than any other between a developed and a developing country in the world. In 1965, Washington, D.C. and Mexico City established the Border Industrialization Program which created a free trade zone for work processing along the border. While the zone has been extended to allow location in most of Mexico,

Table I. Dimensions of Traditional and Strategic *Maquiladora* HRM Systems.

| Characteristic | Traditional <i>Maquiladora</i> HRM System | Strategic <i>Maquiladora</i> HRM System |
|----------------------------------|---|--|
| Time horizon | Short-term | Long-term |
| Employment contract | Work for pay | Meaningful work for loyal, committed service |
| Training objectives | Necessary task specific | Task specific <i>and</i> developmental |
| Decision-making & power | Top-down | Shared (regarding tasks) |
| Labor market | External | Internal |
| Group vs. individual performance | Individual | Combination |
| Basis for control | External, mechanistic | Internal, behaviorally driven |
| Culturally appropriate rewards | Low use | High use |
| Basis for competition | Cost | Cost <i>and</i> differentiation |

more than eighty percent of the *maquiladoras* are still located within 50 miles of the U.S. border. *Maquiladoras*—which are factories, assembly, or processing plants—are the mechanism companies use to take advantage of the Border Industrialization Program. *Maquiladoras* are most commonly called *maquilas* or, less frequently, twin plants or in-bond facilities.² The agglomeration of *maquilas* are also referred to as the *maquiladora* industry, although they represent myriad industrial sectors.

Maquiladoras have proven attractive to foreign and Mexican investigators alike, and there are now over 2,000 facilities employing nearly 500,000 workers. They provide jobs for one-tenth of Mexico's workforce and are its most dynamic economic sector, accounting for four-fifths of Mexico's manufactured exports and two-fifths of its total exports to the United States. Mexico is the United States' third largest trading partner after Canada and Japan which are numbers one and two, respectively.

Firms seeking cheap, abundant labor and low costs of the other factors of production—manufacturing space, utilities, and so forth; relaxed environmental and worker safety standards; and quick access to the U.S. market form the basis of the *maquiladora* industry. These *maquiladoras* produce an array of goods including consumer electronics, electronic parts and assemblies, apparel, automotive equipment and accessories, furniture, toys, health-care products, and food. Many of the manufacturing processes use vast quantities of toxic materials including solvents, heavy metals, acids, resins, paints, plastics, oils, varnishes, and pesticides. The largest single *maquiladora* product category, electronics, often involves the use of solder flux and organic solvents that are flammable and can cause skin irritation and eye damage (Jenner, 1991).³

Environmental regulation is one area in which there is a wide performance gap between what is legally required and what may actually occur. Firms attempting to establish a *maquiladora* are legally required to comply with Mexican and U.S. environmental laws. The environmental law in Mexico provides that any activity posing potential harm to the environment or the ecological equilibrium must receive prior authorization from the Secretary of Urban Development and Ecology (SEDUE). SEDUE is the Mexican equivalent of the U.S. Environmental Protection Agency (EPA). [SEDUE was renamed SEDESOL after this article went to press.]

However, SEDUE faces financial constraints that limit its ability to regulate the *maquiladora* industry. SEDUE has multiple responsibilities nationwide, including housing and parks, but its budget for 1990 was \$10 million (in U.S. dollars) (Suro, 1991). The United States spent \$24.40 per capita in 1991 on environmental protection. By comparison, Mexico spent 48 cents per capita, which was a major increase from the 1989 level of 8 cents per capita (Satchell, 1991). Although Mexico has dramatically increased its investment in this area, environmentalists identify the asymmetry as a significant threat (Clement & Gerber, 1992; Gutfield, 1992).

Officials representing the Secretary of Commerce and Industrial Development (SECOFI) establish which chemicals and hazardous materials may be imported and used in a particular company's production process under the *maquiladora* program. *Maquilas* may import hazardous materials for production processes with prior authorization of SEDUE, but must export the hazardous waste materials not legally disposed of, recycled, or reused in Mexico to the country of origin. The *maquiladora* is required to enroll at the SEDUE register, keep a monthly logbook on the generation of hazardous residues, and follow SEDUE's packaging, storage, and transportation regulations. SEDUE and EPA have the power to enforce their respective environmental laws with criminal and civil penalties for companies in violation (Fuller-Jacobs, 1990). However, a recent SEDUE study of *maquiladoras* in the Matamoros area showed that of 84 plants, only 11 registered their waste discharges with Mexican authorities, and 19 treated them before releasing the flow into local sewers, canals, and ultimately the Rio Grande River and the Gulf of Mexico (Cody, 1991). Additionally, in 1989, according to EPA's Kathleen Shimmin, the agency received just twelve notifications of hazardous waste shipments being returned to the United States across the California and Arizona borders. In 1990 that total rose to eighty-five (LaDou, 1991).

While not representative of practices in many *maquiladoras*, the following passage illustrates the performance gap between what is legally required and what is enforced:

Take a drive along the Mexican side of the U.S. border, past the *maquiladora* assembly plants that dot the dry landscape, and you may come upon rows and rows of trees with plastic bags in place of leaves. The barren branches have no life left of their own—only the refuse they collect from the wind. Stop at a *maquiladora*, and you may find the workers' shacks built right up against the factory's chain-link fence, homes built of two by fours, shipping pallets, or tar paper held on by bottle cap rivets. The back seat of an old Chevy may have been transformed into the dining table. A hairless dog might run by with festering red sores. Poverty isn't pretty anywhere, but at the *maquiladoras* there's an added heartbreak: the poisoning of the landscape because of the lax handling of toxic waste at the factories (Chepesiuk, 1991, p. 36).

Maquiladora Worker Health and Safety

There is virtually no margin for disputes over basic rights or minimum working conditions—these are prescribed and defined by Mexican Labor Law. Article 3 of the 1970 Labor Law states that employment is a right and duty of each individual, and demands liberty and dignity to those that toil. The law requires that work must be effected in a way that assures life, health, and an economic improvement for the worker and his or her family. In exchange, the worker's principle obligation is to personally execute the task contracted for under the direction and dependency of those in charge (Urbina, 1972).

Mexican Labor Law further stipulates that all employers provide employees with minimum levels of training and the formation of training committees to include management and workers. According to the law, training should allow the worker to improve skills, prepare for higher positions that may become available, improve worker productivity and general welfare, and minimize work accidents (Price, Waterhouse, 1990). Although training dictated by the law is not subsidized by the government, a tax deduction for the program costs and expenses is allowed. All training programs must be submitted to the Labor Ministry Board for approval.

Finally, labor law also requires the formation of health and security committees to ensure that all companies meet the minimum requirements for health and safety on their premises. These committees comprise management *and* worker representatives, and also work in conjunction with labor authorities to analyze and investigate causes of work-related accidents and illnesses, to develop safety practices and procedures, to communicate these to the workforce, and to oversee compliance. Both the Social Security and Labor authorities are empowered to issue safety regulations and to inspect sites to evaluate compliance with minimum work standards, to develop special standards in accordance with the type of industry or activity, and to impose sanctions for noncompliance.

In summary, existing laws, which are designed to protect Mexican workers, seem to be adequate for that purpose. In fact, such laws could be described from a generally proactive or strategic HRM framework. An interesting but separate issue revolves around compliance with these laws. As in the United States, organizations vary in their levels of commitment to compliance with such laws, which sets the stage for the creation of performance gaps such as those discussed in more detail below.

Maquiladora Workplace Conditions

Conditions relating to worker health and safety vary greatly in *maquiladoras*. Sklair (1989) cautions

It is important to distinguish between Fortune 500-type firms—those with a corporate image they wish to protect, at least on the surface—and the mass of reasonably well run small and medium sized *maquilas* on one hand, and the limited group of atrocious factories that would be a scandal anywhere in the world, on the other. (p. 173)

Even among the best run *maquilas*, it is possible to identify great performance gaps between what is legally required and what actually occurs. However, hard data on working conditions in *maquilas* is extremely scarce.⁴ According to a report in *Technology Review*, (LaDou, 1991) “not only do U.S. and Mexican *maquiladora* managers attempt to deny access to their plants and their workers, but the Mexican government discourages inquiries and health studies” (p. 48).

What investigators have been able to piece together is that while working conditions in *maquiladoras* vary greatly, they are in most cases inferior to those in the United States and other developed countries.⁵ Many plants are inadequately ventilated, poorly lighted, and accidents resulting from inattention to safety procedures and the absence of safety equipment are frequent. According to one report, “Nogales *maquiladoras* reported more than 2,000 accidents in 1989—three times the accident rate of factories on the U.S. side of the border” (Satchell, 1991, p. 32).

Workers in many *maquilas* report that sanitation is poor, production quotas are high, noise is excessive, and machinery is often unsafe. They receive few rest periods and in the electronics industry must perform long hours of microscopic assembly work. Many regularly handle hazardous materials, however the protective gloves, clothing, and other safeguards routinely required in the U.S. plants are rare. To make matters worse, workers often lack safety instruction on the hazardous materials they are handling, either because instructions are not available or because they are not written in Spanish. Many workers complain of grueling production schedules and factory fumes.

One report of interviews with dozens of employees in border commu-

nities identified complaints of headaches; vision and respiratory problems; and skin diseases caused by soldering fumes, solvents, and other chemicals, particularly in the electronics assembly industry. While some plants supply protective gloves, few women wear them because they hamper dexterity and prevent workers from maintaining fast-paced production schedules (Satchell, 1991). Additionally, few men use protective gear because of "*machismo*"—use of such protection is not considered sufficiently masculine.

Some plants allow workers to take home empty, contaminated metal drums that once contained hazardous chemicals such as pesticides, solvents, acids, and alkalis (Kammer & Tolan, 1989; Satchell, 1991). Bright yellow and orange warning labels are either torn off or ignored. As a result, throughout the industrial regions of Mexico thousands of these containers are used to store water for domestic purposes (Moyer, 1990). Without Mexican tort laws or strictly enforced EPA and OSHA-style regulations, Mexican-based U.S. companies are under little more than moral obligation to protect either their workers or the environment.

The following passage describes the extent of the performance gap between what is legally required and what may occur. It is based on a study of long-term effects of exposure to hazardous chemicals by Dr. Isabel de la Alonso of the Matamoros School of Special Education. The *maquiladora* in question, is the former U.S. company, Mallory Capacitors:

The Matamoros' exposure occurred for full workdays over many months. The women often had to reach into deep vats of PCBs with no protection other than rubber gloves. Many of the workers developed the chloracne rash these chemicals normally cause. The children of these workers, however, were born with unusual characteristics that fell outside well-documented conditions such as Down's syndrome. With degrees of retardation ranging from mild to profound, these children had broad noses, bushy eyebrows, webbed and deformed hands and feet, and other distinctive birth defects. The mothers all reported that their jobs involved washing capacitors (small devices that hold electrical charges) in a chemical mixture they knew only as "electrolito." As they worked with the liquid it would cover their hands and arms and splash on their faces (Satchell, 1991, p. 32).

Some of the affected mothers have filed a lawsuit against Mallory Capacitors claiming negligence. However, Mallory has changed ownership twice since the women were exposed, and the case is currently "under review" until the liable parties can be determined.

North American Free Trade Agreement Implications

In June 1991 the governments of the three North American nations—Canada, Mexico, and the United States—began negotiating a free trade agreement referred to as the North American Free Trade Agreement or

NAFTA. NAFTA will reduce or eliminate barriers to trade and investment flows, and all three governments signed initial approval in October 1992. There is fairly wide consensus that final approval by the respective legislatures is eminent. NAFTA's goal is ". . . to progressively eliminate obstacles to the flow of goods and services and to investment, provide for the protection of intellectual property rights, and establish a fair and expeditious dispute settlement mechanism" (U.S. Department of State, 1991).

Currently, both Canada and Mexico are extremely dependent on the United States as a trading partner—over two thirds of their trade is with the United States—and as a primary source of foreign investment. Some refer to the relationship as "the elephant and two ants." NAFTA will serve to intensify the interaction among the United States, Canada, and Mexico, and criticism of NAFTA has come from myriad sources.⁶ According to Clement and Gerber (1992) there are four basic themes in this criticism:

1. Labor and community groups in (mainly) Canada and the United States strongly attack the potential decline of the manufacturing sector, loss of jobs, and deterioration of living standards that could result from freer trade and from MNCs moving to lower cost locations and the resulting disruptions to communities that would follow. In this view the NAFTA is frequently likened to a gigantic *maquiladora*.
2. Environmentalists in all countries, viewing the poor environmental enforcement record in Mexico, foresee a significant exodus of Canadian and U.S. firms to escape the stricter enforcement in their countries, aggravating both regional and global pollution.
3. Human rights groups in the three countries point to the absence of truly democratic processes and human rights violations in Mexico and advise that increasing trade links would implicitly condone such behavior.
4. In both Mexico and Canada NAFTA opponents are concerned with the potential loss of cultural identity, sovereignty, and political autonomy that could result from a closer, more open relationship with their much larger and more powerful trading partner.

In light of this criticism, MNEs will face increased pressure to respond. In the following section a model is introduced that can guide the management of conflict associated with this criticism.

PERSPECTIVES ON MANAGING CONFLICT IN INTERNATIONAL SETTINGS

There is abundant opportunity for conflict in the *maquiladora* industry, and thus, abundant opportunity for conflict management. We will identify some sources of conflict, then introduce and apply a variety of approaches to conflict management. This will be followed by discussion and recommendations for effective conflict management from a strategic HRM perspective.

Conflicts surrounding *maquiladoras* are readily apparent regarding three sets of issues: goal conflicts, value-based conflicts, and conflicts driven by variations in business practices and standards. The first set, goal conflicts, stems from incompatibility between U.S. and Mexican governmental objectives regarding the role of *maquiladoras*; between binational government objectives and communities in which *maquiladoras* are located; and between employers and worker objectives.

The second set of conflicts refers to those that are culturally based and stem from differences in values regarding the role of work and the role of the worker. The Mexican worker is often characterized as “working to live,” whereas U.S. and Japanese *maquiladora* managers are characterized as “living to work.” In addition, Mexican culture is characterized as hierarchical and fatalistic—one accepts one’s lot in life. This type of culture results in the view by those with high social status that it is acceptable to exploit those of lower status—in this case blue collar workers, especially women. Based on this perspective, practices that would be viewed as unacceptable from a U.S. perspective, for example, providing unsafe working conditions or engaging in sexual harassment, are not uncommon in *maquiladoras* (Cervantes & Ruiz, 1992).

The third set of conflicts refers to those based on variations in business practices and standards. Two that bear directly on issues of worker health, safety, and environment include gaps between U.S. and Mexican worker health, safety, and environment legislation, and bribery, called “*la mordida*” [the bite] in Spanish. There are differences between U.S. and Mexican standards regarding worker health, safety, and environment. Relatively less rigorous enforcement of this legislation in Mexico contributes to firms locating there to avoid stringent enforcement. In addition, bribery can be used to persuade Mexican investigators to look the other way to allow *maquiladoras* to flout Mexican worker health, safety, and environmental law. These three types worker health, safety, and environment conflict in *maquiladoras* are presented in Table II.

Conflict Management Techniques

Based on a conflict model developed by Thomas (1976), Gladwin and Walter (1980) have identified approaches MNEs can use to manage social and political forces that are based on combinations of two dimensions (1) **assertiveness**, which is management’s desire to obtain an outcome satisfactory to the MNE rather than to resolve the conflict; and (2) **cooperativeness**, which represents management’s concern for the relationship between the opposing parties. Combinations of assertiveness and cooperativeness result in five responses to conflict: avoidance, competition, collaboration, accommodation, and compromise. Buller, Kohls, and Anderson (1991) identify education/persuasion as an additional conflict management dimension. We have combined these two perspec-

Table II. Sources of Conflict in the *Maquiladora* Industry.

Goal Incompatibility

- Between U.S. and Mexican governmental objectives
- Between governmental objectives and communities
- Between maquiladora workers and employers

Value Differences

- "Work to live" versus "Live to work"
- Worker as renewable resource versus human asset
- Exploitation of "lower status" individuals acceptable

Business Practices & Standards

- The "mordida" (bribery) accepted Mexican business practice
- Worker health, safety, and environment legislation less restrictive (and less enforced) than in U.S.

tives to define six alternative conflict management strategies: (1) accommodation, (2) avoidance, (3) competition, (4) compromise, (5) persuasion, and (6) collaboration.

Buller et al. (1991) suggest that in most cases the collaboration strategy is the preferred means of addressing global ethical issues. On the other hand, Gladwin and Walter (1980) suggest that from a traditional risk management perspective, an MNC's choice of a conflict management strategy depends on the stakes management places on the outcome and the **relative power** or leverage the MNC has in the conflict situation. Figure 1 identifies the determinants of the choice of conflict management strategies from the risk management perspective. In the following discussion *maquila* or NAFTA-relevant examples that illustrate the six strategies are offered.

Accommodation Strategies

MNEs accommodate by adapting to the ethics or business practices of the host country. For example, an MNE might choose to condone gender-based discrimination, sexual harassment, maintenance of unsafe working conditions, or compliance with minimal environmental regulations based on a rationale that it is a common business practice in the *maquila* industry.

The following example illustrates an accommodation conflict management strategy based on adaptation to Mexico's emission standards:

The Good Bedrooms factory in Compton [California] closed in February 1990. The Good Tables plant in Carson shut down in March. Both were owned by David Finegood, who replaced the manufacturing operations

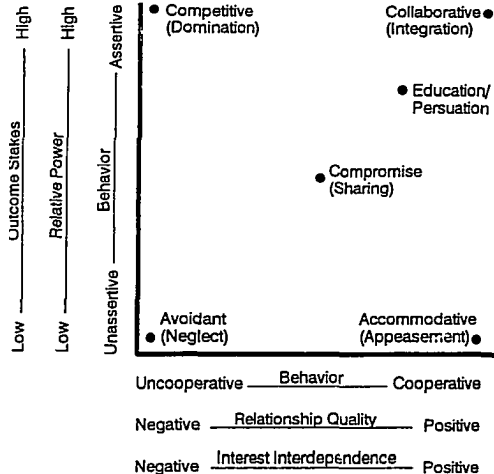


Figure 1. Determinants of conflict management behavior. Note: This Figure is adapted from Thomas N. Gladwin and Ingo Walter (1980), How multinationals can manage social and political forces. *Journal of Business Strategy*, Summer, 1(1).

with *Muebles Fino Buenos*—a literal translation of Fine Good Furniture—which opened in southeast Tijuana in March of 1990.

Wages are much lower in Mexico, and there is virtually no workers' compensation expense, but Finegood says the main reason he left was increasing environmental regulation.

"We had no intention of moving; it never entered my mind." Finegood says, "until we started getting rulings from the (South Coast Air Quality Management District)." He cites AQMD's passage in 1988 of Rule 1136, which gives furniture makers until 1996 to replace solvent-based coatings, which contain pollutants that evaporate into the air, with water-based coatings. Finegood's companies also paid thousands of dollars in penalties for violations of air quality and hazardous waste regulations.

Mexico has no emissions limits for furniture manufacturers (Pasternak, 1991, p. A1).

MNEs that exploit asymmetries such as these might enjoy short-term benefits, for example, rationalizing lower pay for women, encouraging a compliant workforce, or having relatively lower overall costs compared to MNEs that implement home country worker health, safety, or environmental standards. However, *maquilas* face heightened scrutiny from U.S. and Mexican observers. In the long-term, MNEs that employ an accommodation strategy rooted in home-host-country asymmetries increase the appearance of exploitation. They risk loss of "social legit-

imacy" which, in turn introduces the risk of increased regulation, more vigilant enforcement of existing legislation, and/or unionization. These outcomes result in increased costs.

Avoidance Strategies

When the MNE uses an avoidance strategy, managers choose to ignore or not deal with the conflict, thus the conflict remains in the background. This is a common approach ". . . when one party is so strong it can ignore the conflict" (Buller et al., 1991). The following passage illustrates the avoidance strategy:

. . . not all *maquiladoras* are as careful as they should be, especially in verifying their compliance with SEDUE regulations for storage, documentation, training, and transportation and disposal using qualified vendors in Mexico. Solvents are commonly allowed to evaporate to minimize storage space requirements. There have been cases of accidental chemical decompositions resulting in the release of toxic gases. Similar dangers from air emissions exist in *maquiladoras* using paint or varnish or generating dust, and there have been water discharges of heavy metals such as chrome and lead from plating operations. Also, many *maquiladora* managers have inherited waste stored in unmarked containers. Furthermore, many U.S. suppliers do not translate material safety data sheets into Spanish. And there is a need for better emergency response planning by U.S. and Mexican authorities (Jenner, 1991, p. 23).

MNEs ignore laws concerning worker health, safety, and environment based on a belief that Mexico wants or needs foreign investment so badly that the MNE has abundant power. If the MNE is more powerful, avoidance can offer a temporary respite. However, avoidance is seen as "super exploitation" behavior (Sklair, 1989). It has the potential to destroy goodwill, and if the power relationship shifts the MNE faces an increased risk of regulation, enforcement, or even expulsion. This strategy also offers the prospect of increased costs.

Competition Strategies

MNEs use the competition strategy when their objective is to dominate the other party. This occurs when MNEs impose new behaviors that support their own needs in a host country. A relative abundance of workers willing to work compared to the number of job opportunities in *maquiladoras* results in intense competition for jobs which in turn facilitates use of this strategy. For example, MNEs implement competition strategies when they ignore the importance of family to the Mexican worker; discharge or punish workers for attending to family matters; or use worker health, safety, and environmental standards they know to be inadequate.

The experience of workers in a musical instrument factory demonstrates implementation of the competition strategy:

Maura Perez clenched her fist and slammed the table as she talked about the trumpet and saxophone factory where she used to work.

"They don't care about your health," Perez said. "The only thing that interests them is getting production out of you."

Last summer, Perez quit her soldering job in a Nogales plant owned by United Musical Instruments USA, Inc. an Elkhart, Indiana company that sells musical instruments around the world. She says she quit because she was disgusted with the plant manager's disregard for worker safety.

Perez and more than a dozen past and present employees of the plant describe a workplace where chemical vapors and dust foul the air, irritating lungs, stinging eyes, and burning skin. They say the ventilation system is inadequate and sometimes doesn't work at all.

That is a stark contrast to worker conditions at United Musical's plant in Eastlake, Ohio which is required to conform to strict and often expensive standards established by the Occupational Safety and Health Administration (Minimal safety rules, 1989, p. A1).

MNEs that engage in competition strategies expose the firm to the same risks as those who engage in avoidance and/or accommodation strategies depending on whether their behavior is seen as exploitative or "super-exploitative". This strategy sends a clear message to workers that they are devalued and is associated with increased rates of turnover and absenteeism which in turn contribute to increased training costs.

Compromise Strategies

For MNEs using the compromise strategy the objective is to split the difference,

especially when conflicts involve differences in goals, attitudes, and values. . . . Compromise makes sense when goals are important but not worth the effort or potential delays associated with more assertive kinds of behavior" (Gladwin & Walter, 1980, p. 82).

Maquiladoras often pay "*mordidas*"—small bribes or "grease" payment—to Mexican officials to avoid various inspections. This is an example of compromise.

A more dramatic compromise example is suggested in the following passage:

Changes in the pipeline are characterized by one [Mexican] government official as part of the government's ongoing restructuring process. But at the same time, these changes go part of the way toward satisfying foreign investor demands. Among the changes already announced is a reform of Mexico's restrictive 1973 Foreign Investment Law. . . . Other changes hinted at include a reform of Mexico's strict labor laws which, for example, enforce profit sharing. Mexican labor laws also have strict firing guidelines

which include up to three months severance pay for dismissal without due cause. The law creates extra expense for companies and is one more factor which deters foreign companies from setting up operations in Mexico. . . . A more flexible labor code would be a boon to companies considering Mexico (Watling, 1992, p. 16).

MNEs that pursue compromise strategies are only postponing the inevitable commitment that they must make to the worker. Such ambivalence might be a result of poor strategic planning, uncertainty, or seeking the path of least resistance. In the long term, however, this strategy is very likely to increase training costs associated with turnover. Perhaps, more importantly, it can contribute to loss of competitive advantage by harming the MNEs' global reputations.

Education Strategies

This strategy uses communication, for example through training programs, to convert host country parties to the MNE's position. Some *maquilas* use extensive training programs and reward system-based reinforcement to teach worker safety, a good example of the education strategy.

In the following example, education would likely have increased the *maquiladora's* effectiveness:

A . . . U.S. manager of a plant producing oxygen inhalation equipment in Nogales publicly criticized and fired two probationary maintenance employees after finding them at work without the safety glasses that they had agreed to wear. There was considerable agitation in the ranks about this action. He hadn't learned that in Mexican culture it is standard behavior by a subordinate to agree respectfully to whatever is asked, without arguing, even though it may be impossible to perform. Had the manager known, he would have investigated whether the equipment existed in the plant. It did not. Managers cannot accept nods of agreement at face value. Culturally, these are given out of respect (DeForest, 1991, p. 39).

The education strategy can result in short-term increased costs, but longer term the benefits of training can contribute to overall effectiveness through development of a more highly skilled workforce. Research indicates that training is a highly valued reward in *maquiladoras*. Teagarden, Butler, and Von Glinow (1992) found that workers wanted training even if it meant forgoing pay increases. Since the education strategy aims to transfer MNE norms and values to the *maquiladora*, it is sometimes criticized as a mechanism that dilutes Mexican culture.

Collaboration Strategies

The collaboration strategy ". . . is especially effective when both sides want to achieve the same objective . . ." (Gladwin & Walter, 1980).

Using this approach, both parties choose to confront the conflict directly and collaborate on mutually satisfactory solutions. Buller et al. (1991) suggest that, "This approach is most likely to result in a complete resolution of the conflict because it addresses the source of the conflict."

An example of the use of the collaboration approach is SEDUE and EPA agreeing to enforce environmental protection regulations. The following, a synthesis of best practices followed by *maquiladoras*, is an example of the positive outcomes that can result when a collaboration-problem solving approach is used:

. . . material [is] transported in compliance with California Department of Motor Vehicles and Environmental Protection Agency regulations, temporarily imported into Mexico and used according to regulations of the Secretariat of Urban Development and Ecology (SEDUE—Mexico's version of the Environmental Protection Agency) and exported back to the United States or Japan for disposal. Air extractors are used to control emissions, and solder dross can be recycled in the United States for metal finishing. New materials and production processes can be substituted for traditional hazardous or polluting alternatives. An important staff function is careful record-keeping of movements in and out of storage areas and the monthly waste generated and exported from the plant. Containers should be labeled in English and Spanish; fire extinguishers should be readily available; and there should be contingency plans and drills for chemical emergencies (Jenner, 1991, p. 23).

This approach can result in a win/win outcome for the MNE and the opposing party. Even if the conflict is not resolved to the MNEs' short-term advantage, the approach builds trust and removes or addresses the conflict directly. This strategy sends a strong message that the opposing party is valued and respected, important strategic outcomes from a cross-cultural perspective (Teagarden, Butler, & Von Glinow, 1991).

Strategic Implications of Conflict Management

The strengths and weakness of each of these conflict management strategies and its HRM implications are summarized in Table III. While several of the conflict management strategies may result in short-term productivity gains or improvements, they clearly are not consistent with the longer-term objectives associated with improving worker satisfaction and the even longer-term developmental goals characteristic of strategic HRM. We suggest that education and collaboration approaches, shown in Figure 1, are most consistent with the strategic development of a capable, effective workforce. Briefly, education is important in bridging inevitable cross-cultural gaps and in training and development of this workforce. Collaboration also bridges cross-cultural gaps and sends a clear message of long-term commitment. The remaining strategies place the *maquiladora* at a decided comparative disadvantage vis-a-vis those *maquiladoras* that use conflict strategies that support strategic HRM.

Table III. Strengths, Weaknesses, HRM Outcomes, and Examples of Conflict Management Strategies.

| Conflict Resolution Strategy | Examples | Strengths | Weaknesses | Outcomes |
|------------------------------|---|--|---|---|
| Competition | <ul style="list-style-type: none"> Intentionally use substandard WHS* techniques Sexual harassment Ignore Mexican worker health, safety & environment legislation Exploit asymmetries in WHS legislation Gender-based discrimination | <ul style="list-style-type: none"> Short-term cost savings Encourages docility Short-term cost savings | <ul style="list-style-type: none"> Risk regulation or increased enforcement Super exploitative Risk regulation and increased enforcement Super exploitative Can be seen as exploitative MNEs often held to higher standard than local firms | <ul style="list-style-type: none"> Absenteeism Turnover Absenteeism Turnover Absenteeism Turnover |
| Avoidance | | | | |
| Accommodation | | <ul style="list-style-type: none"> Consistent with local practices Short-term cost savings Path of least resistance | | |
| Compromise | <ul style="list-style-type: none"> Use bribery Lobby to have Mexican labor law relaxed | <ul style="list-style-type: none"> Avoid inspection Short-term cost savings | <ul style="list-style-type: none"> Can be seen as exploitative MNEs can be held to different standard | <ul style="list-style-type: none"> Absenteeism Turnover |
| Education | <ul style="list-style-type: none"> Safety Training | <ul style="list-style-type: none"> Trained workforce Tax-deductible Expresses commitment Is a desired reward | <ul style="list-style-type: none"> Short-term cost increase Time missed from production | <ul style="list-style-type: none"> Increased satisfaction Develops a trained workforce |
| Collaboration | <ul style="list-style-type: none"> SEDUE/EPA cooperation | <ul style="list-style-type: none"> Clear expression that opponent is valued and respected Builds trust | <ul style="list-style-type: none"> Shares power Short-term cost increase | <ul style="list-style-type: none"> Increased satisfaction commitment, and loyalty |

*WHS (worker health and safety)

Mexico is currently an off-shore manufacturing hot spot and is expected to remain so and grow in importance with the passage of NAFTA. Attractiveness of off-shore sites, however, shifts with changes in labor cost and availability and other related costs. The recommendations offered in this article apply as well to Thailand, Viet Nam, or Africa as they do to Mexico.

As mentioned earlier, MNEs can have a short-term productivity objective. For these MNEs, a control-based HRM strategy is sufficient, but not without cost. Control-based HRM strategies rely on power coercive techniques, and are typically implemented in a relatively short time frame. They are, however, associated with high levels of conflict. As seen in the *maquiladora* case, this conflict results in increases in turnover and absenteeism and higher costs associated with selection and training. Based on the foregoing examples, it is not difficult to determine which MNEs would likely abandon their *maquiladora* operation due to an over-reliance on this conflict-laden approach.

A middle stance is one in which MNEs meet both increased productivity and improved worker satisfaction objectives. In this case, a longer-term, human-relations-based HRM strategy is more appropriate. Human-relations-based strategies rely on rational-empirical techniques and necessarily require more time to implement than do control-based HRM strategies. An advantage to human-relations-based strategies is that they typically produce lower levels of conflict than do control-based strategies. Since implementation of this strategy would typically result in productivity gains and satisfaction improvement, lower levels of turnover and absenteeism and reduced selection and training costs would also be expected. Given these benefits, *maquiladoras* that pursue this less conflict-laden strategy would likely emphasize both task-related and quality-focused worker training programs.

Finally, MNEs simultaneously pursue productivity, satisfaction, and development objectives. In this case, a long-term human resource strategy is necessary. Such long-term HRM strategies rely on normative-reeducative techniques, are process oriented, and aimed at generating improvements in worker satisfaction and development. While they must be implemented over a longer period of time, attainment of their objectives is associated with the lowest level of conflict, and with maximum gains in productivity, levels of satisfaction, and overall employee development. Consequently, turnover and absenteeism would necessarily be lower in *maquiladoras* using this strategy. Additionally, training and selection costs, at least in the short term, would likely be higher than those encountered in *maquiladoras* pursuing shorter-term HRM strategies. However, an emphasis on training and selection would result in a workforce capable of producing world-class quality products that meet demanding customer schedules. Figure 2 illustrates the costs and

STRATEGIES MODEL

Based on the following management objectives:

- Worker Productivity
- Worker Satisfaction
- Worker Development

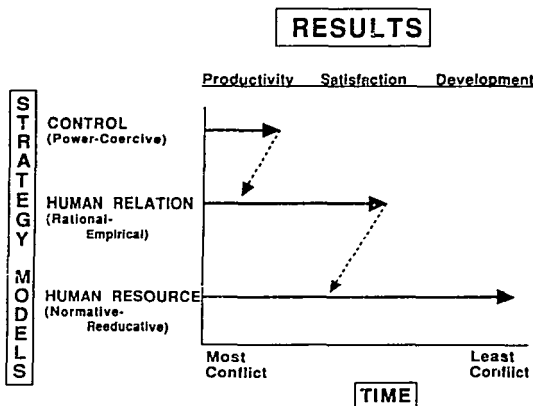


Figure 2. HRM strategy costs and benefits. This figure is adapted from Chin, R., & Benne, K. D. (1976). General strategies for effecting changes in human systems. In W. G. Bennis, K. D. Benne, R. Chin, & K. E. Corey (Eds.), *The planning of change* (3rd ed.). New York: Holt, Rinehart, & Winston.

results of these long- and short-term HRM strategies.

We feel there is a compelling reason for MNEs to consider the strategic HRM approach outlined above: Customer preferences change. Those who at this point in time are satisfied with low cost may well expect low cost, high quality, and rapid delivery in the future—especially if competitors are able to meet such expectations. Development of a workforce that can deliver on these more sophisticated demands takes investment in training, development, and time. MNEs that opt for strategies that yield only short-term benefits place themselves at risk in the long-term competitive arena where ability to compete on cost, quality-based differentiation, and speed are likely to be critical.

CONCLUSIONS AND FUTURE DIRECTIONS

The foregoing discussion identifies a serious question that must be asked: How do we go about the task of solving the variety of problems

identified in this article? We suggest that the strategic HRM perspective provides powerful rationale for problem solution. We advocate a systematic study conducted through the human resource function of organizations that currently work in the international context. In particular, those organizations that operate facilities both in the United States and in Mexico should be examined. While an extensive amount of anecdotal evidence exists which suggests a path that *should* be followed, such data are also somewhat insufficient for a broader range of organizational purposes.

To clarify and specifically identify the path, which would eliminate any insufficiencies in data which currently exist, a more scientifically rigorous and systematic approach is warranted. This approach must combine both quantitative and qualitative data collection methods in order to build on work that has accumulated to date. Further, the study should document (a) the extent to which the worker safety and health and environmental problems discussed earlier actually exist, (b) whether or not such occurrences vary by industry, and (c) what specific HRM strategies are currently being employed (if any) to resolve the identified problems. In short, the goal of future activity is to identify the human resource management best practices that can be most effectively matched to resolving the complex problems noted above. Without such a systematic approach, worker safety and health issues in the *maquiladora* setting will continue to go unresolved, jeopardizing countless numbers of workers as well as prospects for improved economic health between Canada or the United States and Mexico.

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NOTES

1. We would like to acknowledge the valuable contribution of Professor Miguel Angel Valverde of CETYS in Tijuana, Baja California, and many of our MBA graduate students and International Business and Management undergraduate students to this project. (John Hendon, Chris Feno, Marianne Sozio, Mike

- Adams, Jonas Almstrup, Pom Assoratgoun, Chris Barber, Al Stark, Konrad Larson, Jeff Parkinson, John Patton, Lin Farmer, Linlee Austell and Tehseen Lazzouni).
2. Twin plant stems from the belief that there would be similar plants on each side of the border; the U.S. side completing capital-intensive functions and the Mexican side completing labor-intensive function. In fact, less than 10% of the *maquilas* have twin plants in the U.S. The in-bond term stems from the requirement that raw materials and supplies shipped to Mexico be processed and then reexported to the U.S. To guarantee reexport these inputs are bonded.
 3. For a more detailed discussion of the *maquiladora* industry see M. B. Teagarden, M. C. Butler, & M. A. Von Glinow (1992) Mexico's *maquiladora* industry: Where strategic human resource management makes a difference. *Organizational Dynamics*, Winter, 20(3), 34-47.
 4. Studies that address working conditions in *maquilas* are written predominantly in Spanish. Two notable studies include *Condiciones de Trabajo en las Maquiladoras de Ciudad Juarez [Maquiladora work conditions in Ciudad Juarez]* by Dalia Barrera Bassols, Mexico, D. F.: Instituto Nacional de Antropología e Historia, 1990; "La salud y la mujer obrera en las plantas maquiladoras: El caso de Tijuana," [Health and female *maquiladora* workers: The case of Tijuana] by Jorge Carrillo and Monica Jasis, *Enfermeria Hoy*, (June 1983), 4, 20-33. English translations of Spanish language citations are bracketed throughout the manuscript. Translations were done by M. B. Teagarden.
 5. This description of working conditions is based on a synthesis of the work of Barrera Bassols (1990); Gross (1991); Jenner (1990); Kammer & Tolan (1989); LaDou (1991); "Minimal Safety Rules" (1989); Moyers (1990); Pasternak (1991); Sanchez (1989); Satchell (1991); Sklair (1989); and the authors' observations
 6. There are myriad views of the costs and benefits of NAFTA. For example, see *Columbia Journal of World Business*, Summer 1991, 26(2); the *American Review of Canadian Studies*, Fall 1991, 21(2/3); NACLA (1991) The new gospel: North American Free Trade. *Report on the Americas*, 24(6); AFL-CIO (1991) Exploiting both sides: U.S.-Mexico 'Free Trade'. Washington, D.C.; and USITC (1991) *The likely impact on the United States of a Free Trade Agreement with Mexico*. Washington, D.C.: United States International Trade Commission, Publication 2353.