MEASURING THE IMPLEMENTATION OF EMPLOYEE INVOLVEMENT
IN THE MAQUILADORA INDUSTRY: A MATCHED-PAIRS
ANALYSIS OF UNITED STATES PARENT
COMPANIES AND THEIR MEXICAN
SUBSIDIARIES

DISSERTATION

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

By

Jane Herring Stanford, B.S., M.S., M.B.A.
Denton, Texas
December, 1992
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Determining whether management theories practiced under the cultural assumptions of one nation can be successfully implemented in a host country by expatriate managers has become a cogent issue to international management theorists. Upon finalization of the North American Free Trade Agreement, the ramifications of this issue could become critical to United States businesses seeking direct investment opportunities in Mexico. United States enterprises building upon the *maquiladora* concept must manage work forces that are employed from the large, low-wage labor pool that is Mexico's comparative advantage in trade.

Participative management, or employee involvement, is growing in popularity. Practices such as employee empowerment, self-managed teams, and cross-functional groups are being implemented to take advantage of this involvement. Organizations cite advantages such as heightened employee motivation, increased productivity, a higher quality of
output, and, ultimately, augmentation of the firm's competitive position.

Participative management practices between United States parent companies in the maquiladora industry and their Mexico assembly plants were investigated for this study. It was hypothesized that managers of parent maquiladora companies in the United States encouraged greater levels of worker participation than did expatriate managers in Mexican subsidiaries. However, the findings of this study indicate that expatriate managers in a number of the Mexico subsidiaries are currently implementing employee involvement approaches. In some instances, highly participative team-based approaches are being used.
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CHAPTER I

INTRODUCTION

The competitiveness of United States businesses has been questioned repeatedly during the last few decades. As Japan and the newly industrialized countries of the Pacific Rim have increased their global market and manufacturing shares, and as the balance of United States international trade has tilted in favor of foreign nations, the question has reverberated from one United States industry to another. American manufacturers have been at the center of this controversy and, as a result, have been challenged by consumers to meet higher standards of product quality and service.

In accepting the challenge, astute manufacturers have focused their revitalization efforts internally and have attempted to revamp broad areas of their organization structures, strategies, and processes. One objective of this renewal effort is the creation of an expertise that has been referred to as "manufacturing prowess" (Morrison 1990, 70). This expertise requires numerous factors (e.g., the development of more effective production processes, the enforcement of stringent measures of quality control, the defense of economies of scale, and the utilization of higher capacity, among others).
However, commanding manufacturing prowess alone is not enough to remain competitive in today's global market. In order to be truly competitive in the global arena, an organization must remain innovative and be continuously willing to improve products and processes and to adapt to the further changes that occur (Porter 1991). Bartlett and Ghoshal (1987b), too, state that the ability of a company to survive and succeed in today's turbulency depends largely upon its ability to adapt to the demands shaping the current competitive environment.

Fostering this type of adaptability and innovativeness requires a special type of organization structure. Burns and Stalker (1961) first used the term organic to characterize it. Rather than centralized decision making, individuals in every part of the organization are encouraged to make critical judgments, to exercise initiative, and to be creative. Thus, rather than multiple layers of management in an organizational structure made rigid by procedural rules and policies, an organic configuration is relatively flat and flexible. Varying degrees of democracy prevail--rules and policies are replaced by individual decision making throughout the organizational hierarchy.

To preserve its key characteristics of adaptability and innovativeness, the organic structure must have a compatible management style. Thompson and Strickland (1992, 269) suggest that in order to permit continuous adaptation to
changing conditions, a manager can "take special pains to foster, nourish, and support people who are willing to champion new ideas, better services, new products and product applications." Therefore, a management style that is congruent with the decentralized flexibility of the organic design can best be described as one that champions individual endeavors while simultaneously nurturing supportive relationships among organizational members.

The idea of supporting individuals and their organizational relationships has been an inherent component of a participative management style for many years. Likert (1961) used the concept to describe his "linking pin" theory; McGregor (1960), his Theory X; and Blake and Mouton (1978), a "9-9" leader. The principle was described in recalling the Tavistock studies in London after World War II, the Tannoy factory in Coatbridge, Scotland in later years, and the Volvo plant in Kalmar, Sweden, in more recent times (Maccoby 1981; Wren 1987).

Contemporary theorists have redefined the term "supportive relationships" and the concept that the phrase embodies (Crouch and Yetton 1988; Jago 1982; Lawler 1986, 1990; Maccoby 1981; Margulies and Black 1987; Sundstrom, De Meuse, and Futress 1990). However, regardless of its origins or the nomenclature used to describe it--supportive relationships, participative management, autonomous work group, self-managed teams, or employee involvement--the
principle is the same. This type of management is currently utilized in all types of businesses to increase work force performance and to contribute to the overall effectiveness of organizational outcomes, according to Lane and DiStefano (1992), Lawler (1990), Marks, et al. (1986), and others. Thus, modern employee involvement practices that call for flexibility and self-management are especially useful in organizations that must innovate and adapt because their competitiveness is in jeopardy.

Unfortunately, a possible threat exists in the use of participative management theory in multinational organizations—a transferability issue has been raised by a number of contemporary international management theorists. Adler (1991), Boyacigiller and Adler (1991), and Hofstede (1987), who have been among the most vocal of these theorists, argue that the successful implementation of management theory by an expatriate firm using a foreign work force is contingent upon the cultural norms and traditions in the host country being accordant with the underlying assumptions of the theory. Thus, a pragmatic consideration is whether an international firm can experience the same positive results in a foreign context when utilizing management theory as it does in a domestic situation because of the difference in the cultural orientations of the work forces. According to the rationale of transferability proponents, it is possible that a management practice, such
as employee involvement, would not be transferable across international boundaries if theoretical assumptions and cultural values were incompatible.

Thus, if the transferability argument is a valid one—if management theories that have proven to be instrumental in achieving competitive advantage in one country cannot always be successfully operationalized in a foreign one due to disparities between existing cultural values and theoretical assumptions—then it is a serious issue with far-reaching ramifications.

Statement of the Problem

Employee involvement practices are being optimally employed in an increasing number of firms in the United States, especially in manufacturing sectors. The positive outcomes of this approach to managing typically range from increases in motivation and productivity on an individual level to overall increases in the effectiveness of organizational outcomes (Van Fleet 1991). Therefore, the potential of a United States manufacturing company to successfully implement a participative management approach in a foreign subsidiary with a foreign work force constitutes the primary problem in this study.

Tangent to the main problem is one concerned with the negative effects of non-transferability on trade agreements among nations, especially the North American Free Trade
Agreement. One of the assumed outcomes of the North American Free Trade Agreement will be an increase in United States direct investments in Mexico (Bureau of National Affairs 1991; Szekely and Vera 1991). Thus, if management practices that have been used successfully in the United States to augment competitiveness cannot be fully implemented in Mexico in United States companies' interest, negative consequences may result for both the companies involved and the success of the trade accord.

**Significance of the Problem**

The significance of this study lies in (a) the relationship between employee involvement practices and organizational outcomes and (b) the implications for United States companies that will establish future operations in Mexico. This significance may be even more meaningful after the finalized North American Free Trade Agreement has eliminated all direct foreign investment trade barriers.

A positive correlation exists in the participation-productivity relationship (Lane and DiStefano 1992; Lawler 1990; Marks, et al. 1986). As participative methods are implemented in an organization, productivity typically rises. One noteworthy example is a General Electric plant that, after changing to employee involvement, witnessed a 250 percent increase in productivity over a five-year period (Van Fleet 1991, 150). This increase was attributed to the
creation of a democratic environment that fostered high levels of worker motivation. The findings of a recent international study indicate that United States firms plan to continually increase future participative management practices, especially highly advanced forms of employee involvement such as self-managed teams, to improve quality and competitiveness (Ernst and Young and American Quality Foundation 1991, 30-31).

United States companies pursuing growth strategies in Mexico through either the maquiladora industry or through direct investment after the passage of the North American Free Trade Agreement would seek an organizational design/management style that had the potential to maximize overall effectiveness. Based on the findings of the Ernst and Young and American Quality Foundation study (1991), the choice could feasibly be employee involvement.

**Scope of the Study**

The scope of this study was limited in three primary directions. First, the broad issue of transferability, as conceptualized by contemporary international management theorists, was only partially addressed in this study (i.e., one particular management theory was examined to determine if it was implemented in a country where cultural values are assumed to be different from those in which the theory has been primarily propagated). The second constraint was a
corollary of the first—only two cultures were involved in this study. Third, no attempt was made to build a cause and effect relationship (i.e., the intent of the study was to ascertain only whether a specific management theory could be implemented in a foreign culture and not to delve into the reasons for the success or failure of implementation).

Selected Theory: Modern Employee Involvement Practices

The focus of this research, employee involvement, was chosen for several reasons. A primary reason was that employment involvement approaches exemplify contemporary management thought. From a humanistic viewpoint, this approach perceives workers as unique individuals with unlimited capabilities to contribute to a firm. This perspective of employees is pervasive in modern management paradigms, especially in those that call for participative approaches such as employee empowerment, self-managed teams, and cross-functional groups. Conversely, autocratic managers believe that a typical worker holds an inherent aversion to accepting responsibility, is not motivated, and possesses little in the way of personal initiative to contribute to the organization. From this viewpoint, autocratic managers, when confronted with workers, "must coerce, intimidate, manipulate, and closely supervise their employees" (Whetton and Cameron 1991, 343). This perspective of workers is represented by McGregor's (1971) Theory X. The Theory X
model does not epitomize a contemporary paragon of worker behavior, as does employee involvement.

A second reason for examining employee involvement is its potential to optimize the human resource potential of an organization (Beardsley 1988; Crouch and Yetton 1988; Goddard 1991; Hackman and Oldham 1980; Kanter, Summers, and Stein 1986; Maccoby 1981; Margulies and Black 1987; Stewart 1991). Because a participative management approach exemplifies contemporary management thought and is a current strategy used to increase individual employees' motivation and to optimize overall organizational effectiveness, this approach is a relevant theory for studying the implementation of management theory.

Selected Situational Context: The Maquiladora Industry

The situational context selected to examine employee involvement theory was the maquiladora industry dichotomously composed of United States-based manufacturing companies and their Mexico-based subsidiaries. Thus, this study focused on two cultures—the United States and Mexico. The rationale for choosing the maquiladora industry was based on two primary factors. In addition to its international character, the first factor for selection hinged on its internal configuration, and the second concerned the North American Free Trade Agreement.
The Maquiladora's Configuration

The maquiladoras' dichotomous arrangement of United States-based manufacturing firms, each with assembly plants located in Mexico, offered a unique opportunity to study the implementation of management theory. A common industry practice is to send experienced United States personnel to oversee the general operations of subsidiary assembly plants in Mexico. Consequently, plants on both sides of the United States-Mexico border are managed by United States citizens; however, these plants are staffed by work forces that are native to their respective countries. Therefore, in studying the implementation of theory, a comparative analysis was made between domestic and expatriate United States managers.

The Maquiladora--An Investment Model

Another important factor in the selection of the maquiladora industry for this study concerned the proposed North American Free Trade Agreement. Forecasters speculate that after the passage of the North American Free Trade Agreement, those seeking direct investment opportunities in Mexico will emulate the maquiladora model (i.e., United States technology and capital will be combined with an abundant and low-cost Mexican labor supply). Thus, it is important for United States investors and managers who enter Mexico under the terms of the trade agreement to know the
compatibility of proven management theory, especially theory that has the potential to maximize a firm's competitiveness.

**Selected Parameter for Study: Implementation of Employee Involvement**

In this study, no attempt was made to build a cause-and-effect relationship. The research interest was focused on the criterion variable (implementation of employee involvement) rather than on predictor variables (cultural values, biased stereotyping, etc.). According to Kerlinger (1973), it is common in practical or applied research for the basic interest to be more on the criterion (some practical outcome) than on the predictor or predictors of that outcome.

The outcome or criterion variable of interest in this study was the implementation of management theory—whether or not a participative approach being utilized in the United States can be successfully implemented in Mexico. The many implied predictor variables, or factors that could possibly affect the implementation of theory were (a) differences in cultural values between United States managers and Mexican workers and (b) expatriate managers' stereotypical biases toward Mexican workers. It was also possible that expatriate managers' lack of skills to effectively implement a highly participative approach (e.g., not knowing how to organize and facilitate team work) was another factor that could hinder implementation. Too, it was possible that other factors, as yet unidentified through research, could undermine the
efforts to implement management theory. Although numerous barriers could feasibly exist, the focus of this study was to determine whether or not modern or highly participative forms of management could be implemented in United States-managed maquiladora subsidiaries in Mexico.

Theoretical Framework

The theoretical framework for this study is built on several branches of the field of management—strategic, international, and organizational behavior and theory. The field of economics is also an important factor in this study's framework.

Strategic Management

Strategic management is usually conceptualized as consisting of three of four primary levels of strategy-making, depending upon whether the firm is diversified. The corporate-level (diversified) or business-level (non-diversified) is concerned with strategies that will guide the entire organization (i.e., all business units or subsidiaries) into the future, serve as a model for planning in lower levels of the organization, and build competitive advantage. These corporate or business strategies typically have great breadth but lack specific, short-range components. More specific plans are formulated at the appropriate level as long-range strategies are directed down through the organization; the respective order of levels is business (if
Corporate or Business Strategies

The strategies of low-cost and differentiation are integral to the concept of competitive advantage in this study. Continuing debates among theorists concern whether these strategies can be pursued simultaneously and whether one provides a greater advantage over the other under certain environmental conditions, such as a globally competitive one.

Thompson and Strickland (1992) contend that striving to be the low-cost producer is an exceptionally competitive approach in price-sensitive markets, especially when there are many producers of similar or commodity-type products. However, a differentiation strategy can also be a powerful approach when consumer preferences are diverse or when a product's uniqueness cannot easily be imitated.

According to Porter (1985), a producer chooses one of the strategies in his Three Generic Strategy model—low-cost, differentiation, or focus (low-cost or differentiation). He asserts that trying to be "'all things to all people' is a recipe for strategic mediocrity and below-average performance" (Porter 1985, 12, 13), but cautions cost leaders to achieve parity or proximity in the bases of differentiation relative to competitors.
Counter to Porter's stance, Hill (1988, 401) argues that many firms are required to simultaneously pursue low-cost and differentiation strategies--a combination strategy--because in many industries there is no unique low-cost position. Other theorists also contend that generic strategies cannot be stratified exclusively by low-cost or differentiation; that, in fact, any number of combination strategies may exist (Davis 1986; Dess and Davis 1984; Galbraith and Schendel 1983; Hambrick 1983; Miller and Friesen 1978; Robinson and Pearce 1985).

Miller (1988) included other variables in this debate and determined that generic strategies must be matched with complementary environments and structures in order to promote success. He found relationships between differentiation and uncertain environments and between cost leadership and predictable environments. Miller added that these relationships are more likely to be significant in groups of high-performing firms than in groups of poor performers (Miller 1988, 280).

Corresponding with Miller's study, Morrison (1990, 113, 138) found that low-cost did not typify competition in global industries, which are usually assumed to be environmentally uncertain arenas. Furthermore, Morrison found that, within regionally competitive environments, United States-based competitors overwhelmingly emphasized differentiation
strategies. This occurred where competitive positioning was predominantly based on quality offerings; producing high-quality goods and services is becoming the focus of United States international competitors (Morrison 1990, 138, 139). (The term regionally is meaningful in Morrison's study, because his findings suggest that the dominant competitive arena for United States-based companies is regional rather than global. Morrison determined that United States companies do not usually view the world as an undifferentiated global marketplace.)

In this study, the single factor that was deemed most relevant was that cost control strategies are very important to manufacturers in the maquiladora industry. Dornbusch (1991, 74) claims that, due to high labor costs, it is currently impossible for many United States industries to produce goods and be competitive in the global marketplace; foreign industries are far too cost competitive. This is especially true in the United States electronics and automobile industries, where labor costs have stymied competitive ability (Baker, Woodruff, and Weiner 1992). Thus, many United States manufacturers have found off-shore assembly (i.e., the maquiladora industry) to be very attractive because it provides a reduction of labor costs (Asheghian and Ebrahimi 1990; Drucker 1990; Special Report 1991). Wu and Longley (1991, 63) suggest that, after the passage of the North American Free Trade Agreement, lowering
manufacturing costs and achieving economies of scale will place United States companies in a better position to compete with Japan and other emerging powers in the Asia-Pacific region.

However, the premise of this study, that controlling costs is of the utmost importance to United States manufacturers, does not exclude the possibility that certain groups of manufacturers will seek differentiation or that a combination approach is the most strategic one. In the electronics industry, for example, companies may pursue a quality differentiation strategy while striving to be cost competitive. Thus, strategic management theory provides a broad basis for building hypotheses concerning competitive advantage strategies in existing maquiladora organizations and in future organizations that make foreign direct investments in Mexico.

Operating Strategies

Another area of strategic management theory is that of operating strategies (Schendel and Hofer 1979). Although operating strategies are a smaller part of overall strategic planning, their importance and the role of the plant managers who implement them cannot be minimized. Thompson and Strickland (1992, 39) cite a possible scenario to illustrate this point: "A plant that fails to achieve production volume, unit cost, and quality targets can undercut sales and
profit objectives and wreak havoc with the company's strategic efforts." Because of their significance to the operations of the maquiladoras, plant managers were used as subjects in this study. Plant managers are responsible for implementing corporate or business-level plans; therefore, plant managers' opinions were considered most relevant to this study.

Organizational Behavior

Management style theories fall within the realm of organizational behavior. The management model that is central to this study is a participative one. Contemporary terminology has made autonomous work group, self-managed team, employee involvement, and other similar descriptors synonymous with the term participative management.

Aspects of participative theory, such as the history and evolution of participation and its contribution to modern industries, especially to United States manufacturing industries, form the basis of this study. Included in the history are names such as Mayo, Roethlisberger and the Hawthorne studies in the 1920s and 1930s (Wren 1987); Lewin and Field Theory in the 1940s (Weisbord 1988); the Tavistock studies and the "sociotechnical model" (Wren 1987); a decade later Trist and Bamforth (1951); Likert (1961) and McGregor (1960) after the century midpoint; Blake and Mouton (1978) in
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the 1970s; Lawler (1986, 1990), Tarrytown (Guest 1979), and Kalmar (Maccoby 1981) currently; and others.

Increases in the use of employee involvement and the positive contribution being made in organizations are the subject of much of the current organizational behavior literature (Crouch and Yetton 1988; Goodman, Devades, and Hughson 1988; Lane and DiStefano 1992; Lawler 1986, 1990; Margulies and Black 1987; Van Fleet 1991). The contemporary model of participative management--employee involvement--is distinguished by its respect for the individual worker and its belief that the worker has unlimited capacity to innovate, to be creative, and to engage in critical decision making.

Organizational Theory

Organizational Theory involves the structure of an organization. The terms design and configuration are synonymous, and are often substituted for structure. All three terms connote a physical layering of management hierarchy; thus, a "tall" organization refers to the multiple layers of management typically found in a highly centralized or bureaucratic organization. Bureaucratic structures function best when incremental layers of management can control organizational decision making through formalized rules and policies. This type of structure can be very efficient in a stable environment; because few changes occur,
written rules and policies can serve in lieu of spontaneous decision making. Conversely a "flat" organization is usually characterized by few layers of management, decentralized decision making, and few, if any, formal rules and policies. Because of the absence of rules and policies and the wider distribution of authority, individuals throughout a flat structure must engage in decision making. The degree of individual autonomy in this type of structure is dependent upon management style; however, a flat design can function better in a dynamic environment than can a tall one. Empowered individuals in a flat structure can usually respond instantaneously to the rapid changes that may occur. Therefore, the more that authority is pushed to lower levels, the more flexible and responsive the organization. This type of adaptive organization represents Burns and Stalker's (1961) organic organization.

The Organic Structure

As United States manufacturers are threatened competitively, they are forced to implement a flexible structure such as the one described by Burns and Stalker (1961). The Burns-Stalker organic model, free of rigid, formal relationships (e.g., communication flows freely in all directions) and unburdened by numerous rules and policies is one that can respond best to strategic moves toward change
and innovation. Thus, it was deemed as the appropriate model for this study.

The Strategy-Structure Relationship

Alfred Chandler (1962) first conceptualized the strategy-structure relationship in a classic study of seventy large organizations. He determined that the choice of organizational structure made a profound difference in how an organization performs (Thompson and Strickland 1992). Miller suggests that the complex relationship between strategy and structure is, at times, an interdependent one. However, he concludes that the relationship is dependent and strong among successful and innovative firms and seems "to contribute the most to performance in sizeable and innovative firms" (Miller 1987, 7).

Chandler's (1962) hypothesis of the significance of the strategy-structure relationship, supported by Miller's (1987) findings of the relationship being stronger in successful, sizeable, and innovative firms, served as a prototype for this study. Thus, in this study, a linkage was drawn between an organic structure and an employee involvement style of management.

International Management

Because of international management's broad spectrum of interest, the transferability issue falls within this area of management. International management theorists are concerned
with the internal and external factors that affect a global organization. The internal factor included in the transferability issue is management theory. The question posed by theorists concerned with transferability is whether transnational enterprises can experience the same positive results in a foreign context when utilizing management theory as they do in a domestic situation. The externality covered by transferability issue is the world's cultures (i.e., the differences among the nations' societal value systems is hypothesized to be the barrier to transferability of theory). Because the focus in this study was on the internal factor--the viability of domestic management theory in a foreign context--the external factor was considered only as one possible predictor variable and not as a major component of this study.

Cultural Assumptions

A number of international management theorists have debated the question of whether management theories are workable under various cultural assumptions (Adler 1983a; Adler and Jelinek 1986; Bhagat and McQuaid 1982; Boyacigiller and Adler 1991; Doktor, Tung, and Von Glinow 1991b; Hofstede 1980a, 1983a, 1983b, 1984a, 1987; Laurent 1983; Schneider 1988; Triandis 1982-1983). In relatively comprehensive studies, England (1975a) and Hofstede (1980a) investigated differences among cultural values. Hofstede (1980a) examined
more than forty cultures and identified four value dimensions that varied widely among managers.

Culture and Biased Stereotyping

The commonality among researchers debating the transferability issue is the assumption that cultural value differences are the barrier or predictor variable. Empirical investigations of multinational firms using other variables have not been as prominent in the literature, even though overcoming such obstacles as biased stereotyping are among the major objectives of many expatriate training programs. The Global Leadership Programme, for example, is an executive training course for prospective expatriate managers. The most important lesson in this program involves "minimizing the baggage of prejudices and prejudgments that an executive brings to a new job situation" (Wittenbert-Cox 1991, 52).

Other groups and individuals have also attempted to uncover subconscious biases in order to rid themselves of prejudicial or stereotypical behaviors (FIPSE Transcultural Program for Faculty 1990-1992). According to some theorists, personal interactions, as well as flexibility and sincerity, are useful in overcoming stereotyping. After the identification of national stereotypes or images, Ferrari (1972, 31) suggests that increasing the frequencies of contacts between persons of different nations can lead to more realistic mental imaging. Ferrari explained that
individuals often allow a closed, cognitive map about the probable behavior of a foreign group to completely define the other group's behavior. Knotts (1989, 32) describes stereotyping as a form of ethnocentricity and suggests that being flexible and sincere will prevent a biased-thought process.

Economic Theory

The economic implications of increasing trade with Mexico through the maquiladora industry and the proposed North American Free Trade Agreement called for the inclusion of economic theory in the framework of this study. Mexico and the United States initiated the maquiladora industry in 1965 in an effort to maximize each of their comparative trade advantages. Mexico offered its abundant, low-wage labor supply, and the United States provided its capital and technology. United States manufactured component parts are shipped to subsidiaries in Mexico, assembled with Mexican labor, and exported back to the United States for domestic or export sale (only the value-added in assembling is taxed). Originally, only a small percentage of the assembled goods could be sold in Mexico; however, this percentage was increased in 1990, and the ceiling will be eliminated with the passage of the North American Free Trade Agreement.

With the elimination of tariff and non-tariff barriers, direct investment in Mexico from the United States is
expected to increase as each country continues to exercise its advantage in trade--the United States moving capital and technology to Mexico to manufacture and assemble goods with low-wage labor. These completed goods will then be exported into the global market. Mexico, a labor-intensive country, will reap the benefits of the usage of its labor to import goods that are capital- and technology-intensive. (In some cases, the import-export exchange will occur between United States firms manufacturing in Mexico and Mexican consumers.)

The theoretical basis of this advantage-in-trade assumption is the Heckscher-Ohlin model (Asheghian and Ebrahimi 1990, 34). According to this economic theory, each country should export the commodities that use its abundant factor (factor endowment) more intensively, and import goods that use its scarce factor (factor of production) more intensively.

The Heckscher-Ohlin principle should continue to be exercised after the passage of the North American Free Trade Agreement. One international theorist believes that within a few years the United States and Mexican economies will be relatively free of trade obstacles, but the majority of the conditions that favor investment in the maquiladoras will continue to exist--the low cost of labor, the proximity of the United States, and so forth (Szekely 1991, 31). United States negotiators are, in fact, trying to escalate the removal of all trade barriers to maquiladora products in a move that they believe could spur immediate foreign
An argument that runs counter to the Heckscher-Ohlin model is advanced by Ohmae (1985) and Doz and Prahalad (1988). Ohmae lists three reasons why he believes shifting production to low labor cost countries rarely yields a competitive advantage: (a) cheap labor tends to be poorly trained labor with lower levels of productivity; b) the importance of labor costs in the delivered cost of products is shrinking with technological changes; and (c) as workers become better trained in low-income countries, expectations and wages rise rapidly.

Ohmae's (1985) counter argument was considered as part of the theoretical basis of this study; however, it was concluded that the success of the maquiladora industry and the impetus it has provided for a free trade agreement among the United States, Canada, and Mexico are already effective arguments against the first reason (Batres 1991; Masur 1991; Sanderson and Hayes 1990; Wallace 1991). The third reason has also been examined by several international trade theorists who agree that while Mexican wage rates will increase, they will do so gradually. These theorists contend that it may be decades before a complete equalization is reached. They also explain that the corollary of increased wage rates is greater efficiency and productivity in the

**Summary of the Theoretical Framework**

In summary of the theoretical bases of this study, four branches of management were linked with economic theory to build an interrelated framework for this study. First, strategic management (strategies) were tied to organization behavior (participative management) in order to next connect organizational theory (the organizational structure congruent with management style and strategies). Once these three were aligned, this linkage was related to international management theory (implementation of theory) and, lastly, the almost-completed infrastructure was coupled to economic theory (the maquiladora industry and the North American Free Trade Agreement).

**Definitions of Operational Terms**

Transnational corporations or multinational corporations or enterprises are companies based in one country that have a substantial direct investment in a foreign country and actively manage those operations and regard those operations as integral parts of the company, both strategically and organizationally (Bartlett and Ghoshal 1992, 2).

Expatriates or home country nationals are persons who are citizens of the United States but have managerial
responsibilities in Mexican maquiladora subsidiaries of United States companies.

Host country nationals are persons who are citizens of Mexico, but who work in the Mexican maquiladora subsidiaries of United States companies.

National culture versus corporate culture. National culture or societal culture is the larger society of which an organization is but a part; thus, corporate culture is the culture within an organization.

Environment of an organization is comprised of all the constituencies that are external to the organization that directly affect it or have the potential to do so, such as the societal culture, the economy, government policies and regulations, and competitors.

Maquiladora industry or program refers to the plan initiated by the Mexican government to bring labor-intensive industry into Mexico to use its large labor pool in order to ameliorate the country's high rate of unemployment. In this study, all references to this industry are only to the relationship established between Mexico and the United States.

Assembly plant (subsidiary) versus manufacturing plant (parent company) refers to the maquiladora or twin plants which are divided into main manufacturing headquarters on the United States side of the Mexican border and assembly plant subsidiaries located on the Mexican side. Component parts
are manufactured in the United States by a United States work force, shipped to a subsidiary in Mexico, and assembled by a Mexican work force (that is typically managed by a United States expatriate).

**Organization of the Study**

An introduction to the study is provided in this chapter. Following the introduction, the problem statement, its significance, and the scope of the study are presented. Concluding this chapter are the definitions of operational terms and the theoretical framework which describes key concepts that are the basis of this study.

The second chapter includes a comprehensive synthesis of the literature in the field. Contemporary literary offerings are emphasized; however, classic contributions are included when a thorough discussion of the topic would be incomplete without them.

The third chapter delineates the methodology used. The hypotheses and variables, the research design, the sample, the data collection instrument, procedures for treatment and interpretation of the data, and limitations are included.

The fourth chapter contains a summary of the results of the statistical analyses. These results are discussed and findings are presented. Tables are used, when deemed appropriate, to facilitate the summarization.
The fifth and last chapter includes an interpretation of the study's findings and conclusions. Recommendations are also offered.
CHAPTER II

REVIEW OF THE LITERATURE

A review of the literature disclosed a number of topics pertinent to this study. These literary offerings are synthesized and grouped into three general subject areas.

The first topic area focuses on the transferability issue. Because a large number of researchers concerned with transferability consider culture to be a primary factor, the divergent versus the convergent stances on cultural diversity are reviewed. Bias and stereotyping are also discussed, even though their role as problematic factors in the transference of management theory has not been a pervasive theme in the literature.

The second topic area centers around participative management theory or employee involvement. A brief summary of the evolution of participation is reviewed; however, the primary purpose of this historical section is to introduce the contemporary concepts of employee involvement beginning with Rensis Likert's (1961) theory. For this study, the initiation of contemporary approaches in the United States is largely attributed to Likert, because his System 4 was conceived as being a highly participative style exemplified by cooperative teamwork. The four management systems that
comprise his interval scale, "The Profile of Organizational Characteristics," are discussed because they provide the basis of measurement for this study. A review of the role of employee involvement in organizations today concludes this topic area.

The third topic area includes an examination of the maquiladora industry and concludes with a discussion of the North American Free Trade Agreement. The literature reviewed in this topic section was gleaned primarily from the popular literature--newspapers and periodicals.

Transferability Issue

During the past two decades, a growing number of international management theorists have hypothesized that traditional management models are bound by cultural roots to their country of origin and, therefore, cannot be transferred effectively across international boundaries (Adler 1983a; Adler and Jelinek 1986; Bhagat and McQuaid 1982; Boyacigiller and Adler 1991; Doktor, Tung, and Von Glinow 1991b; Hofstede 1980a, 1983a, 1983b, 1984a, 1987; Laurent 1983; Schneider 1988; Triandis 1982-1983).

Theorists who argue that management behaviors are culturally-embued actions base their reasoning on the philosophy of cultural determinism. Basically, the argument supporting culturally-embued theory postulates that incongruities can exist between individual cognitions and the
underlying assumptions of a theory. These incongruities render the theory inappropriate or not germane within a different cultural context (Adler and Jelinek 1986; England 1975a; Evans, Sculli, and Yau 1987; Hofstede 1980, 1984a; Jaeger 1986; Polley 1988; Ricks, Toyne, and Martinez 1990; Schneider and de Meyer 1991).

Cultural Determinism

Culture has been defined as the beliefs, customs, values, and standards of behavior shared by a particular group of peoples. Hodgetts and Luthans (1991, 35) define culture as "acquired knowledge that people use to interpret experience and to generate social behavior. This knowledge forms values, creates attitudes, and influences behavior."

Vander Zanden (1965, 17) supports a similar definition:

Culture provides us with "designs for living"; it gives us guideposts or a kind of map for all of life's activities. It is the socially standardized ways of feeling, thinking, and acting that man acquires as a member of society.

Haslett's (1989, 20) definition of culture includes "shared ways of life, with sharing on both the concrete level (e.g., artifacts) and the cognitive level (e.g., language, symbols)." Adler (1986, 8) credits anthropologists Kroeber and Kluckhohn with one of the most comprehensive and generally accepted definitions: "Culture consists of patterns, explicit and implicit for behavior. . . . Cultural systems may, on the one hand, be considered as products of
action, on the other as conditioning elements of future action." Culture can be defined as having one of the following characteristics: (a) meanings are shared, and (b) behaviors within the group are influenced by its members.

The Cultural Uniqueness of Countries

The assumption that the world's cultures differ from each other and that each possesses inherently unique characteristics is a widely held premise. Haviland (1987) explains his concept of the demarcation among the world's cultures in the following way:

A group of people from different cultures, stranded over a period of time on a desert island, might appear to become a society of sorts. They would have a common interest--survival--and would develop techniques for living and working together. Each of the members of this group, however, would retain his or her own identity and cultural background, and the group would disintegrate without further ado as soon as its members were rescued from the island. The group would have been merely an aggregate in time and not a cultural entity. (Haviland 1987, 27)

Typically underlying this belief in cross-cultural diversity is the argument for cultural determinism (Ricks, Toyne, and Martinez 1990). This philosophy is predicated upon the belief that the values, beliefs, and behaviors of an individual are largely determined by the greater sociocultural environment to which his or her family group belongs. Those embracing the idea of determinism believe that a society passes its values and behavioral patterns from generation to generation. "This process whereby culture is
transmitted from one generation to the next is called *enculturation*" (Haviland 1987, 31).

**Convergence versus Divergence of Cultures**

The sociological and anthropological stance on cultural diversity and determinism has evoked controversy among social scientists over the veracity of these two theories. However, in the debate over the divergence versus the convergence of cultures, more social science theorists seem to be on the side of divergence.

**Divergence of Cultures**

Jain (1990, 209) concludes that "there exists among nations striking and significant differences of attitude, belief, ritual, motivation, perception, morality, truth, superstition, and an almost endless list of other cultural characteristics." Brislin et al. (1986, 13) suggests that "people typically have difficulties when moving across cultures. Suddenly, and with little warning, behaviors and attitudes that proved necessary for obtaining goals in their own culture are no longer useful." They continue by positing that people are socialized, in their own culture, to accept as proper and good a relatively narrow range of behaviors. Adler (1989, 27) states emphatically that "the nature of all the problems encountered by international managers abroad may be perceived as this: a conflict between the basic values held by two or more groups of people." Hodgetts and
Luthans (1991, 35) also emphasize that important differences persist among cultures. They affirm their belief with the following statement: "Since different cultures exist in the world, an understanding of the impact of culture on behavior is critical." Others hold similar views (Ali, Al-Shakhs, and Nataraj 1991; England 1975a; Evans, Sculli, and Yau 1987; Hayes and Allinson 1988; Laurent 1983; Lorsch 1987; Rhinesmith 1979; Snodgrass and Szewczak 1991; Stewart 1972; Tannenbaum 1980).

Boyacigiller and Adler (1991, 270), in "The Parochial Dinosaur: Organizational Science in a Global Context," claim that the preponderance of evidence is clearly on the side of divergence and urge the incorporation of national culture into organizational paradigms for management practices.

Assumptions about underlying values [in management] would be unimportant if either organizational theories were based on universal values or values did not have an impact on organizational behavior (Gonzales and McMillan 1961). Neither supposition is tenable given the research substantiating the cultural diversity of values and the impact of such diversity on organizational behavior (e.g., England 1975a; Hofstede 1980a; Kelley and Worthley 1981; Moore 1974; Oberg 1963).

Some hold a divergence point of view that is tempered by other variables. Evan (1975) theorizes that time is a factor that can significantly alter culture and its affect. Redding (1980) discusses culture in terms of cognition. Le Vine and Campbell (1972) include aspects of trust and loyalty. Others attempting to resolve the question of diversity have offered
models that have been termed culture free or models that reconcile or overcome the differences that exist. Davis and Rasool (1988) argue for the latter type.

Kelley, Whatley, and Worthley (1987, 29), speaking from a strongly divergent viewpoint, state that it is not whether management attitudes are a function of culture, but rather which attitudes correspond with which culture. Therefore, they conclude, it is crucial to know whether organizational practices can be modified to adapt to the prevailing culture's value structure without sacrificing total organizational effectiveness.

Hofstede's Four Dimensions of Culture

A study by Hofstede is recognized as one of the largest organizational-based studies ever conducted is recognized as Hofstede's (Pugh and Hickson 1989). In a study of 40 different cultures, Hofstede (1980) collected more than 116,000 questionnaires from a widespread multinational organization. Hofstede's data, gathered in 1968 and again in 1972, were published in his 1980 book, Culture's Consequences: International Differences in Work-Related Values. His massive study continues to be a focal point for additional research (Yeh 1988).

Based on his 1980 study, Hofstede published numerous articles which focus on national culture (1980c, 1983a, 1983b, 1984a, 1984b, 1985, 1987). In assessing managerial
values, Hofstede identified four primary factors or
dimensions that varied widely among managers in the forty
cultures--power distance, uncertainty avoidance,
individualism, and masculinity.

**Power Distance**

One of these dimensions, power distance is explained by
Hofstede (1980) as the distance that subordinates implicitly
place between themselves and their managers in the
hierarchical boss-subordinate relationship. Hofstede's
(1980, 92) findings led to his belief that the maintenance,
reduction, or enlargement of this perceived distance is
societally (culturally) determined. This dimension, as well
as the other three, can be somewhat similar among or between
certain cultures, or can vary widely. For example, in the
United States, Hofstede found a relatively small power
distance (i.e., because persons in the United States believe
that everyone is equal, they perceive a small power distance
between themselves and their bosses and may seek to reduce
the distance). Conversely, in Mexico, Hofstede found a large
power distance. In the Mexican culture, a subordinate tends
to routinely obey orders that are passed down from above
because of a common belief in inequality--Mexican employees
typically perceive a large power distance between themselves
and their managers. In this culture, a subordinate would
typically seek to further enlarge the distance in the
employee-employer relationship. Hodgetts and Luthans (1991, 46) quote a member of a high power distance culture, as an example:

What is important for me and my department is not what I do or achieve for the company, but whether the [owner's] favor is bestowed on me. . . . This I have achieved by saying "yes" to everything [the owner] says or does. . . . To contradict him is to look for another job.

Davis (1969) explains that Mexican workers often feel personal loyalty to a superior or boss but little loyalty to an organization. This emanates, he believes, from the extended family and a strong father image that predominates in Mexican relationships.

Uncertainty-Avoidance

This dimension characterizes the extent to which persons feel threatened by ambiguous situations and create beliefs and institutions to avoid them. According to Hofstede (1980a), individuals, such as those in Mexico, who dislike uncertainty often have a high need for security and a strong belief in experts and their knowledge. On the other hand, individuals in cultures, such as the United States, with low or weak uncertainty avoidance are more willing to accept risks. Countries with high uncertainty avoidance (Mexico) have a great deal of organization structuring, more written rules, less risk taking by managers, and less-ambitious employees. The opposite characterizes cultures with low uncertainty avoidance (United States). In these countries
organizations encourage personnel to use their own initiative and to assume responsibility for their actions (Hodgetts and Luthans 1991, 48).

Individualism

Individualism describes the tendency of individuals to look after themselves and their immediate families only. The opposite, collectivism, marks the tendency of individuals to belong to groups or collectives and to look after each other in exchange for loyalty. Hofstede (1980a) measured these cultural aspects on a bipolar continuum with individualism on one end of the continuum and collectivism on the other.

Individuals in the United States, which is high on the individualistic end of the continuum, display an individual propensity to be more concerned with themselves and their immediate families than with other persons or institutions. In organizations, this dimension provides support for the Protestant work ethic and greater individual initiative (Hodgetts and Luthan 1991, 51). Promotions are typically made on the basis of merit.

According to Hofstede, (1980a) the Mexican culture leans more toward the collectivism end of the continuum. Mexicans tend to have less support for the Protestant work ethic, and less individual initiative, and to base promotions on seniority.
Masculinity

Ignoring the usual connotation of the word masculinity, Hofstede's (1980a) definition translates to a cultural value that places a high premium on success, money, and possessions. Counter to masculinity is femininity, meaning that the dominant values in society are caring for others and the quality of life. Hofstede postulates that in cultures holding a high masculinity index large-scale enterprises are favored, economic growth is seen as more important than conservation of the environment, fewer women hold higher-level jobs, high job stress exists in the workplace, and industrial conflict is common (Hofstede 1980a, 419). In cultures on the femininity end of the continuum, small-scale enterprises are favored and great importance is placed on environmental conservation, many women hold higher-level job, less job stress is found in the workplace, and not much industrial conflict exists. Unlike the previous value dimensions, Mexico and the United States share the masculine end of the continuum.

Hofstede's Stance on Transference

Hofstede (1983b, 1987) was one of the first researchers to question the transferability of theory when he contemplated the applicability of Douglas McGregor's (1960) Theory X-Y in Southeast Asia. This conceptual comparison was based on his earlier research findings, published in 1980.
Earlier, he concluded that the four national value dimensions can "affect human thinking, organizations, and institutions in predictable ways" (Hofstede 1987, 11). Using these earlier findings as a basis, he conceptually imposed McGregor's American-based theory against the particular four-dimensional value system he described in Southeast Asia and evaluated the theory's appropriateness. Hofstede concluded that the underlying assumptions of Theory X-Y were not congruent with the pervasive societal and organizational climate. He stated: "Because of different culturally determined assumptions, McGregor's Theory X-Theory Y distinction becomes irrelevant in Southeast Asia" (Hofstede 1987, 17).

Convergence of Cultures

A lesser number of theorists believe that although differences exist among cultures, they are overshadowed by universalities in values, beliefs, and attitudes. The convergence view is held by Boseman and Phatak (1978) Podsakoff et al. (1986), and Smith et al. (1990).

Podsakoff et al. (1986), in what they referred to as a preliminary test, compared three groups: United States citizens working in the United States, Mexican workers in the maquiladora industry, and United States workers in the maquiladora industry. Their findings suggest that "despite national boundaries, there was a substantial degree of
similarity in the way the Mexican and United States employees dimensionalize leader reward and punishment behaviors" (Podsakoff et al. 1986, 132). They also concluded, on a cautious note, that the underlying nature of several of the relationships among the three groups did not appear to be influenced greatly by situational variables, regardless of the cultural setting (Podsakoff et al. 1986, 133).

Boseman and Phatak (1978, 44) used a convenience sample of twenty firms to investigate "the feasibility and transferability of advanced management knowledge to developing countries." They compared the management functions of planning, organizing, directing, staffing, and controlling of United States subsidiaries in Mexico with similar domestically owned Mexican firms. In order to investigate the directing variable, the researchers queried managers at all levels of the organization about their management styles. They found that an authoritative style predominated in both the United States subsidiaries and the wholly-owned Mexican plants. In this comparison, the researchers found "no statistically significant differences between the way that managers in United States subsidiaries in Mexico and the wholly-owned Mexican firms perform the functions of management" (Boseman and Phatak 1978, 47).
Relationship Between National and Corporate Culture

In discussing the role of culture in organizations (the unobservable phenomenon, [Fiol 1991]), it is useful to differentiate between organizational culture (the culture internal to an organization) and the culture that is inherent to the society-at-large (the culture external to an organization). In contemporary literature, organization culture is often referred to as corporate culture or organization climate, while the societal culture to which an organization belongs is frequently labeled the external environment, or the societal culture. Each of these nomenclatures is intended to distinguish the internal group from the larger, external one. Schein (1986) makes a clear distinction between the two.

Renato Tagiuri (Gray and Starke 1984, 105) defines an organization's culture in the following manner: "(a) it is relatively enduring, (b) it is experienced by the firm's members, (c) it is an influential factor in their behavior, and (d) it can be described in terms of the values of a particular set of characteristics (or attributes) of the organization."

The similarity of definitions of corporate culture and national culture is apparent. In fact, this resemblance can be envisioned as a bridge linking the two—when individuals move from a general society to a corporate society, they
bring the fundamental axioms of their culture. Terpstra and David (1985, 9) maintain that business culture is constrained by the broader culture—"the codes of behavior in the organization do not contradict the codes of allowable behavior in the wider culture but rather select from it."

Adler reiterates this premise with the following statement:

Does organization culture erase or at least diminish national culture? Surprisingly, the answer is no: employees and managers do bring their ethnicity to the workplace. . . . Hofstede found striking cultural differences within a single multinational corporation. In his study, national culture explained 50 percent of the differences in employees' attitudes and behaviors. National culture explained more of the difference than did professional role, age, gender, or race. (Adler 1986, 46)

Thus, the literature indicates that the values, beliefs, and practices of an organization are representative of the larger sociocultural background from which a preponderance of its employees are derived.

Max Weber (Conrad 1990, 10) advocated this theory. "He believed that when people entered formal organizations, they brought with them a long history of living within their culture, of learning how to make sense of their surroundings and how to respond to the situations they encountered."

Chisholm (1988) agrees that individuals are not born with expectations about what organizational life is like; they develop expectations through communication with other members of their culture. Thus, in the international business arena, cultural differences are often evidenced by disparities in
the values, beliefs, and business practices of the expatriate firm and of the host country (Adler 1986; Austin 1990; Garland and Farmer 1986; Hodgetts and Luthans 1991; Jain 1990; Lodge 1987; Phatak 1989; Terpstra and David 1985).

Significance of Cultural Differences to Organizations

Numerous theorists contend that cultural norms and differences constitute relevant factors in organizational contexts (Adler 1983a; Bartlett and Ghoshal 1987b; Kelley and Worthley 1981; Leontiades 1986; Pearce and Roth 1988; Roberts 1977; Tannenbaum 1980; Torbiorn 1985). Triandis (1982-1983, 139) suggests that culture's significance for organizational behavior operates at such a deep level that people are unaware of its influences; it results in unexamined patterns of thought that seem so natural that most theorists of social behavior fail to take them into account. "As a result, many aspects of organizational theories produced in one culture may be inadequate in other cultures." Byars (1991, 9) implies that cultural differences matter because "organizations tend to hire, retain, and promote people who are similar to current employees in important ways." Asheghian and Ebrahimi (1990, 276) emphasize that attitudes toward work and achievement can vary immensely from culture to culture. According to Schneider and De Meyer (1991, 307) "different cultures are likely to interpret and respond to the same strategic issue in different ways. Whipp,
Rosenfeld, and Pettigrew (1989, 565) found that culture's significance to a firm helps "to define the way business is conducted." Adler (1986) emphasized the effect of cultural differences on organizational behaviors with the following statement:

In culturally diverse groups, misperception, misinterpretation, misevaluation, and miscommunication abound. . . . Stress levels increase and employees frequently disagree, implicitly and explicitly, on expectations, the appropriateness of information, and the particular decisions which must be taken. Diversity increases the ambiguity, complexity and inherent confusion in the group's process. . . . These process losses diminish productivity [in the firm]. (Adler 1986, 105)

Many other researchers have reiterated this theme of national culture's relevancy to organizations (Adler 1983a; Bartlett and Ghoshal 1987b; Beamish et al. 1991; Kelley and Worthley 1981; Leontiades 1986; Pearce and Roth 1988; Tannenbaum 1980; Torbiorn 1985).

Managing Culture

Some theorists suggest that United States employees have a propensity to ignore cultural differences or to be unaware that they exist, to the detriment of themselves and their employing organizations. Conrad (1990) states that organizational newcomers often experience culture shock—the sudden realization that what was taken for granted in another culture is not the same in a new one. This ignorance or unawareness often results in business negotiation breakdowns.
Many contend that it is vitally important to become knowledgeable about cultural differences that exist (Barnum and Wolniansky 1989; Schwartz and Saville 1986).

Maddox and Short (1988, 57) warn that "international business decisions are affected by intense, fundamental cultural differences. . . . The failure to consider how different societies operate can undermine a company's success in a foreign country." Hodgetts and Luthans (1991, 35) add that, "if international managers do not know something about the cultures of the countries with which they deal, the results can be quite disastrous."

Consequently, many researchers support the need for increased knowledge about cultural differences in organizations (Barnum and Wolniansky 1989; Schwartz and Saville 1986). As pointed out by Adler (1991, 97), "Choosing not to see cultural diversity limits our ability to manage it--that is, to minimize the problems it causes while maximizing the advantages it allows." Numerous other researchers echo Adler's theme of managing cultural differences in organizations (Adler 1983a; Barlett and Ghoshal 1987; Kelley and Worthley 1981; Knotts 1989; Leontiades 1986; Pearce and Roth 1988; Roberts 1977; Tannenbaum 1980). Fiol (1991, 203) offers several propositions for managing culture as a competitive resource.
The Effect of Culture on Managerial Attitudes

Van Fleet (1991, 412), in discussing the national culture effect on managerial attitudes, stated: "Cultural perceptions of the proper relationship between boss and subordinate, which show up in such factors as power distance, can have a dramatic effect on leadership styles in various cultures." Massie and Luytjes (1972, 351), in examining United States cultural values, caution that "attitudes and values do affect managerial practices." Anderson (1983), Austin (1990), Daniels and Radebaugh (1989), David (1991), and Wheelen and Hunger (1990) also note that national culture can effect organizational behavior, especially leadership behavior.

Earlier, Webber (1969, 82) remarked: "the diversity of cultural beliefs, habits, and traditions exerts profound influence on managerial relations. What is thought desirable or worthy in life will influence interpersonal relations, especially leadership style." He substantiated this remark by citing a comparative study between United States and Norwegian factory workers by French, Israel, and As (1960, 82), who concluded that "a positive worker's response to more participative management in the United States is not matched in a different cultural setting."

Similarly, Taoka and Boeman (1991) recognize national culture as an important function of organizational
performance and motivation. They maintain that if the
cultural values of managers conflict with workers' values, an
insurmountable problem may develop. "In such situations, it
would be very difficult, for example, to implement a
participative management system" (Taoka and Beeman 1991,
295). Bass (1990, 772) cites several researchers who agree
that "the values, beliefs, norms, and ideals embedded in a
culture affect the leadership behavior, goals, and strategies
of organizations."

Asheghian and Ebrahimi (1990, 282) explain that
"differences in family structures and in attitudes toward
authority in various cultures have led to differences in
authority orientations in the workplace." In cultures where
respect for higher-ranked persons is stronger, autocratic
managerial decision making is generally expected and
accepted. Lorsch (1987, 294) adds that "culture affects not
only the way managers believe within the organization, but
also the decisions they make about the organization's
relationships with its environment and its strategy."
Hofstede (1984) explains his theory of how culture effects
managerial behavior with the following illustration:

Management is a symbolic activity; that is, managers influence other persons through wielding symbols that have meaning for these persons and motivate them towards the desired actions. An example of such a symbol is a memorandum written by the manager to announce a change in procedure. Its effect depends on a complex set of preprogrammed interpretations by the receivers: whether they can read, whether
they understand the language used, and whether they respect the legitimacy of this decision by this manager. (Hofstede 1984, 82)

The significance of culture for managers in multinational firms is the tendency to retain culturally derived behavioral traits regardless of their assigned location. In essence, domestic managers export their learned perceptions and ways of managing to the multinational firm as expatriate managers. Yeh (1988, 114), in a study of American and Japanese firms, found that "they [managers] maintain the traits of their distinct cultural origins even though they have been operating in the same environment for such a long time [i.e., more than ten years in several cases]."

Bias and Stereotyping

A second factor affecting international relationships depicts the bias that many individuals have toward those of other countries or cultures. Bias is often manifested in stereotyping--those predetermined notions of the characteristics or behaviors of another race, cultural group, or social class. Knotts (1989) recognizes stereotyping as a detriment to management outcomes.

In studying managerial attitudes across several countries, Haire, Ghiselli, and Porter (1966) found that managers expressed little confidence in subordinates' capacities for responsibility, initiative, and leadership. Ferrari (1972, 31) equates this lack of confidence to
closedness, or being close-minded. He contends that a national stereotype is closedness in that when individuals exhibit this stereotypical behavior, they allow it to define the foreigner's behavior.

Conclusion of Transferability Issue

The literature supports a theme of culturally imbued actions and behaviors of multinational managers. Of particular interest to management theorists is the study of dissimilarities between domestic and multinational firms; however, the focus of this interest has shifted toward the issue of transferability.

Employee Involvement Theory

Edward Lawler, a contemporary academician and management consultant, identifies "high-involvement" or team-based management as the most successful management style being utilized in organizations. In a recent article (1990), he comments that only two decades ago, a few United States companies began building a new type of manufacturing facility--one that emphasized a high level of employee involvement. Today, he adds, a revolution has occurred as more companies have implemented this form of management. These new plants are noted for the degree to which the workplace is egalitarian. Employees are challenged to control their span of job activities and to direct the way in which work is performed. The typical vehicle for this
employee involvement is self-managed teams, where decision-making responsibility is pushed to the lower levels of the hierarchy.

George et al. (1990), Kanter (1983), and Pearce and Ravlin (1987) cite numerous other situations in which application of work teams in industry continue to increase. Pasmore et al. (1982, 148) concluded that the introduction of "autonomous work groups was the most common intervention in 134 experiments in manufacturing firms." Margulies and Black (1987, 385) point out that "participative management, both in terms of specific techniques and as a broad value, has become more utilized in recent years." Beardsley (1988, 138) more emphatically states that, "The most dramatic social and economic change since the Industrial Revolution is the evolution of participative management in United States business culture."

United States industry was slower to accept participative approaches than were management theorists (Collins, Ross, and Ross 1989). Krishnan found that a majority of the 1,400 United States business executives taking part in a 1974 survey of large manufacturing organizations discouraged employee participation in organizational decision making. However, seventeen years later, a similar Ernst and Young and the American Quality Foundation study showed a marked difference. The results of their international study indicated that "when it comes to
organizing 75 percent or more of employees into quality-related teams, more than a third of United States businesses plan to do so over the next three years" (Ernst and Young and the American Quality Foundation 1991, 31). Kanter, Summers, and Stein's (1986, 30) findings support the Ernst and Young study: "a recent survey showed that organizations of all sizes have adopted alternatives identified as participative management, employee involvement, workplace democracy, and quality of working life."

Organizations frequently cite positive results as a reason for increased use of participative forms of management. Positive results are manifested in the form of more satisfied, motivated, and productive employees, which enable firms to be more effective and, thus, more competitive.

A contemporary attitude toward the role of participative management is reflected by the following statement: "Organizations that are experiencing success in today's marketplace are moving toward a democratic management process" (Levy 1991, 86). Success stories involving employee involvement are not new, however. Beyerlein (Guess 1991, 3) pointed out that companies began covertly using work teams because they provided a competitive edge as long as twenty years ago. As more companies become aware of employee involvement as a competitive strategy, work teams are spreading from coast to coast.
Miller and Monge's (1986) meta-analysis supports the current belief that participation has a positive effect on both satisfaction and productivity. An American Management Association survey of 7,200 business managers revealed that "managers should adopt a more participative management style" (Goddard 1991, 14). Sashkin (1986) avows that participative management is an ethical imperative. Numerous practitioners have lauded the effects of participation on organizational outcomes (Dumaine 1990; Lewis 1991; Magnet 1992; Nulty 1990; Rose 1990; Stewart 1991, 1992; Van 1992; Wartzman 1992). Kanin-Lovers (1990) theorizes that one of the most vital factors in organizational successfulness is increased use of participative management.

A significant component of the United States quality movement supports employee involvement. An American, W. Edwards Deming, (1982, 1987) is credited with taking the participative team concept to the Japanese after World War II. He helped to revitalize Japanese industry with employee involvement and his statistical quality control methods.

The Evolution of Participative Management

Simultaneous to a comparable European movement, the United States underwent a management revolution in the early part of the twentieth century; the human relations movement "began in the 1930s" (Gray and Starke 1984). The initiation of this movement in the United States is often credited to
the Mayo-Roethlisberger studies conducted at the Hawthorne Plant of the Western Electric Company between 1924 and 1927. According to Weisbord (1988), Kurt Lewin's 1940s work in field theory provided one of the conceptual bases for what was to become known as participative management. "Lewin's 1940s model sought to preserve democratic values, build commitment to act, and motivate learning" (Weisbord 1988, 8).

A decade later, the London Tavistock Institute conducted a series of well-known studies. One study that was particularly important to the evolution of participatory management examined productivity changes associated with the implementation of a coal mine assembly line. Management failed to recognize the social importance that miners attached to working in small, autonomous groups; however, the sociotechnical model that ensued from these studies led to increased use of participative management (Cummings 1989; Trist and Bamforth 1951, 3-38).

In the mid-1950s, the participative-humanistic model began to evolve more fully as theorists, such as Argyris (1957), Blake and Mouton (1964), Davis (1957), Herzberg, Mausner and Snyderman (1959), Likert (1961, 1967), Maslow (1965) and McGregorly (1960) contributed their ideas. In the 1970s, General Motors' Tarrytown plant and the initiation of an employee involvement process referred to as "quality of work life" contributed new dimensions to the model (Guest 1979). In reflecting on management's evolutionary trends,
Wren (1987, 379) equated the importance of quality of work life to the Hawthorne experiments of the 1930s. At the same time, new theories, such as goal setting and job enrichment, began to broaden the human relations model. Simultaneously contingency leadership approaches began to surface. Stoner and Freeman (1992) credited Fiedler (1967), Hersey and Blanchard (1969), House (1971) and Vroom-Yetton (1973) as major contributors to this movement.

The contingency or situational model overshadowed the participative model during this period because it suggested that other types of management styles could be equally effective. As the 1980s witnessed increased global competitiveness and massive organizational restructuring, however, the participation model once again returned to the forefront of management thought.

Rensis Likert

Likert (1961, 1967), perhaps more than any other researcher, advanced the concepts of modern participative approaches. In defining participative management, Likert (1961, 289) purposed the idea of supportive relationships, and described a management system based on these types of relationships as a "group form of organization." He demonstrated this concept through a "linking pin" configuration. His affirmations of participative management were that "The supervisors and managers in American industry
and government who are achieving the highest productivity, lowest costs, least turnover and absence, and the highest levels of employee motivation and satisfaction display, on the average, a different pattern of leadership from those managers who are achieving less impressive results" (Likert 1961, 97).

Likert (1961, 1967) challenged participative managers to develop subordinates into loyal teams. Likert depicted the participative manager as follows: "He is supportive, friendly, and helpful. . . . He shows confidence in the integrity, ability and motivations of subordinates. . . . He has high expectations for subordinates' levels of performance. . . . He coaches and assists employees" (Likert 1961, 284).

Likert (1961, 1967) contrasted participative to authoritative management behavior. In comparing managerial attributes, Likert described the participative manager as supportive rather than hostile, kind but firm, never threatening, and as exhibiting confidence rather than suspicion and distrust.

In Likert's management model (1967), two levels of participation and two levels of authoritative-type management styles are identified. System 1, the most authoritative, is called exploitive authoritative. System 2, the least authoritative, is labeled benevolent authoritative. System 3 and 4 denote the levels of participation. System 3 is the
least participative and signifies a consultative
participative style, while System 4, the most highly
participative, represents a group or team approach.

In an instrument developed in the 1960s, *The Profile of
Organizational Characteristics*, Likert equated Systems 3 and
4 with numerous employee involvement concepts. Democracy,
support, and confidence in the employer-employee relationship
are among the underlying constructs in this instrument. For
example, several questions query respondents about the amount
of teamwork present, and whether decision making systems
courage employee involvement. This equation reflects the
contemporary version of employee involvement.

The Present State of Participation
in the United States

Lawler (1986, ix) asserts that participative theory
exists in many forms—employee involvement, quality circles,
job enrichment, work teams, quality-of-life programs,
attitude surveys, gainsharing, and new-design plants. Each
of these forms supports the premise that individual employees
contribute substantial value to the firm, that trust and
respect exist in the employer-employee relationship, and that
decision making should be shared (i.e., the capability for
self-direction and self-control are inherent in every human
being). Beyerlein (Guest 1991, 3) explains that, "at its
best, a self-managed work team gives individual workers more
responsibility and more freedom . . . [than other forms of
participative management] while changing the manager's role from controller to facilitator."

Conclusion of Employee Involvement Theory

Participative management has experienced more than a name change. This paradigm shift from Likert (1961, 1967) to Lawler (1986) has involved emphasis on the structure of the organization and the decision-making hierarchy. Both Lawler (1990) and Kanter, Summers, and Stein (1986) discuss this shift to bottom-up management which began two decades ago. "One of the most striking features of the new participative [manufacturing] plants is their structure. They are characterized by very flat structures and extremely wide spans of control" (Lawler 1990, 5). Kanter, Summers, and Stein (1986) recognize that numerous types and sizes of organizations are adopting participative forms of management. They predict an escalation in this trend. Others support the premise that employee involvement is the key to present and future success.

The Maquiladora Industry and the North American Free Trade Agreement

The number of organizations conducting business internationally is increasing exponentially. Collectively, multinational corporations account for more than 40 percent of the world's manufacturing output and almost a quarter of the world's trade (Bartlett and Ghoshal 1992, 5). This
growth has influenced the world economy as a whole and the individual, national economies from which globally competitive businesses have sprung. Between 1950 and 1980, United States firms' direct foreign investment increased from $11.8 billion to $200 billion (Bartlett and Ghoshal 1992, 7). In the 1970s, attention shifted to developing countries, such as Mexico. In these countries, the United States' share of direct foreign investment grew from 18 percent in 1974 to 25 percent in 1980 (Bartlett and Ghoshal 1992, 7). One major form of direct foreign investment is the maquiladora industry.

One proponent of the maquiladora industry recently observed:

Today along the Texas-Mexico border, we can certainly say we are in the best of times as we see the "boom" created as a direct result of growing trade relations with Mexico. It is estimated, for example, that the trade agreement known as the maquiladoras program is now contributing $196 million per year to the Laredo economy alone in wages, taxes, lease payments, business visitors, purchases of goods and services, retail sales and home sales. (Schwebel 1991, 1)

The maquiladora program, a free trade zone, has primarily benefited the Mexico-border regions of Texas, New Mexico, Arizona, and California. This reciprocal program between the United States and Mexico, lifts three trade restrictions: (a) the type of industry that can be established in Mexico (i.e., the assembly of manufactured component parts), (b) the amount of this industry's
investment in Mexico (i.e., it is possible for a licensed maquiladora firm to have 100% foreign ownership of plant facilities in Mexico), and (c) the amount of assembled goods that can be sold in Mexico (the largest percentage of finished goods must be exported back to the United States).

Thus, component parts are manufactured in the United States, shipped to Mexico where an import bond is placed on them, assembled in Mexican plants, and then exported as finished goods back to the United States. Except for a tariff on the value-added in Mexico, the process is duty-free. A 1983 law placed a 20 percent ceiling on the amount of goods that could be sold in Mexico (McCray and Gonzalez 1989, 4). Although more assembled goods can now be sold in Mexico, restrictions still exist.

If the proposed North American Free Trade Agreement is finalized, all trade restrictions between the United States and Mexico will be lifted. This agreement will permit direct foreign investors to experience the advantages that maquiladoras have had exclusively in the past. The accord will open most avenues of trade between the two countries; thus, the free flow of duty-free imports and exports will encourage new business investments. Canada, a United States free-trade partner since 1989, will also reap benefits from this pact.

On May 31, 1991, the United States Congress passed a fast-track agreement allowing the heads of state to negotiate
this pact without congressional intervention. The expected results of the North American Free Trade Agreement will be the unimpeded conduct of business among the three countries. This free-trade accord will create a market of 362 million people, the largest liberalized economy in the world (Kootnikoff 1991, 5). The long-range goal for the North American Free Trade Agreement is to include countries south of Mexico. Such a North-to-South hemispheric trade alliance would outrival the European economic community.

History of the Maquiladora Industry

The maquiladora program was instituted between the United States and Mexico in 1965 as a method of easing Mexico's unemployment problem. Under-employment and nonemployment had become especially severe along Mexico's United States border after the collapse of the Bracero Program. That program had previously allowed 500,000 Mexican workers to enter the United States for seasonal agricultural work (Mexico 1989). In order to cope with this surplus labor force, the maquiladora program invited labor intensive manufacturing businesses into Mexico. The goal was to place the most labor intensive manufacturing process--the assembling of component parts--in Mexico; hence, the term maquiladora, which refers to an assembly plant (Mexico Chamber of Commerce 1990). The capital- and technology-intensive manufacturing processes were to remain in the
United States. As a consequence of the dual locations, the maquiladoras are frequently referred to as twin plants.

The maquiladora program quickly developed into a full-fledged industry. Although parent companies are located as far away as Illinois, Michigan, and New York, the most active participation is along the United States border regions of Texas, New Mexico, Arizona, and California. It is estimated that 95 percent of the foreign maquiladora business going into Mexico is United States owned (Mexico Chamber of Commerce 1990).

Bonds on Imports to Mexico

The Mexican government granted free trade privileges to manufacturing companies obtaining maquiladora permits. However, a restriction required that a bond be paid on imported component parts as a guarantee that a finished product would be subsequently exported. Hence, the maquiladora plants also became known as in-bond assembly plants (Mexico Chamber of Commerce 1990).

Value Added to Exports

A restriction required that a duty be paid on the value added when assembled goods were exported. Value-added translated into any additions during the assembly process. A licensed United States custom broker recently explained that value-added can include electricity or rent, but most typically is labor. He gave an example of how labor can be
value-added. "If a partially assembled shirt comes into Mexico containing a completed buttonhole, when the shirt leaves Mexico no value is added for the buttonhole. Other labor costs that arose in Mexico--sewing the sleeves to the bodice, hemming, etc.--are taxed" (Corrigan 1991).

Facility Locations for Maquiladoras Plants

Businesses establishing maquiladora operations have typically clustered near the border to defray the costs of transporting component parts from the United States to Mexican assembly plants. Although a few companies have established assembly plants further into Mexico in recent years. This propensity to stay near the border is typical of most maquiladora manufacturing companies.

The Maquiladora Population

As of September 1991, there were 2,066 maquiladora plants employing approximately 455,780 workers (Nibbe and Nibbe 1991). The areas evidencing the greatest growth of maquiladora plants have been the proximal cities of Matamoros-Brownsville, Nuevo Laredo-Laredo, and Cd. Juarez-El Paso in Texas, Nogales-Nogales in Arizona, and Mexicali-Calexico and Tijuana-San Diego in California. As of September 1991, Tijuana-San Diego topped the list in number of plants with 634; Cd. Juarez-El Paso was second with 321.
Types of Manufacturing Plants

Although approximately eleven types of manufacturing industry segments can be found among the maquiladoras, the largest sector is electric and electronic goods. Furniture and other wood and metal products make up the second largest sector, "other" or miscellaneous manufacturing is the third, and clothing and other textiles is the fourth. Electronic and electrical equipment and appliances and articles make up the fifth largest segment (Mexico 1989, 16).

Ownership Arrangements

Three ownership arrangements are found in the maquiladora assembly plants: (a) wholly-owned foreign subsidiaries, subject to Mexican law; (b) subcontracted ventures, in which the manufacturing process is subcontracted to an existing assembly plant and the client is responsible for supplying the contractor with the necessary raw materials and other inputs; and (c) shelter operations, whereby Mexican-owned and managed plants offer component part assembly to foreign clients under a series of very specific agreements. The first type, wholly-owned subsidiaries account for approximately 89 percent of all maquiladora businesses. The last two, together, account for the remaining 11 percent (Mexico Chamber of Commerce 1990, 1-5).
Management-Labor Division in the Maquiladora Industry

An important aspect in the study of transferability is the dichotomous arrangement between United States management and Mexican work forces in the assembly plants. Management's ranks are composed largely of United States citizenry (i.e., parent companies in the United States employ United States managers in the Mexican assembly plants).

The Mexican government advocates a strong management team consisting of employees from the parent company's home country and Mexican nationals (Mexico Chamber of Commerce 1990, ix-9). Because Mexico now graduates more engineers per capita than the United States (Schewebel 1991), it is possible to recruit Mexican professionals for management teams. At present, however, top management positions are dominated by United States expatriates, who often commute to the Mexican plants. The length of managers' foreign assignments in Mexico varies, but a typical assignment is from three to five years (Sherwood 1991). Staff and labor, on the other hand, are composed almost entirely of Mexican-born individuals.

Mexico's Labor Pool

Out of Mexico's 82 million population, 2,576,775 are actively employed in industry (Mexico 2000 1990, 51). Of the 2.5 million manufacturing workers, more than 500,000 work in

Economic Impact of the Maquiladora Industry

Due to the rapid growth of the maquiladora industry, the economies of the two primary countries involved--Mexico and the United States--have been significantly affected. According to the reports of Mexican officials, "the industry annually generates in excess of $12.4 billion in products and over $3 billion of value-added income for Mexico. It ranks second only to Mexico's petroleum industry as a generator of foreign exchange" (Mexico 1989, 2-3). Mexican officials report comparable benefits to the United States.

The North American Free Trade Agreement

Many have suggested that the maquiladora industry provided the impetus for the proposed free trade pact among Mexico, the United States, and Canada (Sanderson and Hayes 1990; Szekely 1991). This opinion was supported in an early North American Free Trade Agreement negotiation meeting:

The maquiladora program has been the pathfinder to bulldozing commercial roadblocks between our two countries [United States and Mexico]. Today it is the most successful Mexican-American program of any kind ever undertaken, and a godsend to the working class in the northern part of Mexico. (Cypher 1991, A19)

Even though they had to convince skeptics in both countries, Presidents George Bush and Carlos Salinas de Gortari met and jointly concurred that a free trade pact
would "create jobs and provide opportunities for citizens in both . . . countries" (Kootnikoff 1991, 8). As a true bilateral trade agreement, it surpasses the restricted terms of the maquiladora program and offers employment incentives, direct foreign investment opportunities, and an increase in the overall economies of the countries involved.

Job Opportunities

According to Ambassador Negroponte, "for every additional billion dollars the United States exports, 25,000 jobs are created. In 1990 alone we exported $30 billion worth of products to Mexico" (Negroponte 1991, 9). Others believe that the North American Free Trade Agreement will create more jobs on both sides of the border (Dornbusch 1991). Batres (1991, 90) reports that a study conducted by the United States International Trade Commission in 1988 revealed that between 1980 and 1985, the number of United States jobs resulting from the manufacture of components shipped to Mexico for assembly increased from 230,000 to 500,000, a 17 percent annual rate of growth.

Increased Level of Training and Wage Rates

Mexican workers are expected to benefit from the pact because levels of training, wages, and standards of living are expected to increase. Batres (1991) and Szekely and Vera (1991) cite the experiences of international companies and workers in Eastern Asia to confirm this point.
Direct Foreign Investment

Direct United States investments in Mexico will provide United States manufacturers with a competitive advantage in global markets (Batres 1991; Dornbusch 1991; Szekely 1991). Masur (1991, 101) cites testimonials from two major auto parts manufacturers, the maker of ceramic magnets, a repairer of cordless telephones, and an assembler of electric harnesses in support of this statement.
CHAPTER III

METHODOLOGY

The methodology used in this study is described in this chapter. Included in the methodology are a discussion of the sample, the hypothesis and variables, the research design, testing instrument, collection procedures, and the procedures used for treatment and interpretation of the data.

Hypotheses and Variables

Substantive Hypothesis

A review of the literature revealed a problem in the transfer of management theory across international borders. From this synthesis, a hypothesis was formulated. This substantive hypothesis states that employee involvement practices, especially advanced forms that call for teamwork, are not being implemented in the Mexican subsidiaries of United States parent companies. Thus, in this comparative analysis between United States parent maquiladora plants and Mexico subsidiaries, it was assumed that United States plants were practicing higher levels of participation than were Mexico plants.

The implicit argument underlying this hypothesis is that the Mexican culture or the stereotypical biases of United States expatriate managers generally serve as a barrier to
the implementation of employee involvement practices. The criterion variable of implementation of management theory was studied for the effect of the predictor variables, cultural value differences or managerial stereotyping. The surrogate for the criterion variable was the presence or absence of employee involvement practices in the maquiladora industry. The supposition of lower levels of participation in the Mexico maquila assembly plants--thus, the non-implementation of theory--was tested through a null hypothesis.

**Rationale of Substantive Hypothesis**

The substantive hypothesis in this research problem was that highly participative forms of management comparable to Likert's System 4 or an employee involvement approach were not being implemented in the maquiladora's Mexican assembly plants. The implicit argument in this hypothesis was that the cultural value system of the Mexican nation acts as a barrier to the application of an advanced employee involvement, team-based approach and that United States managers have predetermined, largely unfavorable concepts of the behavior of Mexican laborers. These predetermined cognitions often exhibit themselves through mental biases or stereotypes.
Tested Hypothesis: Null and Alternate

To test the substantive hypothesis, it was translated into operational and experimental terms (Kerlinger 1973). Statistical testing was used to determine whether this hypothesis was rejected or failed to be rejected.

\( H_0: \) The level of employee involvement in a United States parent company is less than or equal to that of a Mexican maquiladora subsidiary.

\( H_a: \) The level of employee involvement in a United States parent company is more than in a Mexican maquiladora subsidiary.

Predictor and Criterion Variables

This study focused on the criterion variable of implementation of management theory. In other words, the real interest in this research was whether participative management practices, especially those incorporating high levels of employee involvement, are being implemented in the Mexico-based subsidiaries of United States parent companies that comprise the maquiladora industry.

Surrogates for the Criterion Variable

In order to be able to test the criterion variable, surrogates or testable representatives of this variable were determined. In this case, the surrogates were the presence or absence of employee involvement practices in the
maquiladora industry and, if present, the level to which they were present.

Thus, on a scale ranging from one to twenty, the measuring instrument determined initially if participative management practices or non-participative practices (authoritative ones) were being used in both United States and Mexico plants. On the scale, these styles are represented by questions that correspond to Likert's System 1 (exploitative authoritative), System 2 (benevolent authoritative), System 3 (consultative participative) and System 4 (participative group) styles of management. If an employee involvement style was being utilized by the manager in a plant (United States or Mexican), then the test instrument measured the degree of participation, ranging from a low level of involvement (System 3) to the highest level (System 4). Through this measurement, a comparison was made between the particular United States plant manager and his or her counterpart in Mexico. (See Table 1.)

Surrogates for the Predictor Variable

The implied predictor variables, although not being tested, were national culture and managerial stereotyping. Other variables, such as inability of the manager to implement employee involvement methods and numerous other reasons for failure to implement, were assumed to be present. Surrogates for the primary variables were Hofstede's (1980a)
four value dimensions for national culture and stereotyping for the bias variable. (See Table 1.)

Table 1.--Relationships among Variables, Surrogates, and Measures

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<th>Variable</th>
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<td>National culture</td>
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<td><strong>Criterion:</strong></td>
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Research Design

To test the hypothesis, a comparative analysis approach was chosen. This comparison was made between pairs of United States managers employed by maquiladora companies (one manager in Mexico and one manager in the United States were compared to each other). Individuals in the simple random sampling were sent research instruments soliciting
information about their management style and demographic information. Results were gathered from an initial mailout and numerous followups. The procedure used to test the hypothesis was the Wilcoxon matched-pairs signed-ranks test. Other statistical procedures were used to draw further conclusions.

Comparative Analysis

A comparative research design was selected for this study. United States and Mexico managers' responses to the questions on the Likert-type questionnaire were compared to determine the extent to which they practiced employee involvement. If they used a participative style, the scale differentiated between a consultative-participative style (lower level of participation) and a participative-group style (higher level of participation); therefore, it was possible to compare levels of participation between individual pairs and among the pairs for each question on the scale.

Conclusions were drawn concerning whether or not each of the managers in every pair of companies (United States and Mexican) engaged in employee involvement practices, and, if participation was practiced, the direction of the level (lower or higher) of participation.

The control provided by the comparison of United States parent companies and their Mexico subsidiaries was a powerful
factor. If, for example, a parent company utilized a participative style of management with a domestic work force but did not practice a participative style in their subsidiary Mexican plants with a host country work force, there were more inferences to be drawn than if the two companies had been independent of one another. Thus, the strength of the assumptions that could be made were stronger with dependent samples than with independent samples.

**Simple Random Sampling**

The sample for this study consisted of forty matched pairs of companies conducting business in the maquiladora industry (a total of eighty companies). The United States companies were manufacturers that operated subsidiary assembly plants in Mexico. United States parent companies were primarily from the Mexican border areas of Texas, New Mexico, Arizona, and California, but some larger companies were located in the northern United States. The subsidiary assembly plants were also clustered along the Mexico-United States border in the Mexican states of Chihuahua, Coahuila, Nuevo Leon, Baja California Norte, and Sonora, except for a few that were dispersed further into the interior of Mexico.

A sampling of 500 paired (1,000) maquiladora companies was randomly selected from a population of more than 1,000 paired (2,000) companies. This number represented the entire
population of the maquiladora industry as of July 1991. Questionnaires were mailed to 500 parent plants in the United States and to 500 subsidiary assembly plants in Mexico; a follow-up was conducted six weeks later. After the final faxed request, approximately two weeks was allotted for the return of questionnaires. At the end of this period, 80 parent companies and their subsidiaries had been matched for a total sample of \( n = 40 \). (Completed questionnaires received after this point were not included in the sample, even though they may have constituted a pair.)

A recently published directory (June 1991) of the maquiladora industry provided the population. The Complete Twin Plant Guide (1991, iii) is "a directory of the approximately 2,000 twin plants now operating throughout Mexico. . . . It is intended as a reference source and as a tool for facilitating research . . . within this industry." The set is divided into three volumes--North and South Baja California (Volume I), Central Corridor Region: Chihuahua, Sonora & Other Central/Pacific States (Volume II), and Rio Grande, Gulf and lower Pacific Region: Coahuila, Nuevo Leon, Tamaulipas and Other States in the Gulf of Mexico (Volume III). The Mexican regions border Texas, New Mexico, Arizona, and California in the United States.

Each alphabetical listing in the directory includes the name of the company in Mexico, the physical or mailing address, telephone and fax numbers, the name of the plant
manager, the size of the plant, the number of employees, and the product assembled. Also included are the parent company name, address, and telephone number.

Numbers were assigned to the alphabetical listing of pairs of maquiladora plants, beginning with Volume I (pair number 1) and sequentially proceeding through Volumes II and III, until pair number 1,000 was reached. Numbers generated by the random number procedure were then matched to those in the three volumes.

**Measurement Instrument**

The test instrument used was a derivation of Rensis Likert's (1967) *Organizational Characteristics* instrument. Likert's instrument, which was developed and tested for reliability and validity in the 1960s, was published in Likert's 1967 book, *The Human Organization*. Since that time, numerous researchers have used the instrument in their research, and the scale type has become a universal format for measurement.

**Description of the Scale**

In its original form, Likert's scale included fifty-one categorized questions pertaining to managerial styles. The questionnaire derived for this research used twenty-two of the constructs from the original scale. The rationale for selecting these particular variables was twofold. First, it was believed that plant managers would more readily respond
to a shorter version of the scale than to the original, long version (i.e., a 22 question scale reduced the number of letter-size pages from approximately thirteen to only five). Secondly, through a reduction process, it was possible to select those variables that were deemed most descriptive of employee involvement practices (e.g., the two question types from the original scale that dealt specifically with teamwork were chosen for the abbreviated version).

Likert's Organizational Characteristics scale, sometimes referred to as the System 4 scale, measures four types of managerial styles or systems. This ordinal scale ranges from exploitative authoritative (System 1) to benevolent authoritative (System 2) to participative consultative (System 3) to participative group (System 4), with five possible ranking in each of the four categories (i.e., least to most agreement).

The System 4 style is the most highly participative of the two employee involvement styles. Likert advocated this style, which is parallel to current employee involvement theory. For example, Likert (1961, 15) discussed "favorable, cooperative attitudes existing throughout the organization that exhibit mutual trust and confidence." He also referred interchangeably to groups, teams, and teamwork. Several questions on the Organizational Characteristics scale query respondents about teamwork and cooperation.
Categories of Rating Scale Items

The twenty-two questions used in this study were categorized as follows: Category 1 is related to leadership processes; category 2, communication; category 3, attitudinal, motivational, and perceptual; category 4, interaction-influence; and category 5, decision making. Managers in the maquiladora plants were asked to indicate the degree to which they held an opinion about each of the questions in the five categories.

Category 1 - Leadership Processes

The first category concerns organizational leadership processes and determines the extent to which superiors and subordinates have confidence and trust in each other; the extent to which superiors behave so that subordinates feel free to discuss important aspects of their jobs; and the extent to which immediate superiors try to get subordinates' ideas and opinions in solving job problems. (The terms superior and subordinate were used by Likert in the 1967 publication of the test instrument and, as a consequence, will be used in this study in discussions of the instrument. When not referring directly to the scale, however, the more appropriate terminology of employer and employee will be substituted.)
Category 2 - Communication Processes

The second section contains questions about the amount of interaction and communication aimed at achieving the organization's objectives, direction of information flow, extent to which superiors willingly share information with subordinates, and accuracy of upward communication.

Category 3 - Attitudinal, Motivational, and Perceptual Processes

The third section contains questions related to attitudes, perceptions, and motivational stimuli; the psychological closeness of superiors to subordinates; how well superiors know and understand problems faced by subordinates; and the accuracy of their perceptions.

Category 4 - Interaction-Influence Processes

The fourth category is devoted to interaction-influence processes within the organizations. Questions concern the amount and character of interaction, amount of cooperative teamwork present, extent to which subordinates can influence the goals, methods, and activity of their units and departments (as seen by superiors and as seen by subordinates), and amount of actual influence which superiors can exercise over the goals, activity, and methods of their units and departments.
Category 5 - Decision-making Processes

Questions in the fifth category query subjects about the character of decision making in the organization and the level at which organizational decisions are made. It also includes the adequacy and correctness of information available for decision making, the extent to which decision makers are aware of problems, the degree to which subordinates are involved in work-related decisions, and whether decision making is based on man-to-man or group patterns of operation.

Rationale for Selection of Instrument

Likert's System 4 instrument was selected as a model for this research for several reasons: (a) Its long-term usage and continual revalidation have made it a classic instrument. (b) It was important to determine the actual, practicing managerial style of the maquiladora plant managers rather than their beliefs about management practices. Likert (1961, 11) advocates directing respondents "to describe their own organization as they experience it," rather than as they think it should be. (c) The resemblance between Likert's participative group (System 4) and current approaches to participation made this classic instrument ideal for measuring the implementation of employee involvement practice methods in the maquiladora industry.
Procedures for the Collection of Data

The first step in collecting data was to mail a questionnaire and a list of questions seeking demographic data to each of the companies in the 500 pairs. A cover letter contained an introduction to the study, stated the purpose of the study, and briefly discussed the significance of the research. As an incentive to respond, two commitments were made to the prospective respondents: (a) to provide anonymity of the companies and respondents, excluding persons involved in the research project; and (b) to furnish the results of the study to the respondents. Also included in the initial mailout was a self-addressed, coded, and stamped return envelope. No time limit for return of the questionnaires was designated because of the unreliability of the Mexican mail service.

A second letter and questionnaire were mailed six weeks later to the plant managers whose affiliates had responded (ninety-six managers). It was assumed that the address printed in the directory was accurate (this was not always the case) if one company out of the pair had responded. The second mailing was an effort to maximize the response rate by increasing the matching probability (the probability of matching a pair from 1,000 companies was very low). The original mailout resulted in an 11.4 percent return rate, and only 8 percent of the returns were paired.
Approximately three days after the follow-up letters were mailed, an intensive follow-up campaign was initiated. Each company was called and a short message was left urging the manager to respond. During the telephone call, the address, fax number, and the manager's name and title were verified. The next phase began four or five days later, after the managers had an opportunity to respond to the message. Managers who had still not returned the questionnaire were sent another follow-up letter and questionnaire. In the third phase of the campaign, questionnaires were faxed to managers who had not responded. This contact method proved to be the most successful—the response rate was highest to the faxed requests.

At the time the data files were closed, two weeks after the instruments were faxed to non-responding managers, forty pairs of companies had responded. Several questionnaires, primarily from Mexico, were returned after the cut-off date. Questionnaires were coded as they were returned and data were entered into the computerized file.

Procedure for the Treatment of Data

The primary statistical procedure used to test data was the Wilcoxon matched-pairs signed-ranks test. Rather than using the parametric matched pairs t-test for hypothesis testing, the Wilcoxon test was selected. The Likert-type
scale is an ordinal scale (Champion 1981, 168) and requires a non-parametric measure. The samples were dependent, and the Wilcoxon test is the appropriate nonparametric procedure for testing dependent, matched-pair samples.

Because the hypothesis was one-tailed, and because additional information could be gained by learning the direction of any differences in the ranked pairs, a one-tailed rather than a two-tailed Wilcoxon was selected. The Wilcoxon test also yields a p-value or achieved significance level. The alpha (significance) level was set at $p < 0.05$.

Other statistical measures were also used in testing the data. A correlation analysis was conducted on the responses. Correlation coefficients were determined by using Spearman's rho rank correlation test. Contingency tables were constructed to cross-tabulate demographic data with level of participation on selected questions from the instrument. Finally, additional statistics were obtained for the contingency tables to determine the relationship between cross-tabulated variables.

**Procedures for Interpreting the Data**

The statistical procedures used provided initial insight into the problem by determining whether the hypothesis would be rejected or would fail to be rejected. The p-value
indicated the significance of these results. Once these determinations were made, conclusions were drawn.

**Limitations of the Study**

An initial limitation arose from the inability to study this problem under laboratory or field experimental conditions. However, due to (a) the fact that the maquiladora industry is so widespread (United States plants concentrated along the Mexico-United States border and extending into many of the northern United States states, and Mexican plants also with close proximity to the Mexico-United States border and ranging into the interior regions of Mexico), and (b) very limited access to Mexican assembly operations (e.g., Mexican maquiladora plants, even though usually United States owned, do not openly welcome visitors due to sensitivities concerning wages, pollution, and living conditions of the Mexican workers), it was not feasible to apply a purely experimental design.

The necessity of using a mailed survey instrument for the collection of data provided a second limitation. This limitation posed a threat to the internal validity of the study through nonresponse bias. Although the assumption cannot be made that subjects who did not return the questionnaire would have responded the same as those who did reply, there were a number of reasons why questionnaires were not returned: (a) Though the most current maquiladora
industry directory was used (June 1991) some of the addresses had changed or contained inaccuracies. (b) It is also possible that some of the managers did not receive the questionnaire because of the unreliability of the mail in Mexico or because a clerical worker within the organization failed to direct the envelope to the right person. (c) It is also possible that the managers received the questionnaires but, for personal reasons, chose not to answer.

Because the survey was mailed, another threat to internal validity was a systematic response bias. This bias could have been caused by (a) erroneous answers--managers may have responded in a manner to make themselves appear more favorably, (b) answers provided by someone other than the intended recipients, or (c) respondents' perceptual interpretations of the questions or terminology that were different from those intended.

Thus, the primary limitations of this study were threats to internal validity. No apparent threats to external validity existed, however. The number of matched pairs \((n = 40)\) in the random sample represented a broad cross-section of the maquiladora industry, both in the United States and in Mexico. This was true geographically, as well as by industry type. Approximately thirty-eight industry standard industrial classification codes were indicated by the responding managers. These codes were grouped into several general industry types--food processing, metal
fabrication, fabrics (auto upholstery and hospital wear),
electronic components and fabrication (electrical connectors,
television monitors, appliances, switches, ceramic ferrite
magnets, automobile harness assemblies, and circuit boards),
and ornamental works. The largest concentration of standard
industrial classification codes was in the electronic
components and fabrication industry, which is also one of the
largest industry types in the general maquiladora industry
population.
The Wilcoxon matched-pairs signed-ranks test was used for hypothesis testing of the level of employee involvement in United States companies and their Mexican subsidiaries. A correlation analysis was also conducted on the questions from the instrument to determine the degree of association between United States and Mexico paired responses for each question. Correlation coefficients were determined using Spearman's rho rank correlation test. Finally, contingency tables were constructed by cross-tabulating selected demographic data from the Information Sheet with respondents' participation levels (Systems 1 through 4) on selected questions from the instrument.

Wilcoxon Matched-Pairs Signed-Ranks Test

To test the alternate hypothesis (that level of employee involvement is greater in United States parent plants than in Mexican maquiladora subsidiaries), a one-tailed Wilcoxon matched-pairs signed-ranks test was utilized for each of the 22 questions from the instrument, and the alpha level was set at \( p < 0.05 \). The results of the Wilcoxon test are summarized in Table 2.
Table 2.--Summary Results from the Wilcoxon Matched-Pairs Signed-Ranks Test Statistic

<table>
<thead>
<tr>
<th>Categories of Rating Scale Items</th>
<th>Number of Items in Which Null Hypothesis Failed to be Rejected</th>
<th>Number of Items in Which Null Hypothesis Failed to be Rejected</th>
<th>One-Tailed p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>n = 40</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>process variables</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>(5 questions)</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Character of communication</td>
<td>n = 40</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>process variables</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>(4 questions)</td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Attitudinal, motivational,</td>
<td>n = 40</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>perceptual variables</td>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td>(3 questions)</td>
<td></td>
<td></td>
<td>B</td>
</tr>
<tr>
<td>Interaction-influence/level of</td>
<td>n = 40</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>coop. relationships</td>
<td></td>
<td></td>
<td>B</td>
</tr>
<tr>
<td>(5 questions)</td>
<td></td>
<td></td>
<td>C-1</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D</td>
</tr>
<tr>
<td>Character of decision</td>
<td>n = 40</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>making process variables</td>
<td></td>
<td></td>
<td>B</td>
</tr>
<tr>
<td>(5 questions)</td>
<td></td>
<td></td>
<td>C</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>D</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>E</td>
</tr>
</tbody>
</table>

*Test statistics were statistically significant (\( p < 0.05 \)) (\( n = 40 \)).
Only 4 of the 22 questions from the instrument indicated a significant ($p < 0.05$) difference (i.e., the null hypothesis was rejected for questions II-2, II-3, 6-B, and 6-C2). (See Table 3.) For the other 18 questions, there was not sufficient evidence to reject the null form of the hypothesis.

Table 3.--Partial Test Statistics of the Four Organizational Variables that Showed a Significant Difference (Mexico Minus United States) at the $p < 0.05$ Level

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean Difference</th>
<th>SD</th>
<th>1-Tail p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II-2</td>
<td>-6.42</td>
<td>22.84</td>
<td>0.0415</td>
</tr>
<tr>
<td>Communication 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II-3</td>
<td>-8.30</td>
<td>22.21</td>
<td>0.0116</td>
</tr>
<tr>
<td>Interaction/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>influence 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II-6B</td>
<td>-7.72</td>
<td>22.40</td>
<td>0.0176</td>
</tr>
<tr>
<td>Interaction/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>influence 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>II-6C2</td>
<td>-6.35</td>
<td>22.87</td>
<td>0.0435</td>
</tr>
</tbody>
</table>

$n = 40$

Two of the 4 questions that indicated significant differences between the United States and Mexico managers' responses compared the direction of information flow in the organization; a third compared the amount of cooperative
teamwork present; and the fourth compared the extent
to which subordinates believed they could influence

Table 4.--Description of the Four Organizational Variables in
Which United States Managers Indicated Significantly Higher
Levels of Employee Involvement than Mexico Managers

<table>
<thead>
<tr>
<th>Variables</th>
<th>System 1</th>
<th>System 2</th>
<th>System 3</th>
<th>System 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direction of information flow. (II-2)</td>
<td>Downward</td>
<td>Mostly downward</td>
<td>Down and up</td>
<td>Down, up and with peers</td>
</tr>
<tr>
<td>Downward communication. Extent to which superiors willingly share information with subordinates. (II-3)</td>
<td>Provide minimum of information</td>
<td>Give subordinates only information</td>
<td>Give info needed &amp; answers to give subordinates all relevant info</td>
<td></td>
</tr>
<tr>
<td>Amount of cooperative teamwork present. (II-6B)</td>
<td>None</td>
<td>Relatively A little amount</td>
<td>Moderate amount</td>
<td>Very substantial amount throughout organization</td>
</tr>
<tr>
<td>Extent to which subordinates can influence the goals, methods, and activities of their units and departments (as seen by subordinates). (II-6C2)</td>
<td>None except through informal organization or via union</td>
<td>Little except through informal organization or via union</td>
<td>Moderate amount except both directly and via union, if exists</td>
<td>Substantial amount but often done indirectly through an influence &quot;system&quot;</td>
</tr>
</tbody>
</table>

Note: For the other 18 variables on the scale, there was no statistically significant ($p > 0.05$) difference between the participation levels of United States and Mexico managers.
the goals, methods, and activities in their units and
departments. Table 4 contains a list of the 4 questions and
the variables they represented. A higher level of
participation in the United States parent company than in the
Mexican subsidiary was indicated by a significantly higher
average score for United States companies on these four
questions.

Thus, based on the results of the test statistic, it
was concluded that there were no statistically significant
differences between the levels of participation in United
States parent companies in the maquiladora industry and
their Mexico subsidiaries on 18 of the 22 questions.
(See Table 5 for a summary of the 18 organizational
variables.)

**Correlation Analysis**

A correlation analysis was conducted on questions from
the instrument to determine the degree of association between
the responses of paired United States and Mexico companies.
Correlation coefficients were determined using Spearman's rho
to test the strength of the linear relationship between
pairs. (See Table 6.)

All correlation coefficients were positive for the
paired responses that were statistically significant, which
indicates that the direction was the same. In other words,
in each statistically significant paired relationship between
Table 5.--Summary of Eighteen Organizational Variables in Which There Were No Significant Differences in Levels of Employee Involvement between United States Managers and Mexico Managers

<table>
<thead>
<tr>
<th>Variable</th>
<th>System 1</th>
<th>System 2</th>
<th>System 3</th>
<th>System 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>(I-1) Confidence &amp; trust in subordinates</td>
<td>None</td>
<td>Condescending</td>
<td>Not complete</td>
<td>Complete</td>
</tr>
<tr>
<td>(I-2) Confidence &amp; trust in superiors</td>
<td>None</td>
<td>Condescending</td>
<td>Not complete</td>
<td>Complete</td>
</tr>
<tr>
<td>(I-3) Superiors supportive</td>
<td>No</td>
<td>Condescending</td>
<td>Generally</td>
<td>Fully</td>
</tr>
<tr>
<td>(I-4) Subordinates free to discuss job problems</td>
<td>Not at all free</td>
<td>Not very free</td>
<td>Rather free</td>
<td>Completely free</td>
</tr>
<tr>
<td>(I-5) Superior seeks input from subordinates</td>
<td>Seldom</td>
<td>Sometimes</td>
<td>Usually</td>
<td>Always</td>
</tr>
<tr>
<td>(II-1) Amount of interaction-communication in jobs</td>
<td>Very little</td>
<td>Little</td>
<td>Quite a bit</td>
<td>Much</td>
</tr>
<tr>
<td>(II-4) Accuracy of upward communication</td>
<td>Restricted</td>
<td>Cautiously given</td>
<td>Somewhat accurate</td>
<td>Accurate</td>
</tr>
<tr>
<td>(II-5) Psychological closeness between superior and subordinate</td>
<td>Far apart</td>
<td>Moderate by role</td>
<td>Fairly close</td>
<td>Very close</td>
</tr>
<tr>
<td>(II-5A) Superior understands subordinate's problems</td>
<td>No</td>
<td>Some limited</td>
<td>Fairly well</td>
<td>Very well</td>
</tr>
</tbody>
</table>
Table 5.--Continued

<table>
<thead>
<tr>
<th>Variable</th>
<th>System 1</th>
<th>System 2</th>
<th>System 3</th>
<th>System 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>(II-5B) Accuracy of perceptions between superior and subordinate</td>
<td>Often in error</td>
<td>Errors on some</td>
<td>Moderate accuracy</td>
<td>Quite accurate</td>
</tr>
<tr>
<td>(II-6A) Amount &amp; character of interaction</td>
<td>Little w/fear</td>
<td>Little</td>
<td>Moderate</td>
<td>Extensive</td>
</tr>
<tr>
<td>(II-6C1) Extent to which subordinates influence as seen by superior</td>
<td>None</td>
<td>Virtually none</td>
<td>Moderate amount</td>
<td>A great deal</td>
</tr>
<tr>
<td>(II-6D) Amount of actual influence</td>
<td>Very little</td>
<td>Moderate</td>
<td>Moderate to high</td>
<td>Substantial</td>
</tr>
<tr>
<td>(II-7A) Decision making level</td>
<td>Top of org</td>
<td>Some lower</td>
<td>Broad-top spec.low</td>
<td>All of org</td>
</tr>
<tr>
<td>(II-7B) Accurate info for decisions</td>
<td>Gen. in-accurate</td>
<td>Less in-accuracy</td>
<td>Fairly accurate</td>
<td>Very accurate</td>
</tr>
<tr>
<td>(II-7C) Decision makers know problems on lower levels</td>
<td>Usually no</td>
<td>Yes and no</td>
<td>Mod. aware</td>
<td>Well aware</td>
</tr>
<tr>
<td>(II-7D) Subordinates involved in their work</td>
<td>Not at all</td>
<td>Might be asked</td>
<td>Usually asked</td>
<td>Fully</td>
</tr>
<tr>
<td>(II-7E) Decision making man-to-man or group pattern? Encourage teamwork?</td>
<td>Man-to man always; no</td>
<td>Usually man-to man; no</td>
<td>Both; some teamwork</td>
<td>Group; teamwork</td>
</tr>
</tbody>
</table>
Table 6.--Spearman Correlation Coefficients for Significant Paired Responses

<table>
<thead>
<tr>
<th>Variable</th>
<th>Correlation Coefficient</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BII-1:AII-1</td>
<td>0.32848</td>
<td>0.0385</td>
</tr>
<tr>
<td>Communication 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BII-2:AII-2</td>
<td>0.37493</td>
<td>0.0171</td>
</tr>
<tr>
<td>Perceptual</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BII-5B:AII-5B</td>
<td>0.48550</td>
<td>0.0015</td>
</tr>
<tr>
<td>Decision making</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BII-7C:AII-7C</td>
<td>0.35565</td>
<td>0.0243</td>
</tr>
</tbody>
</table>

Note: A=Mexico, B=United States. p < 0.05. (n = 40 pairs)

a United States company and a Mexico company, both companies responded in the same direction on the instrument. Direction, in this case, involves the 1 to 20 ranked scale of the instrument.

The four positive coefficients yielded additional information about the results from the one-tailed, directional Wilcoxon Test. Spearman's rho, a nonparametric technique using data in the form of ranks, was used to determine whether the relationship in paired responses was positive, negative, or zero (no relationship). In the paired responses between United States and Mexico managers, a positive coefficient indicated that high scores were paired with high scores or, conversely, low scores were paired with
low scores. For example, if one manager in a pair responded in the upper range on the scale, a positive coefficient indicated that, on the average, the second manager comprising the pair also responded in the higher range of the scale. A pair of managers responding on the lower end of the scale would also be positively correlated. Thus, the four significantly paired relationships with positive coefficients added information about the direction of managers' responses.

Contingency Tables

Frequencies were cross-tabulated for certain questions from the Information Sheet and the test instrument. The cross-tabulations were repeated separately for the United States and the Mexico plants.

Of particular interest on the Information Sheet (demographic data) were the questions that directly queried managers about their current or past involvement with participative management practices. Managers' responses to these questions were cross-tabulated in two ways: (a) with other demographic queries from the Information Sheet and (b) with responses to questions from the instrument.

The first type of comparative analysis is illustrated in Table 7. Responses on demographic question 7a (Did you use any type of participative management in your previous job?) were compared to demographic ranked question 1 (Our plant uses self-managed work teams in which the worker makes
Table 7.--Comparison of Previous and Current Usages of Employee Involvement

<table>
<thead>
<tr>
<th>Used Participation Previously</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our Plant Uses Teams</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>United States Managers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No (19 total)</td>
<td>7</td>
<td>7</td>
<td>0</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Yes (21 total)</td>
<td>0</td>
<td>6</td>
<td>2</td>
<td>10</td>
<td>3</td>
</tr>
<tr>
<td>Cum. totals (40)</td>
<td>7</td>
<td>13</td>
<td>2</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>Mexico Managers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No (27 total)</td>
<td>3</td>
<td>11</td>
<td>3</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Yes (13 total)</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Cum. totals (4)</td>
<td>6</td>
<td>13</td>
<td>6</td>
<td>12</td>
<td>3</td>
</tr>
</tbody>
</table>

decision affecting production/assembling or work group outcomes) separately for the United States and Mexico companies. In summary, the outcomes for the United States managers showed that 6 of the 20 managers who either strongly agreed or agreed that self-managed work teams were used in their plants had previously practiced some form of participation in another job. The frequency results for
United States managers were similar to those of managers in Mexico plants who strongly agreed or agreed that managed teams were used in their plants—5 of the 19 had previously used participative practices.

Total yes and no responses to having previously used participative practices differed slightly, however, in comparing the United States to Mexico. Twenty-one of the 40 (53 percent) United States managers had used participative management prior to their current position, while only 13 of the 40 (33 percent) Mexico managers had done so.

Once again, similar results occurred when responses to demographic question 3 (As participation increases, productivity usually decreases) and responses to demographic question 7a (Did you use any type of participative management in your previous job?) were compared. Of the 33 United States managers who strongly disagreed or disagreed to question 3, 15 had previously used participative management. Thirty-six Mexico managers strongly disagreed or disagreed, and 23 had used participative management before.

When United States and Mexico managers who had practiced participative management in a previous job were asked their opinions about whether participation increases effectiveness (demographic ranked question 4), their concurrence was even stronger than in the frequency comparisons of questions 7a and 3. Thirty-six of the 40 United States managers either
agreed to strongly agreed that participation increases effectiveness. Seventeen of the 36 had used participative management previously. Of the 40 Mexico managers, 38 either agreed or strongly agreed that effectiveness is the outcome of participation. Twelve of the 38 had practiced participative management in a former job.

Other interesting frequency comparisons were made by collapsing the 1 to 20 interval response set on the instrument to Likert's Systems 1, 2, 3, and 4. As in the previous contingency tables, United States managers' and Mexico managers' responses were compared. However, this time, responses to the demographic questions on the Information Sheet were compared to certain questions from the instrument. For example, a comparison was made between demographic ranked question 1 (Our plant uses self-managed work teams in which the worker makes decisions affecting production/assembling or work group outcomes) and one of the questions from the test instrument (6B) that showed a significant difference in the hypothesis testing (Amount of cooperative teamwork present [in your plant]). The outcomes of this analyses are shown in Table 8.

Of the 21 United States managers (53 percent of total United States managers) who indicated the highest level of participation by their responses on the questions from the instrument (System 4), 6 (29 percent of the 21) strongly agreed that self-managed work teams were used in their
Table 8.--Comparison of Amount of Cooperative Teamwork and the Use of Self-Managed Teams

<table>
<thead>
<tr>
<th>Plant Uses Self-Managed Teams</th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States Managers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooperative teamwork</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>System 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooperative teamwork</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>System 3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooperative teamwork</td>
<td>1</td>
<td>3</td>
<td>2</td>
<td>8</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>System 4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooperative teamwork</td>
<td>6</td>
<td>10</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>21</td>
</tr>
<tr>
<td>Cum. total</td>
<td>7</td>
<td>13</td>
<td>2</td>
<td>15</td>
<td>3</td>
<td>40</td>
</tr>
</tbody>
</table>

| Mexico Managers               |               |       |          |                  |          |       |
| System 1                      |               |       |          |                  |          |       |
| Cooperative teamwork          | 0             | 0     | 0        | 0                | 0        | 0     |
| System 2                      |               |       |          |                  |          |       |
| Cooperative teamwork          | 1             | 1     | 0        | 3                | 0        | 5     |
| System 3                      |               |       |          |                  |          |       |
| Cooperative teamwork          | 1             | 9     | 5        | 6                | 3        | 24    |
as shown in Table 8, a difference was evident in the responses of Mexico and United States managers. Only 11 Mexico managers (28 percent of the total Mexico managers as compared to 53 percent of the United States managers) responded in the highly participative range (System 4). Similar to United States managers, however, 4 of the 11 (36 percent) strongly agreed that self-managed work teams were used in their plants.

The response differences determined by the cross-tabulated frequencies correspond to the findings from the Wilcoxon test. For question 6B on the instrument (amount of cooperative teamwork present), a significant difference was evident at $p = 0.0176$. Thus, in this particular instance, United States managers had significantly higher levels of participation in their plants (a greater amount of teamwork present) than did Mexico managers.
Neither the United States managers nor the Mexico managers responded to the demographic question--Does your plant use self-managed work teams in which the worker makes decisions affecting production/assembling or work group outcomes?--in the same proportion as to the questions from the instrument concerning the amount of cooperative teamwork present in their plant. Twenty-one United States managers indicated a very substantial amount [of cooperative teamwork present] throughout the organization but only 16 of these either agreed or strongly agreed that self-managed work teams were used (the other 5 disagreed that self-managed teams were used). The same was true for the managers of Mexican plants--11 indicated the presence of a very substantial amount of cooperative teamwork but only 7 agreed (or strongly agreed) that self-managed teams were used (of the remaining 4, 1 indicated that they were not sure, and the other 3 disagreed). It can be conjectured from the disproportionate responses to the demographic questions and the questions from the instrument that the terms self-managed or self-managed teams connoted a variety of meanings for the United States and Mexico managers, and that the connotations were, in some instances, inconsistent with the terms cooperative or cooperative teamwork.

The results of a similar cross-tabulation differed slightly from those shown in the previous contingency table (Table 8). A comparison of response frequencies from
demographic question 1 (Our plant uses self-managed work teams in which the worker makes decisions affecting production/assembling or work group outcomes) and instrument question 7E (Is decision making based on man-to-man or group patterns of operations?) is provided in Table 9. In this case, the majority of responses to the instrument question from managers of both countries fell within the consultive participative or System 3 range. These like responses were congruent with the findings of the Wilcoxon testing--18 of the 22 questions on the instrument showed no statistically significant difference.

However, even though, the cumulative responses to the Information Sheet question for both System 3 and System 4 respondents were similar for managers from both countries, a dissimilarity in opinions between the United States managers and the Mexico managers who scored in the highly participative range (System 4) was evident. In this instance, 12 of the United States managers in the System 4 range agreed or strongly agreed that their plants used self-managed teams, while only 5 of the Mexico managers in the System 4 range agreed or strongly agreed that self-managed teams were used.

Although there was lack of agreement between System 4 respondents in the two countries, there was a general concurrence, overall. The real discrepancy that occurred was analogous to the previous set of contingency table results--more managers from both the United States and Mexico
Table 9.--Comparison of Decision-Making Patterns (Man-to-Man or Group) and Use of Self-Managed Teams

<table>
<thead>
<tr>
<th>Plant Uses Self-Managed Teams</th>
<th>Strongly Agree</th>
<th>Not Sure</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
<tr>
<td>United States Managers</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>System 1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Decision-making patterns</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System 2</td>
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<tr>
<td>Decision-making patterns</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Cum. total</td>
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<td>13</td>
<td>2</td>
<td>15</td>
<td>3</td>
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<td></td>
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</tr>
</tbody>
</table>
Table 9.--Continued

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Total</th>
</tr>
</thead>
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<tr>
<td>System 3</td>
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</tr>
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<td>patterns</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System 4</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>0</td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cum. total</td>
<td>6</td>
<td>13</td>
<td>6</td>
<td>12</td>
<td>3</td>
<td>40</td>
</tr>
</tbody>
</table>

indicated that decision making was based on group patterns of operations (as opposed to man-to-man) than was indicated by the affirmative responses to the question of whether their plant used self-managed work teams. Once again, there appeared to be an inconsistency in perception between the terms group and self-managed work teams.

An illustration of similar responses from United States and Mexico managers is depicted in Table 10. The two variables cross-tabulated in Table 10 are demographic ranked question 2 (Our plant encourages leadership among workers at all levels—from the highest to the lowest level) and instrument question I-5 (Extent to which immediate superior, in solving job problems, generally tries to get subordinates' ideas and opinions and make constructive use of them).
Table 10.--Comparison of Leadership Levels and Use of Subordinate Input

<table>
<thead>
<tr>
<th>Plant Encourages Leadership at all Levels</th>
<th>Strongly Agree</th>
<th>Not Agree</th>
<th>Strongly Sure</th>
<th>Disagree</th>
<th>Disagree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States Managers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System 1</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Subordinate input</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>System 2</td>
<td>4</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Subordinate input</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System 3</td>
<td>1</td>
<td>11</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td>19</td>
</tr>
<tr>
<td>Subordinate input</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>System 4</td>
<td>4</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>9</td>
</tr>
<tr>
<td>Subordinate input</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cum. total</td>
<td>10</td>
<td>19</td>
<td>3</td>
<td>8</td>
<td>0</td>
<td>40</td>
</tr>
</tbody>
</table>

| Mexico Managers                          |                |           |               |          |          |       |
| System 1                                 | 0              | 0         | 0             | 0        | 0        | 0     |
| Subordinate input                        |                |           |               |          |          |       |
| System 2                                 | 2              | 7         | 5             | 0        | 1        | 15    |
| Subordinate input                        |                |           |               |          |          |       |
| System 3                                 | 3              | 7         | 4             | 4        | 0        | 18    |
| Subordinate input                        |                |           |               |          |          |       |
Table 10.--Continued

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Not Sure</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>System 4</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subordinate input</td>
<td>3</td>
<td>4</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Cum. total</td>
<td>8</td>
<td>18</td>
<td>9</td>
<td>4</td>
<td>1</td>
<td>40</td>
</tr>
</tbody>
</table>

Responses from United States and Mexico managers were comparable on the demographic query and the instrument, particularly from managers responding in the Systems 3 and 4 range. System 3 responses included 19 United States and 18 Mexico managers, with 12 of the 19 United States managers either agreeing or strongly agreeing with the demographic question. Of the 18 Mexico managers, 10 concurred. Similar response sets occurred in the System 4 range. Nine United States managers and 7 Mexico managers responded as being highly participative (System 4s). Eight of the 9 United States managers agreed or strongly agreed that their plants encouraged leadership at all levels.

On another comparison made with geographic locations of managerial experience with the same instrument question (amount of cooperative teamwork), the results were inconclusive. Nine of the 40 Mexico managers indicated their managerial experience had been in Mexico only; however,
almost half of the managers in this same group were on foreign assignment from a United States company. Managers who indicated that they were on foreign assignment were asked what their position had been before being assigned to Mexico. Almost half of this group responded that they were newly hired.

Additional contingency tables were constructed (Tables 11, 12, and 13) to test the relationship (i.e., through chi-square analysis) between certain demographic questions and instrument items. In these three tables, Systems 1-3 response sets were collapsed to obtain valid chi-square analyses. Interesting results for United States managers were found in Tables 11 and 12; although, no relationship of significance existed in the last table (Table 13) for the response sets of either United States or Mexico managers.

As depicted in Table 11, a statistically significant relationship was found to exist for United States managers between responses to the demographic ranked question 1 (Our plant uses self-managed work teams in which the worker makes decisions affecting production/assembling or work group outcomes) and instrument item II-6B that queried managers about the amount of cooperative teamwork present in their plants. Under the null hypothesis of no relationship, more United States managers indicating System 1-3 styles of management disagreed to using self-managed teams than would
Table 11.--Relationship Between Amount of Cooperative Teamwork and the Use of Self-managed Teams

<table>
<thead>
<tr>
<th>Plant Uses Self-managed Teams</th>
<th>Strongly Agree/Agree</th>
<th>Strongly Disagree/Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States Managers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>System 1-3 Cooperative teamwork</td>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>System 4 Cooperative teamwork</td>
<td>16</td>
<td>5</td>
</tr>
<tr>
<td>Chi-Square = 10.45</td>
<td>$p = .0012$</td>
<td></td>
</tr>
</tbody>
</table>

| Mexico Managers               |                       |                            |
| System 1-3 Cooperative teamwork | 12                   | 12                         |
| System 4 Cooperative teamwork | 7                     | 3                          |
| Chi-Square = 1.145            | $p = .285$            |

be expected, while, conversely, more United States managers with a System 4 style agreed to the presence of cooperative teamwork in their plants. Results for Mexico managers were insignificant--no relationship was found between the agree/disagree responses and the degree of participation revealed by Systems 1-3 and 4.
Table 12.--Relationship Between Decision-making Patterns (Man-to-man or Group) and Use of Self-managed Teams

<table>
<thead>
<tr>
<th>Plant Uses Self-managed Teams</th>
<th>Strongly Agree/Agree</th>
<th>Strongly Disagree/Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>United States Managers</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System 1-3 Decision-making patterns</td>
<td>8</td>
<td>17</td>
</tr>
<tr>
<td>System 4 Decision-making patterns</td>
<td>12</td>
<td>1</td>
</tr>
<tr>
<td>Chi-Square = 12.477</td>
<td>$P &lt; .001$</td>
<td></td>
</tr>
<tr>
<td><strong>Mexico Managers</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>System 1-3 Decision-making patterns</td>
<td>14</td>
<td>11</td>
</tr>
<tr>
<td>System 4 Decision-making patterns</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Chi-Square = .001</td>
<td>$P = .975$</td>
<td></td>
</tr>
</tbody>
</table>

Findings similar to the previous ones (see Table 11) were discovered through chi-square testing of the relationship between the demographic question (Our plant uses self-managed work teams. . .) used in the prior crosstabulations and instrument question 11-7E (Is decision making
based on man-to-man or group patterns of operations?). This second analysis is exhibited in Table 12.

In Table 12, results showed a statistically significant relationship for the responses of United States managers to the demographic question and the instrument query. Once again, more United States managers exhibiting System 1-3 styles disagreed to using self-managed teams, while more of those with System 4 styles agreed than would be expected under the chi-square null hypothesis. Also, as in the previous table (see Table 11), no significant relationship existed between the responses of Mexico managers to these particular questions.

In the third cross-tabulations (refer to Table 13), demographic question 1 was replaced by question 2 (Our plant encourages leadership at all levels) and compared to instrument question 1-5 (Extent to which immediate superior, in solving job problems, generally tries to get subordinates' ideas and opinions and make constructive use of them). In this instance, no relationship of significance resulted from the chi-square analysis of response frequencies for either United States or Mexico managers.

The cross-tabulation of variables yielded some important data for facilitating an interpretation of the Wilcoxon's directional results. However, it was also helpful to compare a summary of the responses of Mexico and United States managers to each of the 22 instrument questions (see Table 14).
Table 13. -- Relationship Between Leadership Levels and Use of Subordinate Input

<table>
<thead>
<tr>
<th>Plant Encourages Leadership at all Levels</th>
<th>Strongly Agree/Agree</th>
<th>Strongly Disagree/Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States Managers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>System 1-3 Subordinate input</td>
<td>21</td>
<td>7</td>
</tr>
<tr>
<td>System 4 Subordinate input</td>
<td>8</td>
<td>1</td>
</tr>
<tr>
<td>Chi-Square = .775</td>
<td><em>p = .379</em></td>
<td></td>
</tr>
<tr>
<td>Mexico Managers</td>
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<td></td>
</tr>
<tr>
<td>System 1-3 Subordinate input</td>
<td>19</td>
<td>5</td>
</tr>
<tr>
<td>System 4 Subordinate input</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>Chi-Square = 1.739</td>
<td><em>p = .187</em></td>
<td></td>
</tr>
</tbody>
</table>

The combined frequencies of both Mexico and United States companies as they responded within the ranges of the four systems suggest that the majority of Mexico and United States companies practiced some form of participative management, as opposed to authoritative types (Systems 1 and
Table 14.--Summary of Responses to Instrument Questions by United States and Mexico Managers

<table>
<thead>
<tr>
<th>Variables</th>
<th>System 1</th>
<th></th>
<th></th>
<th>System 2</th>
<th></th>
<th></th>
<th>System 3</th>
<th></th>
<th></th>
<th>System 4</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>I.1 Trust/Sp:Su</td>
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<td>0</td>
<td>1</td>
<td>4</td>
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<td></td>
</tr>
<tr>
<td>.2 Trust/Su:Sp</td>
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<td>.3 Support</td>
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<td>1</td>
<td>15</td>
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Table 14.--Continued

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<td>M  US</td>
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<tr>
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<td>4  5</td>
<td>24  25</td>
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</tr>
<tr>
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<td>5  5</td>
<td>25  20</td>
<td>10  14</td>
</tr>
<tr>
<td>880:880=1,760</td>
<td>22  27</td>
<td>192 155</td>
<td>486 396</td>
<td>180 302</td>
</tr>
<tr>
<td>% 880: Mexico</td>
<td>2.50% 21.82%</td>
<td>55.23% 20.45%</td>
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<td></td>
</tr>
<tr>
<td>% 880: United</td>
<td>3.07% 17.61%</td>
<td>45.00% 34.32%</td>
<td></td>
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<tr>
<td>States Combined %</td>
<td>2.78% 19.72%</td>
<td>50.11% 27.39%</td>
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</tbody>
</table>

2). Also, it can be assumed that the level of participation was more within the System 3 range (participation-consultive) for both countries. The percentages per country in the highly participative (System 4) range were somewhat larger for the United States (34.32 percent) than for Mexico (20.45 percent).

Of the 880 responses from Mexico managers, 666 fell within either System 3 or System 4. Almost an equal number, 698 of 880, from United States managers fell within either System 3 or System 4. Thus, based on the cumulative data shown in Table 11, there was, with few exceptions, no significant difference between participative practices in the United States and Mexico.
Summary

Hypothesis testing utilizing the Wilcoxon matched-pairs signed-ranks test showed no statistically significant differences in 18 of the 22 instrument items tested. Thus, these findings suggested that, in most instances, the level of participation in United States parent companies was not greater than in the Mexican subsidiaries. Results of cross-tabulations between responses from selected Information Sheet and test instrument questions generally supported these results; although, some interesting differences were found between Mexico and United States Systems 1-3 and 4 respondents when comparing the current use of self-managed teams in these managers' plants to the degree of cooperative teamwork they believed existed among their work forces.
CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS, RECOMMENDATIONS, AND DISCUSSION

This chapter includes a summary of the study and conclusions drawn from the findings. Next, the conclusions are interpreted. From these interpretations, implications are drawn. Finally, a course of action is recommended for United States expatriates who manage direct investment interests in Mexico. A model was developed to guide the recommended course of action.

The conclusions derived from statistical analyses are divided into two main categories. The first contains the specific participative management research problem as delineated by the hypothesis in this study: Are employee involvement practices being implemented at the same level in the Mexican subsidiary as they are in the United States parent company? Or is the level of participation less or more? Finally, are participative management practices being implemented in the Mexican subsidiaries of United States companies? Other factors of interest derived from cross-tabulations are summarized.

Following a summary of the conclusions, further interpretations are made and implications pertaining to three
subject areas are drawn. (a) Management theory implementation: What was learned about the implementation of employee involvement practices from parent company to foreign subsidiary? Is there a natural corollary between parent and subsidiary? That is, if participation is practiced in a parent company, can the assumption be made that it will also be practiced in a subsidiary? (b) Employee involvement practices: Do some Mexican assembly plants practice participation when their parents do not? Are there correlations between the use of participative practices and the size of a plant, its geographic location, or how long the plant manager has been in a managerial position? Is there a positive correlation between a manager's current use of participation and his or her previous experience in this area? Are employee involvement practices being used as pervasively as the current literature suggests? Is the contemporary use of the term self-managed work team congruent with the actual practice of participation or employee involvement? (c) North American Free Trade Agreement: If employee involvement practices are being implemented, what are the implications for additional direct United States investments in Mexico? Recommendations are offered.

**Summary of the Study**

Matched pairs of United States parent companies and their Mexican subsidiaries were studied to determine the
level of employee involvement in each. It was hypothesized that United States plants would have higher levels of employee involvement than would Mexico plants. In order to examine this premise, United States managers on both sides of the border were surveyed using an instrument that queried them in four organizational categories—decision making, communication, interaction-influence, and attitudinal-motivational-perceptual characteristics.

After responses were obtained from each of the eighty managers in the random sample (forty matched pairs), the hypothesis was tested using the Wilcoxon matched-pairs signed-ranks test. Results indicate that in eighteen of the twenty-two instances, no significant difference was evident between the level of employee involvement in the pairs of companies. Thus, in this study, the prevailing premise—that management theory cannot be readily implemented under cross-cultural conditions—was not supported in the majority of situations.

**Conclusions**

From the forty paired responses, eighteen of the twenty-two questions on the test instrument revealed no significant difference in levels of employee involvement between United States parent companies in the maquiladora industry and their Mexico subsidiaries. In only four instances was the level of participation in a United States parent company more than in its Mexican assembly plant. The four questions revealing a
significant difference were from two of the five categories on the scale that pertained to communication processes (category 2) and the interaction-influence processes (category 4) within the organization (see Table 4). The other three categories (i.e., leadership process variables; attitudinal, motivational, and perceptual variables; and decision making processes) showed no significant differences (see Table 6).

Level of Participative Management

Thus, based on hypothesis testing, it was concluded that, for the paired sample ($n = 40$), there was seldom any significant difference in the levels of participation in a United States parent maquiladora company and its Mexico subsidiary. Organizational leadership processes, decision making processes and one other set of organizational variables all indicated no statistically significant differences. Only four questions involving communication and interaction-influence relationships showed that the participation level was higher in a United States parent company than in a Mexican maquiladora subsidiary.

Implementation of Theory--United States to Mexico

Using the results of hypothesis testing in conjunction with contingency table outcomes it was possible to derive conclusions concerning the criterion variable of management
theory implementation. Employee involvement practices are being implemented in the maquiladora assembly plants in Mexico by expatriate managers using a host country workforce.

Implications

Further interpretation of the conclusions and implications of these for employee involvement practices and direct foreign investments in Mexico after the passage of North American Free Trade Agreement are included in the following sections.

Employee Involvement Practices

Management theory, in this case participative or employee involvement theory, was being implemented, to some degree, from United States parent companies to their Mexico subsidiaries. The summary of responses from the instrument (see Table 14) shows that a far greater number of Mexican assembly plant managers were practicing either a System 3 or System 4 style of participation than were using an authoritative style. No assumptions can be made, however, about a natural corollary existing between a parent company and a subsidiary in the usage of participative styles versus the other two authoritative styles (i.e., one cannot assume that because participation is practiced in the United States parent company that it is necessarily practiced in the Mexican subsidiary). In a large number of pairs in the
sample, both parent and subsidiary practiced participative methods; however, there were several instances in which the United States parent practiced participation and the Mexican subsidiary did not. However, in some pairs the Mexican subsidiary practiced participation and the United States parent company did not.

The implication of active employee involvement practices in the Mexican assembly plants for those international theorists who consider this a problem is that the issue, in instances such as this one, is not a valid concern. Hofstede (1980a) suggests that Mexico differs in three of four value dimensions from the United States. The power distance dimension is particularly pertinent to this study and to the implementation of participative practices in Mexico. Hofstede's premise, briefly recapitulated, is that persons in the United States have a relatively small power distance (i.e., because a basic belief in equality exists, subordinates typically see very little distance between themselves and their superiors), while persons in Mexico have a high power distance. Mexican subordinates typically perceive a large distance between themselves and their superior and typically seek to further enlarge this distance, according to Hofstede's theory. The inference from this theory is that the employee involvement model, which works to decrease power distances, is in opposition to Hofstede's theory about Mexican workers.
Thus, as Hofstede's theory pertains to this study, there could exist a problem with the implementation of employee involvement practices by United States managers in Mexico due to incongruity among values; however, the present findings dispute that premise. Hofstede's premise is contrary to Podsakoff et al.'s (1986) findings in a study similar to the present one which compared Mexican employees to United States employees. Podsakoff et al. found that, despite national boundaries, there was a substantial degree of similarity in the way Mexican and United States employees dimensionalized certain leader behaviors. In summary, the present study is not congruent, within United States-Mexico parameters, as conceptualized by theorists such as Adler (1983a); Adler and Jelinek (1986); Bhagat and McQuaid (1982); Boyacigiller and Adler (1991); Doktor, Tung, and Von Glinow (1991b); Hofstede (1980a, 1983a, 1983b, 1984a, 1987); Laurent (1983); Schneider (1988); and Triandis (1982-1983). Moderate to high levels (System 3 to System 4) of participative management are being implemented by United States expatriate managers in the Mexican maquiladora subsidiaries of United States companies.

Employee Involvement Practices

Current literature in the field of management suggests that employee involvement practices are increasingly being utilized in the United States. A recent survey reported that more than one-third of the United States businesses studied
plan to increase participation by implementing quality-related teams within the next three years (Ernst and Young and American Quality Foundation 1991). In the present study, 77.50 percent of the total responses from both Mexico and United States managers fell within the System 3 or System 4 participation category (see Table 11). This statistic correlates positively with the current popular literature.

A second aspect of contemporary thought concerning employee involvement is the terminology used to describe the highly participative practices that are being utilized in many organizations today. The terms used most often are cross-functional work teams and self-managed work teams. However, in a cross-tabulation between responses to the demographic item "our plant uses self-managed work teams" and the instrument question "What is the amount of cooperative teamwork present in your plant?" an inconsistency was found in the responses for both the United States managers and the Mexico managers. Of the twenty-one United States managers who indicated a "very substantial amount of cooperative teamwork" (System 4) on the question from the instrument, only sixteen reported that they used self-managed work teams in their plants when asked directly on the Information Sheet; the other five of the twenty-one reported that they did not use self-managed teams. The Mexico managers responded similarly--eleven reported a very substantial amount of
teamwork but only seven responded in the affirmative on the Information Sheet to using self-managed teams. Of the remaining four, one indicated a "not sure" on the Information Sheet and the other three indicated they did not use self-managed teams. As conjectured previously, there may be disagreement with the term self-managed work team rather than the concept of teamwork. Another possible explanation is that the words self-managed and cooperative have different connotations for different people, and that the connotation used in management literature often differs from the connotation used by practitioners in the field. One manager, when asked to describe the method of participative management that he had used in a previous job, replied: "I don't understand the question--I didn't know participative management fell into different categories." Another said: "Modern method from In Search of Excellence." A third replied: "We used a variation of Nissan's 'Shop Floor Management'; definitely a employee involvement approach but not self-directed." Other descriptors used by the Mexico and United States managers to describe the type of participative management they had used previously were: SPC (Statistical Process Control), PERL (Personal Employee Relations and Leadership), QIS (Quality Improvement Systems), group discussions, worker's committees, team projects, team meetings, matrix, ULINES, team player, task forces or member of task force, modular manufacturing, TQM, cells, and work
cells. One manager, for lack of a one-line descriptor, wrote in the margin, "Not enough room here to describe it, I'd need about 50 pages." The lesson to be learned here seems simple: It is not what people say they do, but what they do that matters. The implication for management theorists who are interested in researching this topic, however, is that precaution needs to be taken when attempting to elicit information from individuals about participative practices. In this study, more managers actually engaged in employee involvement practices--free flow of information, complete trust and confidence, decision making at all levels of the organization--than professed to doing so.

A third aspect of participation that is very pertinent to this study relates to whether the managers used any type of participative management in previous jobs. A comparison of United States managers and Mexico managers is included in Table 15.

Of the forty United States managers, 53 percent had used participative management in a previous job. Thirty-three percent of the forty Mexico managers had used participative management in a previous job. Only conjectures can be made as to why more United States based managers than Mexico based managers had previously used participative practices, because no questions were included on the Information Sheet to query the managers about why they had or had not previously used
Table 15.--Summary of Responses Regarding Managers' Use of Participation in Previous Jobs

<table>
<thead>
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<th>Managers</th>
<th>No</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>19</td>
<td>21</td>
</tr>
<tr>
<td>Mexico</td>
<td>27</td>
<td>13</td>
</tr>
</tbody>
</table>

these practices. Consequently, the relevancy of more managers in the United States having previously used participative management lies in the parent companies' current or future efforts to implement employee involvement in Mexican subsidiaries—certainly these practices would be more difficult to implement if the plant managers (the primary managerial position in a maquiladora assembly plant) did not have previous experience in participative methods. One manager of international operations who responded from a large United States manufacturing company that utilized self-managed teams in the United States, offered the following notation:

We have 17 factories [in Mexico] and today about 10,000 employees. Some plants are more advanced than others. I hope the information helps. Making cultural changes in Mexico is a slow process, but our company has been making significant advances since 1982 [in implementing teamwork].

The Mexico plant manager who responded from the same company had used participative management previously and indicated the use of self-managed teams in the maquiladora assembly plant. (As the international manager indicated, though, not
all of their Mexico plants were as progressive as this one.) Thus, the implication here is clear: The continuing efforts by the parent company to implement participative practices in Mexico were apparently a major reason for the organization's success.

North American Free Trade Agreement

The finding that participative management practices are being implemented in Mexico has several significant implications for companies that are likely to seek direct investment opportunities in Mexico after the passage of the North American Free Trade Agreement.

First, United States manufacturers have been challenged to meet higher standards of product quality, and highly participative practices are thought by many to be integral to doing so. For some, the concepts are synonymous. W. Edwards Deming has received much acclaim during the last few years for his team-based statistical quality control methods (Walton 1986). He avows that teamwork and quality are inseparable, that the two must go hand-in-hand.

The second implication concerns higher levels of productivity. It has been demonstrated that participative approaches to management increase individual motivation and productivity, thus increasing the overall effectiveness of a firm. This aspect is critical to firms that seek to gain a competitive advantage through maquiladora operations or
through direct investment in Mexico. These moves are made to gain economies of scale, primarily through controlling the cost of labor. Some strategic management and economic theorists describe cheap labor as poorly trained and unskilled labor; in other words, the type of workers who do not have the skills necessary to make decisions, be flexible, and be innovative—or to be participative. However, a recent article in *Business Week* announcing that General Motors was closing factories across the United States and Canada to move operations to Mexico attests to the fact that this is not so.

United States auto workers aren't just battling Mexico's low wages. They see themselves pitted against a young, malleable work force amenable to the manufacturing revolution . . . (a flexible labor force, where highly trained workers in small teams can jump into each other's jobs . . .). In Detroit's view (GM), Mexico's young work force adapts more quickly to new industrial regimes than entrenched workers. (Baker, Woodruff, and Weiner 1992, 100)

It is apparent that the Mexican labor force has the requisite skills to be participative on the job. This factor, coupled with the findings of this study that employee involvement practices have been successfully implemented in Mexican *maquiladora* subsidiaries, portends well for future ventures that are initiated in Mexico.

**Recommendations**

Based on the findings of this study and its underlying theoretical framework, the recommendation to companies that currently have wholly-owned subsidiaries in Mexico's
maquiladora industry and to companies that will extend their operations there in the future is to implement employee involvement practices, especially highly participative, team-based practices. The positive results of such an endeavor have been previously elucidated; however, the methodology is sometimes a problem. Therefore, a second recommendation is to have two important variables in alignment—a high level of support from the parent company and a plant manager who is fully experienced in the practice of participatory methods. The consequence of having lesser degrees of either of these important factors is a lower probability that participation can be successfully implemented. The model shown in Figure 1 more fully describes the ingredients for success.

Discussion

Employee involvement is the contemporary leadership style that seems to have a great potential to maximize a firm's effectiveness because individuals within the organization are motivated to perform at their highest levels. Employee involvement is also an astute strategy for gaining a competitive advantage. It offers a firm the adaptability, flexibility, and innovativeness necessary to compete successfully in a dynamic environment.

Employee involvement will be a natural complement to a free trade agreement between the United States and Mexico. With the North American Free Trade Agreement, United States
### Level of Support From Parent Company

<table>
<thead>
<tr>
<th>High</th>
<th>Medium</th>
<th>Low</th>
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</thead>
<tbody>
<tr>
<td><strong>The Cadre</strong></td>
<td><strong>Team Members</strong></td>
<td><strong>High</strong></td>
</tr>
<tr>
<td>Team Decision Makers</td>
<td>Moderate Employee Involvement</td>
<td>Low/No Employee Involvement</td>
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<tr>
<td>High Employee Involvement</td>
<td>Innovativeness Limited to Specific Task</td>
<td>Innovativeness Discouraged</td>
</tr>
<tr>
<td>Innovativeness Encouraged</td>
<td>Work Teams and</td>
<td>No team work</td>
</tr>
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<td>Work Teams and</td>
<td>Decision Making at Lower</td>
<td>Decision Making at Top</td>
</tr>
<tr>
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<td>Levels of the Organization</td>
<td>Levels of the Organization</td>
</tr>
<tr>
<td>Levels of the Organization</td>
<td>Flow of Communication Limited by</td>
<td>Primarily Horizontal</td>
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<td>Contingency Factors</td>
<td>Communication</td>
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<td>Followers</td>
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<td>Low/No Employee Involvement</td>
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<td>No Encouragement of</td>
<td>Innovativeness Discouraged</td>
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<td>Innovativeness</td>
<td>No team work</td>
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<td>Some Team Work for</td>
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<td>Organization</td>
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<td>Levels of Organization; Sometimes</td>
<td>Delegated to Lower Levels</td>
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<td>Horizontal and Upward</td>
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<td>Communication</td>
<td>Downward Communication Limited</td>
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</table>

**Fig. 1.** A Model for Employee Involvement in a Mexican Subsidiary.
firms that seek direct investment opportunities in Mexico to enhance their competitiveness can benefit from participative management's promulgation. Mexico, too, can benefit. As expatriate United States managers demonstrate the advantages of employee involvement, the skills to utilize employee involvement will be transferred to Mexican host managers.

Summary

In summary, this study revealed that in eighteen of twenty-two instances, no statistically significant differences were found in the levels of participation of the United States parent companies and their Mexico subsidiaries that comprised the matched-paired random sample (n = 40). These results suggest that implementing employee involvement practices is not an issue in the United States-Mexico maquiladora industry. Furthermore, it is possible to generalize beyond this industry to other United States-Mexico alliances that may arise in the future and to hypothesize that cultural differences and biased stereotyping will not impede the implementation of participative practices but will, in fact, be ameliorated by participation's characteristics of democracy and team esprit de corps.

Future Research

Several future research topics emerged as a result of this study. The first topic surfaced from current popular
literature suggesting that members of the Mexican work force are younger and, thus, more flexible and amenable to participative practices than are many workers in the United States. This suggestion leads to the research question: Are employee involvement practices related to the age of workers. Geographical factors are another topic for consideration. The problem in this instance is whether managers in parent companies in the northeastern United States, separated from the Mexican maquiladora subsidiaries by large geographical distances, have different perspectives than managers in the border states of Texas, New Mexico, Arizona, and California. The size of maquiladora facilities may also play a role in the implementation of employee involvement practices. Lastly, a longitudinal study of the present problem to determine whether results change over time would be of interest.
February 10, 1992

As the manager of a successful plant, you have been chosen to participate in a study that can make an important contribution to knowledge about the maquiladora industry and about organizations in general. A number of persons in your industry and in education agree that a study, such as this one, can be useful to plant managers, like yourself, and to present and future students of business.

Your help would really be appreciated. All you need to do is to fill out the enclosed questionnaire and information sheet. The two should only take a few minutes of your time. Your answers will be completely anonymous except to the researchers involved in this study, and we will assure you that we will keep your responses confidential.

If you would like to know what our findings are in this study, just place a check in the upper right-hand corner of the information page. For your convenience in mailing back the questionnaire and information sheet, we have enclosed a stamped, return envelope.

Will you please help us?

Thank you for taking your valuable time to invest in this project.

Yours truly,

J. H. Stanford, Researcher

Enc: Stamped, return envelope for mail back to researchers
April 8, 1992

As the manager of a successful maquiladora plant, you were chosen to participate in a study that has the potential to make an important contribution to knowledge about this industry. Because this thriving industry is important to the economies of both the U.S. and Mexico, we, as researchers, believe that learning about it is a worthwhile endeavor. Among others, we think that future students of business as well as managers, such as yourself, can benefit from our findings.

A small number of other Mexico assembly plants were also asked to be involved in this study, along with an equal number of U.S. firms associated with the maquiladora industry. Because of the small number of chosen companies, your input is valued greatly.

Even though you were not able to respond to an earlier request, would you please do so now? All you need to do is to fill out the enclosed questionnaire and information sheet. The two should only take a few minutes of your time. Your answers will be completely anonymous except to the researchers involved in this study, and we will assure you that we will keep your responses confidential.

If you would like to know what our findings are in this study, just place a check in the upper right-hand corner of the information page. For your convenience in mailing back the questionnaire and information sheet, we have enclosed a stamped, return envelope.

Thank you for contributing your input to this research.

Yours truly,

J. H. Stanford, Researcher

Enc: Stamped, return envelope for mail back to researchers
April 8, 1992

As the manager of a successful U.S. company associated with the maquiladora industry, you were chosen to participate in a study that has the potential to make an important contribution to knowledge about this industry. Because this thriving industry is important to the economies of both the U.S. and Mexico, we, as researchers, believe that learning about it is a worthwhile endeavor. Among others, we think that future students of business as well as managers, such as yourself, can benefit from our findings.

A small number of other U.S. firms were also asked to be involved in this study, along with an equal number of Mexico assembly plants. Because of the small number of chosen companies, your input is valued greatly.

Even though you were not able to respond to an earlier request, would you please do so now? All you need to do is fill out the enclosed questionnaire and information sheet. The two should only take a few minutes of your time. Your answers will be completely anonymous except to the researchers involved in this study, and we will assure you that we will keep your responses confidential.

If you would like to know what our findings are in this study, just place a check in the upper right-hand corner of the information page. For your convenience in mailing back the questionnaire and information sheet, we have enclosed a stamped, return envelope.

Thank you for contributing your input to this research.

Yours truly,

J. H. Stanford, Researcher

Enc: Stamped, return envelope for mail back to researchers
During the past week you received a letter requesting your participation in a research project. You were asked to fill out a series of questions and return them in the enclosed envelope. If you did not have the time to respond earlier, would you do so now? We would really appreciate your help with this project and, in return, we would like to share our findings with you.

Will you take a few moments of your time to give us the information we are seeking? Thank you.
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