The utilization of perceived needs importance in explaining and predicting responsiveness to organizational inducements

Melissa N. Castillo

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THE UTILIZATION OF PERCEIVED NEEDS IMPORTANCE IN
EXPLAINING AND PREDICTING RESPONSIVENESS TO
ORGANIZATIONAL INDUCEMENTS

A Dissertation
by
MELISSA N. CASTILLO

Submitted to the Graduate School of the
The University of Texas-Pan American
In partial fulfillment of the requirements for the degree of

DOCTORATE OF PHILOSOPHY

August 2003

Major Subject: International Business and Management
Copyright

by

Melissa N. Castillo

2003
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ORGANIZATIONAL INDUCEMENTS

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ABSTRACT

Castillo, Melissa N., The Utilization of Perceived Needs Importance in Explaining and Predicting Responsiveness to Organizational Inducements. Dissertation, Doctorate of Philosophy (Ph.D.), Business Administration, August, 2003. 201 pp., 10 appendices, 28 tables, 1 illustration, 202 references.

The concern over attraction and retention strategies in organizations has been widely acknowledged through the voluminous amount of research. As functions of human resources management (HRM), the emphasis in utilizing effective attraction and retention strategies cannot be ignored due to their importance to the firm's overall performance. In meeting this concern, inducements have been recently mentioned to be the missing link in providing more effective recruitment and retention strategies. Inducements are deliberate modifications of a job characteristic or the work environment, including benefits for the sole purpose of enhancing the attractiveness of a job to potential applicants and maintaining that attraction to minimize the intention to leave (turnover).

The purpose of this dissertation is to reveal the particular inducements that are important to the lower-level maquiladora workers in Mexico. By way of the inducements mentioned, needs were to be discovered for the purpose of attracting potential employees and more importantly reducing turnover. The needs theories by Maslow, Herzberg, and
McClelland were used as a theoretical framework in explaining the inducements and needs of the lower-level workers in maquiladoras in Mexico.

A qualitative field study was conducted to test propositions in the discovery of lower-level maquiladora workers' needs as well as their "intention to stay". Semi-structured interviews with open-ended questions were used in gathering responses from lower-level maquiladora workers. Utilizing content analysis and logistic regression, the findings indicate that this particular level of workers are likely to stay due to relationship-oriented inducements, work performance-related inducements, extrinsic and more visible inducements, and most importantly, inducements that satisfy their basic needs. Also, lower-level maquiladora workers are more likely to leave their jobs if they are discontent with contingent inducements.

Through the inducement categories the development of the needs of lower-level maquiladora workers resulted in the development of the following needs: need for basic necessities, need for order/stability, need for patronage, need for development/improvement, and need for relationships. In comparing these needs with the classic needs, lower level needs are overwhelmingly "forgotten" and not satisfied by maquiladora management.

For maquiladora management focused on increasing retention rates, this dissertation offers suggestions that may be considered in developing adequate human resource management practices for this level of maquiladora workers. For the academic community it provides the strategies in contributing to this growing theme in maquiladora literature where the focus lies in management principles contingent on the worker's culture and background.
DEDICATION

To my beautiful daughters, Ashley Annette and Amanda Linda.

Who have inspired me more than words can express;

To my wonderful husband and teammate, Arturo.

WE DID IT!
ACKNOWLEDGEMENTS

First, I must thank GOD, the Almighty, the glory is to You. I thank You for who I am and all that I may become. Dr. Linda Matthews, your dedication and commitment to me were beyond expectations. Your determination to make me believe in myself will never be forgotten. Your words will be with me forever. I am eternally grateful to you. Dr. John Sargent, I especially thank you for introducing me to the world of maquiladoras and for your guidance and expertise throughout the entire dissertation process. Dr. Jose Pagan and Dr. Jerwen Jou. I thank you for your helpful comments and encouragement in the making of a great dissertation.

I also owe my deepest gratitude to the maquiladora managers who welcomed me to speak to 75 wonderful maquiladora workers. To the maquiladora workers, whom I had the honor of interviewing, this dissertation would not have been possible without your cooperation and honesty. I thank all of you from the bottom of my heart. Your stories will live with me forever.

Finally, there are several people, who served as an anchor and support crew: this dissertation would not have been possible without them. Wolfgang Hinck, you are truly a great person and most of all a wonderful friend. My parents, Juan and Elida Najera, who guided me through their love and prayers I love you both very much. Ashley, who time and time again has made me so very proud: you are my inspiration. Amanda, thank you for coming into my life when you did. Finally to my “sweetie.” Arturo, I thank you the most. I cannot express the love and gratitude I have for you. I am eternally blessed to have you as my soul mate. Thank you and I Love You!
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CHAPTER I

INTRODUCTION

The attraction and retention of quality employees is an integral part of organizational human resources efforts and has been linked to organizational success. This topic has received high attention in organizations due to the remarkably high costs associated with the recruitment and retention of employees. As companies begin increasingly realizing that human resources is one of their most important assets, the role of human resources management (HRM) needs to be in line with the firm's strategy formulation in identifying the people-related issues the organization encounters. Recent empirical evidence supports the assumption that HRM practices set by the corporation can positively impact the firm's overall performance (cf. Brockbank, 1999; Huselid, 1995; Delaney & Huselid, 1996; Huselid, Jackson, & Schuler, 1997; MacDuffie, 1995; Schuler & MacMillan, 1984). In addition, much research has been performed specifically looking at the HRM functions of recruitment (cf. Barber, 1998; Schein, 1980; Rynes, Heneman, & Schwab, 1980) and turnover (cf. Cotton & Tuttle, 1986; Allen & Griffeth, 1999; Griffith, Hom, & Gaertner, 2000).

While this research has assisted academicians to explain and practitioners to promote better attraction and retention strategies, there exists an underdeveloped area that may be the missing link in effectively attracting and retaining employees. This unrefined
area is known as the introduction of "inducements". In their development of applicant
attraction strategies, Rynes and Barber (1990) introduced a model that included
inducements as a dominant tool in attracting potential applicants. In addition, as a
method of retention, inducements have been mentioned as a possible tool in the reduction
of turnover (Lakhani, 1988). Rynes and Barber (1990, p. 294) define inducements as the
"deliberate modification of job and organizational attributes for the explicit purpose of
enhancing the attractiveness of a job to potential applicants". Due to the limited amount
of empirical studies, the literature has revealed to a lesser extent the advantages
inducements can play in the attraction and retention of employees. In viewing this issue
from an organizational point of view, the application of inducements and its ultimate
success is subject to their satisfying an individual's needs. This dissertation will focus on
the investigation of individual needs and the role inducements play in the satisfaction of
needs.

In addition to the investigation of needs and inducements, this dissertation also
aims to supplement to the growing literature of our neighbor to the south, the country of
Mexico. The main focus will lie in the examination of lower-level workers employed in
maquiladoras. Given that historically, turnover rates have been high in the maquiladora
industry, the greater part of turnover occurs in the lower-level assembly-line positions
where jobs are plentiful, thus making it problematic to attract as well. Thus, this
dissertation will fill several voids since researcher has uncovered no study that
investigates inducements in maquiladoras and/or Mexican firms; furthermore needs
research performed in Mexico is virtually non-existent.
Purpose of Study

Several empirical studies have been conducted to uncover the needs of employees as well as what employers think their employees need in the workplace (cf. Johnson & Marcum, 1968; Graen, Dawis, & Weiss, 1968; Ivancevich, 1969; Jurgensen, 1978; Kovach, 1987). Unfortunately, employers have not been able to effectively testify what their employees want. While employers repeatedly think that their employees desire more pay, Kovach (1987) found for example that employees really desire interesting work. Interestingly, the 1987 study had been a replication of studies conducted in previous years (Jurgensen, 1949; Kovach, 1980) and employers' responded that more pay was what employees desired the most. Then again, all of these studies have been conducted in the U. S. with U. S. samples. Will these attributes result in the same order in another country?

In the international scope, attraction and retention issues have also plagued multinational organizations. As a result, several international studies have been conducted to uncover employee needs (cf. Slocum, Topichak, & Kuhn, 1971; Clark & McCabe, 1972; Blunt, 1973; Reitz, 1975; Stephens, Kedia, & Ezell, 1980; Badawy, 1980; Fisher & Ya Yuan, 1998). Several of the studies have gone as far as comparing U. S. findings with international results (Buera & Glueck, 1979; Howell, Strauss, & Sorenson, 1975). Interestingly, the same survey instrument, Porter's Needs Questionnaire (1961), based on the classic needs theory, Maslow's Hierarchy, was used in the U.S. and international studies. All of the international studies simply translated the U.S. questionnaire with no adjustments or changes. Triandis (1983, p. 139) cautioned researchers that findings based on "theories produced in one culture may be inadequate in
other cultures.’ With this in mind, the usage of Porter Needs Questionnaire or any other needs instrument developed and tested in the United States may not give an accurate or true indication of another culture’s needs. Thus, the discovery of potential and current employee needs is of utmost importance for organizations especially when using inducements as attraction and retention strategies. Managers, recruiters, and academicians should not make assumptions regarding worker’s needs. Analysis of individual needs must first be made and then an arrangement of suitable rewards should be developed that comply with the needs. For instance, offering more pay, flexible hours, and fitness programs may be successful in the United States in attracting individuals or bringing turnover rates down, but how important will these inducements be in another culture?

Thus, the purpose of this study is to discover workers’ needs by way of their identification of inducements provided by the organization. The identified, thus valued inducements will serve as the underlying link in the discovery of needs.

*Importance of Study*

The research is overwhelming in regard to methods of attracting and retaining employees. Rynes and Barber (1990) made progress in establishing an applicant attraction model from the viewpoint of the organization. They initiated the concept of inducements as an essential way towards the enhancement of attracting potential applicants. Even though Rynes and Barber (1990) limited their model to attraction of applicants, the inducement framework provides substantial support in defining a practical method in attracting and also retaining applicants. Despite this progress, research has
also indicated the gaps that are apparent in the recruiting and retention literature specifically in the inducement area.

For instance in the recruitment area, Turban and Keon (1993, p. 192) suggest that future researchers should conduct field studies and investigate "whether organization characteristics influence applicants' actual decision to interview, to go on a site visit, or to accept a job offer". Pervin (1989) also recommends an investigation of how individuals' perception of rewards (i.e. inducements) available and their influence on job choice decisions. In retention, Lawler (1970) recommends research in investigating the type of outcomes (or rewards) subordinates value (or need) so that these outcomes can be linked to performance. He also urges supervisors to "individualize" the reward system employee to capitalize on the individual differences among people in how they value different outcomes (p. 236). Kovach (1987) suggests questioning employees using surveys to inquire what their specific needs are in order to keep employees in the workplace. However, Kovach (1987, p. 64) contends that the "basic needs of the worker are met by industrial organizations" by way of the workplace environment and benefits. This may be a emic distinction since his support for this conclusion is based entirely on U.S. studies sampling U.S. workers. Also, what exactly are "basic needs"? What may constitute basic needs in the U.S. may be higher level needs (for instance, security) in another culture. The consistent theme concluded by researchers in this area is that people are inclined to and tend to remain in jobs that fulfill their needs (House, 1988; McClelland, 1985).

This study is of importance to both academia and practitioners. For academia, this study will contribute in four ways, (a) needs theories will be scrutinized by testing their
predictive power in another culture, (b) international HRM literature will be increased by the inclusion of inducements as a possible effective attraction and retention tool, (c) maquiladora literature will be expanded by the in-depth investigation of lower-level workers needs, and (d) cross-culture literature will also be supplemented with the qualitative investigation of workers' needs in the developing country of Mexico. For practitioners, this study will assist managers in three ways, (a) the identification of inducements that meet lower-level maquiladora workers' needs, (b) the inclusion of "identified" inducements in the development of effective attraction and retention strategies for lower-level maquiladora workers, and (c) the importance in recognizing cultural differences regarding needs in their employees.

Given the above, this dissertation will be organized as follows: Chapter II will present a thorough literature review that includes sections on HRM, International HRM, recruitment and the study of turnover, inducements, needs theories and research, and culture. Chapter III will present the propositions developed based on theoretical foundations of needs, inducements, and Mexican culture. Chapter IV will present the research methodology selected and performed for the study. Chapter V will present the results and finally Chapter VI will present the conclusion.
CHAPTER II

LITERATURE REVIEW

This chapter presents the background necessary in investigating the role inducements can play in the effective discovery of individual needs. The introduction of inducements as a possible attraction and retention instrument necessitates the need for familiarity and knowledge in the field of human resources management (HRM). A brief introduction to the field, including a more thorough analysis into the specific studies of the HRM functions of recruitment and the study of turnover will be given. Following those sections will be an overview of inducements and their relation to needs, as well as a review of needs theories and research. Finally, this chapter will conclude with a comprehensive overview of Mexico, its culture and the maquiladora industry.

Human Resources Management

Human resource management (HRM), the administration of activities to enhance the quality and performance of people employed in an organization, is considered a key function to a corporation’s success. Pfeffer (1994, 1998) along with other researchers (Sheppeck & Militello, 2000; Schuler, 1992; Schuler & Walker, 1990) claim that human resources can be the source in maintaining a firm’s competitive advantage. Their recommendation to management is by implementing “innovating” and “high performing” HRM techniques, organizational effectiveness will follow. Recruitment and turnover
prevention are the HRM functions under investigation and without effective recruiting methods to attract and eventually retain the right individuals; the organization may not be as effective. The studies that follow will lay the framework in supporting the need for new and creative HRM techniques in the recruitment and retention areas.

*Recruitment*

From the organizational point of view in regard to recruiting, its purpose is to find the right people the organization needs in order to be effective. As defined by Barber (1998), recruitment includes "those practices and activities carried on by the organization with primary purpose of identifying and attracting potential employees". Despite the appropriateness of the strategies and the organizational structure designed for successful accomplishment of set goals, organizations do not function and will not prosper until recruitment of qualified applicants occurs to satisfy the set needs of the organization. Therefore, recruitment of applicants is the first major human problem encountered by the organization (Schein, 1980).

The issue of bringing humans into an organization becomes complex due to uncertainty of the recruitment policy's ability to bring in the best-qualified people. In addition, it does not guarantee that organizational needs as well as individual needs will be met. The rules and policies in practice to assure organizational efficiency and effectiveness may leave individual needs unsatisfied. When the organization falls short of the fulfillment of employee needs, the organization suffers as well (Schein, 1978). Thus, the essential function of recruitment, that of attracting qualified human capital to the organization, becomes vital and necessary in determining the future success of the
firm. In the following sections, a foundation against which one can view past and present issues in recruiting will be presented.

Recruitment Literature

While academicians have routinely studied organizations, Rynes and Barber (1990) recommend descriptive research to find out what organizations are actually doing to attract applicants before recommendations (prescriptive) can be given that will benefit organizations. It has been discussed that the use of selection systems has risen to the point that recruitment practices attract more qualified applicants (Boudreau & Rynes, 1985), encourages more job acceptances and creates greater enthusiasm and longer tenure among those applicants who become new employees (Herriot & Rothwell, 1981). Thus, the attraction of employees has started to become a focal point to researchers who support the advancement of recruitment. While limited research has been undertaken with recruitment as the focal point of the HR function and its influence on firm performance (Terpstra & Rozell, 1993; Rynes and Boudreau, 1986), a more detailed look at the recruitment process will bring to light the importance of using the right strategies in attracting the best individual for the organization.

Recruitment Process

The recruitment process encompasses a wide variety of phases beginning with the identification and generation of applicants. Secondly, the rather large group of applicants is decreased to a select group using various recruiting and selection tools. Finally, the recruitment process ends with the applicant deciding whether to accept or reject an offer.

The first phase is usually described as organizations trying to find people and people looking for certain organizational characteristics at the same time. Applicant
screening, limited generation of information by both the organization and individual, and little interpersonal contact is generally included in phase one (Barber, 1998). Phase two involves the point in the recruitment process where a smaller pool of interested individuals is considered “applicants” and along with the organization pursues an intensive search of information from each other. Barber (1998) characterizes phase two as a point where personal contact exists, information searching by both parties, and a final choice by the organization. Finally, phase three is the point in the recruitment process where the applicant determines organizational choice. This phase is perhaps the most important for applicants since they will have to accept one while declining other offers. Each of these phases is occupied with broad dimensions. For instance organizational agents, outside forces, target populations, recruitment sources, delivery of message, administrative processes, and outcomes like attraction, post-hire, and organizational performance play a key role in the recruitment process and impact the choices a potential applicant makes. Accordingly, a brief summary of the three phases will be discussed in order to bring a true picture of the complexities involved in recruitment.

**Phase one: Generation of applicants.** Once an organization decides on a target market, it has to determine how to actually reach those individuals. Much research has been written in regards to corporate or organizational image (Gatewood, Gowan, & Lautenschlager, 1993; Barber, 1998), selection of recruitment source (Breaugh, 1981), and recruitment materials (Barber, 1998) and its effect on initial job choice decisions and whether or not to apply at a certain organization. Few studies have been conducted that investigate the role image plays in recruitment (Rynes, 1991). In addition, the
organizational image and position attributes play a part in the attraction of the applicant to the particular firm. Organizational characteristics like structure, size, and strategy have also been found to influence individuals in becoming applicants (Olian and Rynes, 1984).

**Phase two: Interested individuals become applicants.** While characterized as a function of an organization, phase two of the recruitment process has in its entirety been investigated from an individual's perspective (Highhouse, Steirwalt, Bachiochi, Elder, & Fisher, 1999; Thomas & Wise, 1999; Strand, Levine, & Montgomery, 1981; Rynes, Heneman, & Schwab, 1980). Along this realm is the research associated with an individual's personality and its influence of organizational characteristics on the attraction of the firm (Turban & Keon, 1993; Burke & Deszca, 1982). While these studies that result in individual responses may be helpful in determining if the organization's recruitment strategies are effective, the focus needs to be in the organization's particular activities that attract the right individual for a particular position. In that respect, viewing attraction strategies from an organization's point of view have to be addressed.

**Phase three: Job choice.** Phase three, as noted by Barber (1998) involves the ultimate decision by the applicant. The issue of concern is that while most studies place importance on the applicant, the organization should not be forgotten. At this point the organization can still be a major influence in an applicant's decision. Whether it is by subjective or objective measures (Barber, 1998), the attraction of job attributes plays a determining factor in the final decision by the applicant.
To summarize, a general theme runs throughout the three phases of recruitment, that of the "attraction" of either the job or organization towards the applicant. While some studies have considered "attraction" important predominately during the initial phase, "attracting" of the applicant is essential throughout the entire process. Thus, even after the hiring of the employee, the idea of "continuous attracting" has to be maintained in order for the employee to stay with the organization. The following section on turnover literature will support the idea for the need for "continuous attracting" in the retention of employees.

The Study of Turnover

In recent academic, as well as, practitioner journals, voluntary turnover has been reported as the subject of much research (Mitchell et al., 2001; Lambert, et al., 2000; Trevor, 2001). Several reviews of turnover literature have been conducted (March & Simon, 1958; Schuh, 1967; Porter & Steers, 1973; Price, 1977; Mobley, 1977; Muchinsky & Tuttle, 1979; Cotton & Tuttle, 1986; Allen & Griffeth, 1999; Griffith, Hom, & Gaertner, 2000). Despite all the reviews, there are still gaps and much left to investigate about the major reasons for turnover to occur. Thus an understanding of the causes and antecedents of turnover is a first step for taking action to reducing turnover rates.

Turnover Literature

In the 1950's, March and Simon (1958) wrote that the decision to participate (i.e. to stay or leave) was at the center of the theory of organizational equilibrium (Barnard, 1938). The theory of organizational equilibrium states that an organization can continue to exist only as long as the inducements, it offers participants are sufficient to
continue contributions on the part of the participant, i.e. when the inducements and contributions are in equilibrium. March and Simon (1958) emphasized, however, that judgments of the desire to move, can be used only with the perceived ease of movement as a measure of whether the inducements and contributions are in equilibrium. Thus, the inducements-contributions framework of March and Simon (1958) indicates that the most important theoretical causes of turnover are the perceived ease and desirability of movement. Thus, the basis follows the importance the inducement theme plays in satisfying individuals' needs and reducing turnover. The following turnover reviews duplicate these results in showing the significance inducements can play in mitigating turnover intentions by employees.

In Lifkowitz (1971) study, his analysis determined that turnover was influenced by the individual's expectations of the position, satisfaction, work environment, compensation, and supervisory style. These outcomes have previously been linked to organizational tools in applying inducements. Along the same lines, Porter and Steers' (1973) review resulted in turnover being caused by the individual, job, and work environment including organization-wide factors. Influences on turnover were obvious that the organizational structure as a whole (pay and promotion policies, working conditions, co-worker relations, supervisory style, job requirements) is at the root of preventing turnover (Mowday, Porter & Steers, 1982). Again we see the organizational-supported inducements playing a role in possibly reducing turnover. Muchinsky and Tuttle's (1979) review, found major influences on turnover due to attitudinal, biographical, work-related, and personal factors. They also found significant support for realistic job previews and an individual's job expectations in reducing turnover.
Another meta-analysis conducted by Cotton and Tuttle (1986) declared to resolve previous disagreements regarding turnover causes and antecedents. They utilized a categorization of correlates and found three: external factors structural or work-related factors and personal characteristics. In viewing external factors, the perception of job alternatives again proved to be positively related to turnover and the presence of a union is negatively related. Work-related factors produced highly reliable correlates of turnover. Pay produced a negative relationship in 29 out of 32 data sets. Interestingly enough was the issue that pay was found to be less significant for blue-collar and non-managerial employees than for other employees. Overall job satisfaction, satisfaction with the work itself, pay satisfaction, satisfaction with supervision, and organizational commitment produced highly significant meta-analyses, showing that these are negatively related to turnover (Cotton & Tuttle, 1986). In addition, task repetitiveness indicated weak support for a positive correlation with turnover. Finally, personal characteristics found to be negatively related to turnover were age, tenure, and number of dependent children while education and behavioral intentions were positively correlated.

A key concern suggested by Cotton and Tuttle (1986) was that while most of the variables studied are related to turnover for instance type of industry, the employee population, and nationality, these variables are almost never examined and often not reported. In addition, the relation between each variable and turnover are moderated by other variables and thus studies investigating these particular moderating variables need to be examined as well.

Griffith and Hom’s (1995) and Allen and Griffith’s review (1999) brought a new concept into the turnover literature. They state that performance levels are expected to
influence overall job satisfaction and organizational commitment through satisfaction and perceived organizational support. These relationships are dependent on factors including rewards, feedback, and individual levels of achievement. Consistent with past turnover research, they found satisfaction and commitment, the primary attitudinal antecedents of turnover that activate different forms of withdrawal thoughts, such as intentions to quit and search behavior (Allen & Griffith, 1999).

Finally, a more recent meta-analysis conducted by Griffeth et al., (2000) showed that like previous reviews, job satisfaction, organizational commitment, job search, comparison of alternatives, withdrawal cognitions, and quit intentions were among the best predictors of turnover. Particularly they found “distal determinants” like characteristics of the work environment, including job content, stress, work group cohesion, autonomy, and leadership to illustrate moderate effect sizes for predicting turnover as well as few demographic characteristics that predict turnover like company tenure and number of children (Griffeth et al., 2000, p. 483). Like Cotton and Tuttle (1986), and Griffeth et al., (2000, p. 486) found the effect sizes of all variables investigated “can vary widely across situation and populations” and they agree that, “greater theoretical attention should be paid to moderators, besides offering universal turnover formulations”.

In examining previous and recent turnover articles, focus needs to be in these moderating variables mentioned but never studied. For instance, inter-role conflict (Steers & Mowday, 1981; Cohen, 1997, Hom & Kinicki, 2001), non-work satisfaction and family-related factors have been mentioned in more recent turnover literature (Shaffer & Harrison, 1998; Kosseck & Ozeki, 1998; Lee & Maurer, 1999; Lee, Mitchell.
Holtom, McDaniel & Hill, 1999), but ignored entirely as to their impact to turnover in reviews (Mowday et al., 1982; Hom & Griffeth, 1995; Griffeth et al., 2000). Many theorists include nonwork-related factors in their models of turnover, but there is no consensus about how or where these factors have an impact on the process. Lee and Mitchell's turnover model (1994) and improved model by Lee, Mitchell, Holtom, McDaniel, and Hill (1999) introduced "shocks" that an employee may sustain. Shocks are events that "initiates the psychological analyses involved in quitting a job" like changes in marital status, birth or adoption of baby, or transfers (Lee et al, 1999). Only a few empirical studies of organizational withdrawal have included shocks or family variables beyond marital status or number of children (e.g., Blegen, Mueller, & Price, 1988; Lee & Mowday, 1987; Price & Mueller, 1981; Prestholdt, Lane, & Matthews, 1987). Findings have been generally weak or inconclusive (Hom & Griffeth, 1995).

Thus, to effectively retain workers, employers must know what factors motivate their employees to stay in the workplace and what factors cause them to leave. Incidentally, the majority of reviews found that job dissatisfaction, availability of employment alternatives, low organizational commitment, and organizational work environment were the strongest predictors of turnover. As previously noted non-work and family-related factors were limitedly mentioned. Consequently, based on the reviews, since the major predictors of leaving are not personal or related to the balance between work and family but are organizational or job based, employers need to understand and discover which factors they do have some control over and which of them they do not and make the changes necessary to retain employees. Nonetheless, caution
needs to be followed, since the above findings were based on studies conducted entirely to U.S. samples, mostly managerial employees.

In conclusion, the evidence is substantial that there clearly is a necessity to examine the possibility of applying inducements. As mentioned earlier, the organization's inducements will be the key in attracting a potential applicant or not. If the organization provides inducements that meet the needs of the individual and maintains that satisfaction level, applicant will be attracted as well as remain on the job. Before inducements can be applied, organizations need to discover which inducements satisfy the needs of their employees. Thus, it is important to precede this discussion with a review of inducements.

**Inducements**

Chester Barnard (1938, p. 39) in his study of the organization first introduced inducement literature in "The Functions of the Executive". He stated that the "efficiency of the organization is its capacity to offer effective inducements in sufficient quantity to maintain the equilibrium of the system." He strongly led the framework of inducements to be understood as "material or monetary considerations" that contribute enough effort to an organization to enable its employees to be productively efficient beginning in the early employment stage and over an extended period of time.

Even in current times, inducements are still being recommended as a method in improving the attraction of potential applicants (Rynes & Barber, 1990) and as a method to retain employees (Mitchell, Holtom, Lee, Sablinski, & Erez, 2001). In relation to these statements, is the belief that a certain "attraction" to the organization needs to occur and stay constant during the pre-employment phases as well as to maintain this attraction throughout the years in order for potential applicants to enter and eventually to remain.
Even though the literature is minimal in regards to the application of inducements as a viable recruitment tool in attracting applicants and retaining employees, Rynes and Barber's Attraction Process Model (1990) laid the foundation in recognizing the importance inducements can play in the entire attraction process.

**Definition of Inducements**

Rynes and Barber (1990) in their previous research have suggested that inducements are the "major determinants of applicants' attitudes and behaviors". They differentiate inducements with job attributes, stating that an inducement is the "deliberate modification" of a job characteristic or work environment for the sole purpose of "enhancing the attractiveness of a job to potential applicants". However, Rynes and Barber (1990), did fail to mention that inducements may also be utilized to "enhance the attraction" of a particular job of a current employee in order to prevent turnover. They do distinguish between pecuniary and non-pecuniary inducements but failed to mention specific examples of non-pecuniary inducements. Examples of pecuniary inducements cited in the literature include, changes in salary, improvement of benefits, and increasing/decreasing hours of work as well as and other improvements in the workplace environment. Non-pecuniary benefits include flexible working hours, housing, teamwork, and job security. Since these examples are very similar to job attributes, traditional and non-traditional benefits, and incentives, it is the "deliberate change" in any of these in order to attract potential applicants or retain current employees is what makes them inducements.

In the United States, benefit plans that include the legally required, workers' compensation, Social Security, and unemployment insurance as well as other benefits
like life insurance, medical coverage, paid leaves, short- and long-term disability and 401(k) plans have become fairly standard; however, compensation packages increasingly have begun to focus on the specialized needs of workers. Several trends have contributed to the growing popularity of these new benefits. In an effort to attract and retain the best and brightest talent, many companies are offering inducements to help employees balance the details of their professional and personal lives.

Barnard (1938) also gives examples of inducements and their applicability. He states that from the organization's viewpoint requiring or seeking the "contributions" from individuals, the problem is the searching or "finding" positive inducements in the eyes of the individuals. He differentiates inducements as those that can be specifically offered to an individual; and second those that are general. He differentiates specific inducements in several classes: material, non-material, desirable physical conditions, and ideal benefactions. General inducements include: associational attractiveness, adaptation of conditions to habitual methods and attitudes, the opportunity of enlarged participation and the condition of communion. He also states that inducements may be either increasing positive inducements or of reducing or eliminating negative ones. For instance, employment may become attractive either by reducing the work required, either by shortening hours, or supplying additional resources, or by increasing positive inducements such as the introduction of flextime, job rotation, telecommuting, or simply increasing wages. Thus the organization is making the position less burdensome, or more attractive.
Inducement Literature

Rynes and Barber (1990) in providing an applicant attraction model from the viewpoint of the organization saw inducements as an essential way towards the enhancement of attracting potential applicants. While previous research has investigated the particular attributes of the job and what is "preferred" (Jurgensen, 1978), other research has used field experiments that actually examine applicant behaviors towards particular inducements (Lakhani, 1988). As of yet, Jurgensen's (1978) report is the largest example of such research. He conducted a longitudinal study encompassing 30 years from 57,000 job applicants at a particular gas company. Applicants were asked to rank the importance of ten job characteristics to themselves, and then to rank them again in importance to 'others who are in your type of work'. His results found drastic differences in preferences such as advancement, pay, and supervision. He also found differences between men and women and in the preferences reported for one's self and those attributed to others.

Kovach (1987) found differences between superiors' and subordinates' rankings of job importance. Like Jurgensen (1978) and other researchers (Kovach, 1987, 1980; Silverthorne, 1992) have determined, individuals report their own needs and motives "higher, more honorable, or at least different" from those of their peers and subordinates (Fisher & Yuan, 1998). The literature shows that an organization needs to identify and acknowledge exactly what employees value, and whether subgroups of employees have differing preferences. Only then can benefits be appropriately targeted (Bento & White, 1998). Similarly, when targeting a particular group of individuals, the organization...
should determine needs of the individuals so that inducements will be reconstructed or modified in order to meet a potential applicant’s need.

In a study that investigated small businesses’ applicant attraction practices, Heneman and Berkley (1999) found that the sample of 117 small businesses highly used four specific inducements for attracting applicants—flexible starting date, promotion possibilities, new employee training, and part-time work. Another interesting result of this study was that recruitment source usage (employee referrals, newspaper ads, and temporary help agencies), another attraction strategy according to Rynes and Barber’s model (1990), was associated with the initial attraction of the applicant (phase 1 of recruitment process). Whereas, employing inducements was shown to impact acceptance and especially retention rates. Also, according to Allen and Meyer (1990), they state that an employee’s commitment to an organization is largely determined by early job experiences with it, especially noting the recruitment process.

In introducing their new job embeddedness model, Mitchell et al. (2001, p.1103), included inducements as “organization-focused predictors” when predicting voluntary turnover. They stated that the opportunity to work in groups or on certain projects creates commitment and thus the employee may be more likely to stay. Along those same lines, Lee, Mitchell, Holtom, McDaniel, and Hill (1999) recommended that managers should instill interventions (inducements) in order to prevent an employee from leaving. While these studies have shown positive strides in better understanding applicability of inducements, these studies have been conducted in the United States and as a result their generalizability to other cultures is not known.
In conclusion, despite the advances made with this limited research, gaps still exist in the inducement literature. For instance, Young and Place (1997) conducted an investigation on attraction strategies looking specifically at factors in Rynes and Barber’s model (1990). In their empirical study, they considered recruitment messages, organizational representatives, and applicants; however, they did not examine inducements in the attraction process. At this point, it is understandable that if inducements were utilized in attracting a potential applicant, inducements should continue to maintain organizational commitment among employees. In addition, Barnard (1938) stated that the extent to which the organization provides inducements for an individual’s contributions established an organizational context in which the person may stay or leave. Thus, the more satisfied the employee is with the inducements provided by the organization, the more they should want to remain with it (Lambert, 2000; Bretz et al., 1994). Turban and Keon (1993, p. 184) emphasized that it is the “individual’s differences that determine the extent to which the organization inducements meet the individual’s needs”. Termed the interactionist perspective, Turban and Keon (1993) felt that it is this particular balance of organizational characteristics and individual needs that attracts certain individuals to certain organizations and eventually prevents them from leaving. While inducements may be the possible missing link in the attraction and retention strategies’ process, focus now has to be on the needs that need to be satisfied in order to provide the specific inducements. The following section will examine theories that look at the satisfaction of needs.
Need Theories

This recruitment and retention process involves actions utilized by an organization for the sole reason of targeting and attracting possible employees (Barber, 1998) as well as keeping them satisfied once they are employed. Management's attraction and retention strategies and policies stem from their assumptions of basic human nature and behavior. Thus, a thorough understanding of human needs is necessary in order to understand the complexities involved in developing an effective recruiting and retention program. A comprehensive analysis of established needs theories will be presented in order to set the foundation necessary in understanding why people make choices the way they do.

For about 60 years, need theories have played an integral role in the work motivation literature (Alderfer, 1969; Maslow, 1943; McClelland, 1961). As a motivation theory, need theories suggest the kinds of things people desire from life or work. Needs can be defined as internal states experienced by an individual that shape and control behavior. Some theories stress money, others stress social rewards to be derived from participation in groups, and a third group emphasizes the need for individuals to fulfill themselves as people (Herzberg, 1966; McGregor, 1977).

In general, motivation theories recognize that:

1. Different people have different needs-some need the kinds of feelings that money can provide, others need the kinds of feelings that people provide, others seek self-actualization, and some want a little of everything.

2. People are more comfortable in situations where they are treated equitably. This means that organizations must not only provide what people desire, but must also
reward them with all kinds of rewards, not just pay (Teely, French, & Scott, 1971) in a way that will be perceived as equitable.

3. In choosing their organization, people will choose one in which (a) they perceive they have the ability to perform satisfactorily in order to obtain rewards, and (b) the rewards that are offered are those they desire (Schneider & Schmitt, 1986).

4. In deciding to stay in an organization, people will stay in which (a) they have been rewarded based on satisfactory performance, and (b) the rewards received are those they desire.

Need theories then, tell us that different things energize people to do something; the theories do not indicate what people do. They particularly focus on what needs people are attempting to satisfy and what from the organization will satisfy those particular needs. One particular theory integrates something from each of those types of theories and has set the foundation in the subsequent development of other theories in the management literature. This theory is the hierarchy proposed by Maslow (1943) as a general theory of personality development (Schneider & Schmitt, 1986).

*Maslow's Hierarchy of Needs*

While Maslow’s need hierarchy theory is widely acknowledged, there is little research evidence to support it (Wahba & Bridwell, 1976). Its attractiveness is that it makes available both a theory of human motives by classifying basic human needs in a hierarchy, and a theory of human motivation that relates these needs to general behavior. Maslow (1970) proposed that his need categories are structured in a hierarchy based on the probability of importance. The hierarchy of needs is as follows, in ascending order: the physiological needs, the safety needs, the belongingness or love needs, the esteem
needs, and the need for self-actualization (Maslow, 1970, pgs. 35-47). The model also stipulates that although individuals pursue self-actualization levels, they do so only after the fulfillment of lower level needs have been met. Thus, explaining why Maslow hierarchically categorizes needs according to their priority for satisfaction. Table 1 identifies and defines each factor.

Determining these particular needs is necessary in predicting an individual’s behavior whether attraction will occur and if retention can be sustained. Maslow argued that the five basic needs are "instinctoid" and that his needs are "more universal" for all cultures than other desires or behaviors (Maslow, 1970, pg. 54).

Table 1

*Maslow’s Need Hierarchy Model*

<table>
<thead>
<tr>
<th>Maslow’s Need Levels</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Actualization</td>
<td>The ultimate need that dominates once lower-level needs are met. This need motivates an individual to realize his or her potential, continue self-development, and be the best one can be.</td>
</tr>
<tr>
<td>Esteem</td>
<td>The need for recognition and status. This need drives an individual to want to be respected by others, self-confident, and appreciated.</td>
</tr>
<tr>
<td>Affiliation (Social)</td>
<td>The need for belonging, for giving and receiving attention, and for friendship.</td>
</tr>
<tr>
<td>Security</td>
<td>The need for personal safety, security, and protection.</td>
</tr>
<tr>
<td>Physiological</td>
<td>The need for basic needs, like food, water, shelter, and clothing.</td>
</tr>
</tbody>
</table>
Unfortunately, Maslow based his statements entirely on the assumption of U.S. individuals' needs. In a review of the research on Maslow's model, Wahba and Bridwell (1976) determined that "there is no consistent support for the hierarchy proposed by Maslow" (pg. 224). They follow this statement by emphasizing that there is "no clear evidence that human needs are classified in five distinct categories, or that these categories are structured in a special hierarchy" (Wahba & Bridwell, 1976, p. 224).

However, to completely ignore Maslow's model is not the solution. The results of the review should be viewed with caution, partly because the nature of the theory makes it difficult to test empirically as well as methodological and measurement problems of the studies. For instance the majority of the studies reviewed used a rank-order system in categorizing needs. Based on Wahba and Bridwell (1976), this may not be a "valid test of Maslow's need hierarchy, since rank ordering is not a Maslow concept". In addition, the scales used did not indicate acceptable reliability coefficients and their construct validity is questionable. As a result, modifications of the model may be necessary when applying the model to other individuals from other countries. In relating U. S. individuals' needs to inducements offered by the organization, Maslow's hierarchy can be used to identify what types of inducements may satisfy an individual's particular need. In addition, need hierarchy theory has tried to explain the dominance of particular needs between different people at the same time, as well as within an individual over time (Wanous & Zwany, 1977). This theory can prove indispensable when focusing on the retention of employees in the organization.
**Herzberg's Two-Factor Theory**

Developed from actual research in industry, Herzberg, Mausner, and Snyderman (1959) perceived hygiene and motivational factors as separate dimensions affecting separate aspects of job satisfaction. In addition, they did not regard job satisfaction and dissatisfaction as different ends of the same continuum as shown in Figure 1. They concluded that job satisfaction is made up of two uni-polar traits (Bockman, 1971).

Herzberg's (1966) classic analysis involved feelings and experiences of 200 engineers and accountants employed in nine U.S. companies. The employees sampled were asked to describe episodes in which they were “exceedingly happy or unhappy” about their jobs. The respondent would state either a “good” or “bad,” and was asked for an explanation for feeling the way they felt and how this particular feeling affected job performance, work relationships, and a sense of well-being (Herzberg, 1966).

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**Figure 1. Herzberg's two factor theory**

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Each event was classified as a “critical incident”. If it is bound by time (possesses a beginning, middle, and an end), the feelings reflected by event had to be very good or bad, and the particular episode must have been related to his job, not to the individual’s personal life, then it would be classified as a critical incident (Herzberg, 1966).

Favorable job attitudes were associated with attributes that were intrinsic (those related to the job itself). Herzberg (1966) called these factors, motivator factors and included achievement, recognition, the work itself, responsibility, advancement, and growth.

Unfavorable job attitudes or extrinsic factors were linked to the factors that were part of the job context but not the job content. These were called hygiene factors and consisted of company policy and administration, supervision, relationships with supervisors, work conditions, salary, relationships with peers, personal factors, relationships with subordinates, status, and security.

As per Herzberg (1966), hygiene factors caused dissatisfaction if, in the employee’s view, they were provided insufficiently or otherwise unattractive. At the same time, adequately provided hygiene factors were taken for granted. Thus, the “right” hygiene factors did not cause satisfaction but “wrong” ones resulted in dissatisfaction. On the contrary, motivator factors were more powerful. Satisfactory acceptance of these would cause motivation but their absence would cause dissatisfaction. Herzberg et al., (1959) replicated their original study to include diverse groups including international samples, for instance, lower-level supervisors, Finnish supervisors, women in high level professional positions, scientists and engineers separately, hourly technicians, unskilled hospital employees, housekeeping workers, and Hungarian engineers. Based on the findings, the results all supported the original outcome.
Many replications have been conducted that have supported Herzberg's et al., (1959) original findings (Friedlander & Walton, 1964; Myers, 1964; Saleh, 1964; Weissenberg & Gruenfeld, 1968). Their studies have supported the conclusion that factors causing job satisfaction (motivators) are different from, and not merely opposite to, factors causing job dissatisfaction (hygienes). On the other hand, in Bockman's review (1971), she noted that some studies (Dunnette, Campbell, & Hakel, 1967; Friedlander, 1965; Myers, 1964) resulted in a particular job attribute causing job satisfaction in one sample and job dissatisfaction in another. On the other hand, some studies resulted in the same factor causing job satisfaction and job dissatisfaction in the same sample (Gordon, 1965; Ewen, 1963). For instance in Ewen (1963), salary, classified as a hygiene, acted as a motivator for one group, and in the other it caused both satisfaction and dissatisfaction. Also, prestige, a motivator, resulted in both satisfaction and dissatisfaction. Thus it is evident that what one calls a "motivator," may be considered "hygiene" for another. Bockman (1971, p. 164) comments on this issue by stating that "the Herzberg results cannot be generalized beyond the situation that they were obtained".

In addition, Ewen (1963) and Ewen, Smith, Hulin, and Locke (1966) negatively evaluated Herzberg's method of gathering information from his subjects. They disapprove of the "recall" method used by Herzberg which they say is subject to "bias" (Ewen et al., 1966). Also, Friedlander (1966) also criticized the "self-report" technique because according to Bockman (1971, p. 184) "self-perception may be quite different from objective perception of what occurred." Nevertheless, the fact that different studies using different methods result in different outcomes is obvious from reviews of literature.
It is apparent that studies using Herzberg's exact methodology obtained results that support the original findings; however, as French, Metersky, Thaler, and Trexler (1973) commented, others who have applied different methodologies like method of collecting data, failed to obtain results supportive of the original findings.

Although these issues will never be satisfactory to everyone, there is an absolute method of application emerging from Herzberg's theory and its implementation in the organization. For instance in relating it to the retention of the employee, Herzberg's theory contributes an important idea, that the nature of the job, such as pay, challenging work, and flex-time, is extremely important in maintaining high levels of job satisfaction and as a result employees are less likely to leave. Herzberg's methodology of allowing subjects to state episodes of "satisfaction" and "dissatisfaction" is worthy of consideration.

In testing the theory as a predictive tool for job turnover, Karp and Nickson (1973) found that their sample of black working poor (n = 50) significantly perceived motivators as a source of satisfaction and hygiene factors as a source of dissatisfaction. They also found that the absence of motivators on the job resulted as a significant factor in job turnover. However, we should not be comparing results obtained from a variety of studies since the subjects were different, they had different professions, they worked in different environments, and were subjected to different types of organizational control. Thus it is not surprising to find different "motivators" and "hygiene" factors in every study.

For example in French, et al., (1973), they used an oral and written instrument to identify factors. The interviewee initiated the oral method as he or she gave factors that
were "good" and "bad." In the written questionnaire method, the subjects were given a set of 44 alternatives representing the twelve factors (taken from oral interviews). The problem of matching both responses becomes an issue when subjects are introduced to "other" factors that previously had not been mentioned. Nevertheless, it seems that numerous studies including Herzberg et al., (1959) resulted in very similar factors as shown in Table 2.

Table 2

*Herzberg's Motivators and Hygienes*

<table>
<thead>
<tr>
<th>Motivators</th>
<th>Hygienes</th>
</tr>
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<tbody>
<tr>
<td>Achievement</td>
<td>Company policy</td>
</tr>
<tr>
<td>Recognition</td>
<td>Administration</td>
</tr>
<tr>
<td>The work itself</td>
<td>Technical supervision</td>
</tr>
<tr>
<td>Responsibility</td>
<td>Salary</td>
</tr>
<tr>
<td>Advancement</td>
<td>Interpersonal relations with supervisor</td>
</tr>
<tr>
<td>Growth</td>
<td>Working conditions</td>
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<tr>
<td></td>
<td>Personal life</td>
</tr>
<tr>
<td></td>
<td>Relationship with subordinates</td>
</tr>
<tr>
<td></td>
<td>Relationship with Peers</td>
</tr>
<tr>
<td></td>
<td>Security</td>
</tr>
<tr>
<td></td>
<td>Status</td>
</tr>
</tbody>
</table>
McClelland's Needs Theory

McClelland’s theory (1961) hypothesizes that an individual’s motivated behavior is in large degree a role of the strength of various needs (Achievement, Affiliation, and Power) at a given point in time. As per McClelland (1961, pg. 160), he defines need for affiliation as “establishing, maintaining, or restoring a positive affective relationship with another person.” He also defined the need for power as, “a concern with the control of the means of influencing a person” (p. 167). Finally, McClelland (1961) defines the need for achievement as the desire for performing challenging tasks, in becoming successful and in obtaining the satisfaction that comes from accomplishing a challenging goal.

While Maslow’s and Herzberg’s work was strongly developed through the American theoretical background, McClelland’s need theory (1961) is based on a classical study conducted across different cultures. He analyzed the three needs within various cultures and related evidence of differing levels of motivation, especially need for achievement, to subsequent levels of productivity across cultures. Thus, McClelland’s contribution did highlight the existence of different levels of types of motivation in various cultures.

The method McClelland (1961) developed and used in determining an individual’s three needs is a projective technique called Thematic Apperception Tests (TATs). An individual is told to write an essay describing what they think is occurring in an ambiguous picture. The essay reflects needs the individual desires. McClelland’s (1961) presented proof that the need for achievement is a “trait” that is developed in early childhood and persists throughout an individual’s lifetime. McClelland has also shown that individuals’ levels of achievement motivation in a society are related to that society’s
economic status. However, how has McClelland’s theory fared in investigating the three needs in other countries with different levels of economic growth?

In attempting to generalize the theory across different cultures, Ronen (1986) mentions Hines (1973, 1974), and Melikian, Grinsberg, Guceloglu, and Lynn (1971) to provide empirical support for this concept. Utilizing a survey type of instrument, Melikan et al., (1971) gave evidence that the theory explains needs in Turkey and Brazil, two developing countries at time of study. Coincidently, Iwawaki and Lynn (1972) also proved the effect of the theory in more developed countries such as Britain and Japan. The result of this study questioned McClelland’s hypothesis that individual needs for achievement relate to a society’s economic status.

Other studies followed, Krus and Rysberg (1976), using TAT and survey methods, found that Czechoslovakian executives had half the need for achievement than their American counterparts; yet the economic development of both countries was not that much different. Thus it was apparent that the country you come from does not establish a prerequisite for what level of need for achievement a person will possess. The reason for introducing this particular problem with McClelland’s theory is that there was some evidence to support the belief that individual needs are not identical across different cultures. Achievement motivation is developed differently and takes different forms in different countries (Bhagat & McQuiad, 1982). For some cultures, need for affiliation is high and thus the achievement motive may be triggered as the need to belong and to cooperate with others.

In summarizing this section, a general understanding of need theories was necessary in attempting to predict how people may react to certain inducements that are
offered. While surrounded by controversy, Maslow’s needs theory along with the other theories have a significant place in needs studies. It is apparent that an individual’s needs are varied and desired differently in different countries. Thus, methods to motivate workers should be consistent with their needs and appropriate rewards (incentives) also must be appropriately developed to satisfy their specific needs. McClelland’s, Herzberg’s, and Maslow’s theories help us understand the possible attraction to an organizational setting as well as the reason to remain. Thus, needs are considered important sources and explanations of motivation in the work environment. In illustrating the importance of needs, the next section presents the massive amount of studies on needs that have been conducted in domestic and international locations.

Needs Research

Even though this study will focus in the in-depth investigation of inducements in determining individual needs from another country, past Western-based research will be examined in order to serve as guides in the planning and direction of proposed research. A thorough review of domestic and international needs research and how the researchers attempted to discover individuals’ needs as well as the findings will be discussed in the next section.

Domestic Needs Research

Graen, Dawis and Weiss (1968) used the Theory of Work Adjustment (Dawis & Lofquist, 1984) to investigate if the pattern of preferences for a particular job result affects the relationship between need for an outcome and satisfaction for that outcome. Graen et al., (1968) used industrial scientists as their sample. The Minnesota Importance Questionnaire and Minnesota Satisfaction Questionnaire, developed to measure
vocational needs was given. The scientists rated the degree of importance and satisfaction of various aspects of their job. Dimensions tested were authority, company goals, company image, company policies, security, social status, supervision, and working conditions. Based on the results, two “need” types were identified. The study found that among the 113 industrial scientists there appeared to be at least two need groups for which the relationship between need level and satisfaction on several dimensions was significantly different. Based on the results, the two groups differed mainly on intrinsic and extrinsic outcomes. Based on Maslow’s Theory of needs, one group viewed the organization merely as a means to achieving their lower level needs, and the other group viewed the company as the source of their higher-level achievements and rewards. The importance of this study was the introduction of need types. The main point being that individuals, working in the same job, with similar working conditions and similar compensation have different sets of needs. Consequently they will not necessarily exhibit the same level of job satisfaction.

Johnson and Marcrum (1968) studied the degree of individual need fulfillment of career US Army officers at three different levels of the organizational hierarchy. Using Maslow’s hierarchy as a guide, they assessed deficiencies in need fulfillment by determining to what extent an incentive is provided for each need versus the extent to which an incentive should be provided for each need. Based on the results, the highest-ranking officers (Captains) were most dissatisfied with the “prestige” while the majors and colonels were most dissatisfied with the amount of authority they were permitted to exercise in command positions. The results also indicated that the greatest deficiencies existed in the self-actualization and esteem categories. An important note worth
mentioning is that perceived deficiencies in need fulfillment tended to increase at the lower levels in the organization hierarchy. This classic study of need fulfillment initiated the assumption that lower-level workers do not have similar needs as higher levels in the hierarchy. However, incentives provided by the organization for need fulfillment tend to be directed to all employees, with the idea that lower-level workers have similar need to higher-level workers.

Ivancevich (1969) compared the needs and satisfaction of needs of domestic and overseas American managers. Being the first study of its kind, Ivancevich (1969) used the need satisfaction questionnaire used and developed in Porter’s (1963) study. Adapted from Ivancevich (1969, p. 275); and developed by Porter (1963), the questionnaire corresponds to the Maslow-type (1943) need framework as shown in Table 3.

Top managers (n=78) and middle managers (n=49), working overseas were given the survey answering the following questions for each need: 1) How much is there now?, and 2) How much should there be? The amount of need satisfaction experienced by each subject was determined by subtracting the response of question 1 from the response of question 2. Results were that top managers reported more satisfaction than middle managers in 11 of 12 need items. Also overseas managers reported more satisfaction in 8 of the 12 item scores. They also perceived more esteem need satisfaction than domestic managers. Overall analysis showed that autonomy and self-actualization needs “appear to be the most critical area of need fulfillment deficiency at all levels of management for both domestic and overseas American executives” (Ivancevich, 1969, p. 278).
Table 3

*Category of Needs*

<table>
<thead>
<tr>
<th>Category</th>
<th>a)</th>
<th>b)</th>
<th>c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security</td>
<td>the feeling of security in my management position</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social</td>
<td>the opportunity in my management position</td>
<td>the opportunity to develop close friendships in my management position</td>
<td></td>
</tr>
<tr>
<td>Esteem</td>
<td>the feeling of self-esteem a person gets from being in my management position</td>
<td>the prestige of my management position inside the company (that is, the regard received from others in the company)</td>
<td>the prestige of my management position outside the company (that is, the regard received from others not in the company)</td>
</tr>
<tr>
<td>Autonomy</td>
<td>the opportunity for independent thought and action in my management position</td>
<td>the authority connected with my management position</td>
<td>the opportunity, in my management position, for participation in the setting of goals</td>
</tr>
<tr>
<td>Self-Actualization Needs</td>
<td>the opportunity for personal growth and development in my management position</td>
<td>the feeling of self-fulfillment a person gets from being in my management position (that is, the feeling of being able to use one’s own unique capabilities, realizing one’s potential)</td>
<td>the feeling of worthwhile accomplishment in my management position</td>
</tr>
</tbody>
</table>

Jurgensen (1978) conducted a longitudinal study encompassing 30 years from 57,000 job applicants at a particular gas company. Applicants were asked to rank the importance of ten job characteristics to themselves (see Table 4), and then to rank them again in importance to “others who are in your type of work” (Jurgensen, 1978, p. 268.)
His results found drastic differences in preferences such as advancement, pay, and supervision. He also found differences between men and women and in the preferences reported for one’s self and those attributed to others. ‘Security’ was found to be most important for men and ‘type of work’ was ranked as most important for women.

As far as job preference attributed to other applicants, both men and women ranked ‘pay’ to most important to other individuals in their type of work. This ranking differed from their self-preferences. Over the 30-year period (1946-1975), security was the most important job factor for men and type of work for women.

Table 4

<table>
<thead>
<tr>
<th>Job Preferences</th>
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<tr>
<td>------------------</td>
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<tr>
<td><strong>Job Factors</strong></td>
</tr>
<tr>
<td>Advancement</td>
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<tr>
<td>Benefits</td>
</tr>
<tr>
<td>Company</td>
</tr>
<tr>
<td>Co-workers</td>
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<tr>
<td>Hours</td>
</tr>
<tr>
<td>Pay</td>
</tr>
<tr>
<td>Security</td>
</tr>
<tr>
<td>Supervisor</td>
</tr>
<tr>
<td>Type of Work</td>
</tr>
<tr>
<td>Working conditions</td>
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</tbody>
</table>

Kovach’s (1987) investigation included what workers value from their jobs and what their supervisors think that workers value. He utilized a list of “job reward” factors developed by Jurgensen (1947). Factors were developed using Maslow’s and Herzberg’s...
categories. Respondents included two major groups: employees and employers. The employee sector was divided in this manner: blue-collar unskilled, blue-collar skilled, white-collar unskilled, white collar skilled. The supervisor sector was divided by whom they supervised equal to the previously mentioned categories. The results indicated that employers have an inaccurate perception of what motivates their employees. They continually place wages at the top of their hierarchy. McClelland (1961) explains that managers are "high achievers" who are interested in concrete measures, money, that reflects how well they have performed. Employees; however, ranked "interesting work" as first on their list, with wages placing fifth. This study shows the misleading notion that employers know what employees want out of their jobs. Another problem with this study is that employees/employers were told to rank the items on a prepared list that was first introduced by Jurgensen (1978) in 1945 and used in his classic study of job preferences. No changes were made to the list in studies conducted in 1945 (Jurgenson, 1947), 1975 (Jurgenson, 1978), 1980 (Kovach, 1980), or 1986 (Kovach, 1987). Since it is understood that employees do have or need obviously different job preferences, researchers need to amend instruments utilized.

Using graduate students as their sample, Feldman and Arnold (1978) examined the importance of three job factors and three organizational factors. Based on the results, pay and fringe benefits were the most important factors in the position choice situation followed by use of skills and abilities, responsibility and leadership and autonomy and independence, with flexibility of working hours and types of services the organization provides the least two important factors. Thus quite different results from Jurgenson (1978) and Kovach (1987), Feldman and Arnold (1978) retrieved back to the classical
theory of motivation, money as the primary need. These results need to be carefully accepted, since sample used were graduate students who were to graduate soon prospecting for higher salaries.

International Need Studies

In the international realm, need investigation has also been conducted. For instance, Slocum, Tapichak, & Kuhn (1971) conducted what was to be the first empirical study using operative (non-supervisory) employees in two countries, US and Mexico. Prior to this, cross-cultural studies were limited to upper-level managers and supervisors (Haire, Ghiselli, & Porter, 1965; Ivancevich, 1969). Slocum et al., (1971) specifically examined the effect of culture on operatives' need satisfaction. Using the Porter need satisfaction questionnaire (1961) based on Maslow's theory of needs, workers from both countries were asked to rate "characteristics or qualities" related to their job (Slocum et al., 1971, p. 438). For each item (12 in all), the workers were asked to rate his or her answer on a seven-point scale answering the following: How much of the characteristic do you think should be connected with your job?; How much of the characteristic is there now connected with your job?; How important is this characteristic to you? The first question's rating was to the measure the worker's expected level of rewards. The second was to measure need fulfillment, and the third was taken as an indicator of importance placed on each item as shown in Table 5. The results indicated that the U.S. workers were "generally much less satisfied than their Mexican counterparts" (Slocum et al., 1971, p. 439).

Differences were found in the average need importance scores in all 12 need items. The Americans, stated self-actualization needs as not very well satisfied ranking it
fourth; whereas, the Mexican workers considered self-actualization need to be highly satisfied and ranked it first. Social need was ranked first by the US workers and third for the Mexicans. In regards to importance, security need was ranked as most important in both countries and the self-actualization need came in second.

Table 5

Need Categories and Items

<table>
<thead>
<tr>
<th>Security Need</th>
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<tbody>
<tr>
<td>a) security in job</td>
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<table>
<thead>
<tr>
<th>Social Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) opportunity to help people</td>
</tr>
<tr>
<td>b) opportunity for friendships</td>
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</table>

<table>
<thead>
<tr>
<th>Esteem Needs</th>
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</thead>
<tbody>
<tr>
<td>a) feeling of self-esteem</td>
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<tr>
<td>b) prestige inside company</td>
</tr>
<tr>
<td>c) prestige outside company</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Autonomy Needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) opportunity for independent thought and action</td>
</tr>
<tr>
<td>b) authority in position</td>
</tr>
<tr>
<td>c) opportunity to participate in goal setting</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th>Self-Actualization</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) opportunity for growth and development</td>
</tr>
<tr>
<td>b) feeling of self-fulfillment</td>
</tr>
<tr>
<td>c) feeling of accomplishment</td>
</tr>
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<table>
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<tr>
<th>Job Satisfaction</th>
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Interestingly, social needs was the least important to the Mexicans and third most important to the Americans. This study introduced the concept that operatives' (lower-level workers) responses differ from managers based on the same need satisfaction questionnaire.

In addition, the data from these two groups of operatives differ from Maslow's hierarchy of needs and results from managers' need as stated by previous studies (Haire, Ghiselli, & Porter, 1965; Ivancevich, 1969). More importantly, these results indicate "culture significantly affects need satisfaction and importance for operative employees" (Slocum et al., 1971, p. 443).

However, methodological issues play a major part in validating this and other cross-cultural studies. Slocum et al., (1971) merely translated an U.S. based questionnaire, and distributed it to plant employees in Mexico. This action defies all procedures related to conducting cross-cultural research. This topic will be thoroughly discussed in a later section.

Clark and McCabe (1972) studied the importance Australian managers placed on the various needs they are attempting to satisfy through their jobs and the extent to which the needs are being satisfied. Utilizing the same questionnaire as in Slocum et al., (1971), based on Maslow’s need classification system initiated by Porter (1961), the job characteristics were exactly like previous studies (Slocum et al., 1971) with the exception that an additional characteristic was entered in the "Autonomy Need," that of "Opportunity for participation in methods and procedures".

For each item (13 in all), the manager was asked to rate his answer on a seven-point scale answering the following: How much is there now?; How much should be
there?; How important is this to me? Similar to a study replicated (Haire, Ghiselli & Porter, 1963), Australian managers viewed self-actualization as the most important need.

Like the previous study, all managers including Australia, self-actualization was the least satisfied. This was followed in order by autonomy, social, security, and esteem. According to the authors of the study, Maslow's classification of needs appears to "fit the human condition" (Clark & McCabe, 1972, p. 632). Nevertheless, there were many disparities with lower-level needs among the fifteen countries. Similarities were clearly seen among the Anglo-American countries: England, US, and Australia.

Blunt (1973) replicated an earlier study (Clark & McCabe, 1972) conducting a study using managers from South Africa. Compared to previous studies of other managers surveyed, Blunt's (1973) study found that South African managers were much less satisfied than managers from USA, Australia, Denmark, Germany, France, and Italy. In addition, security needs caused more dissatisfaction than social ones. As Maslow's theory predicted, South African managers attached the greatest importance to self-actualization needs. Interestingly, South African managers did not differ from managers in other countries in regard to the ordering of need importance.

Howell, Strauss, and Sorenson (1975) conducted a similar study to Blunt (1973) and Clark and McCabe (1972) using middle managers in Liberia as their sample. Security need had the largest dissatisfaction as well as the highest need importance score. The results of this study indicate that need importance rankings are similar to those in earlier studies; however, need satisfaction ranking scores are not.

Reitz (1975) tested Maslow's hierarchy of needs hypothesis that "higher order" needs are more important than "lower-order" needs. Using blue-collar workers at
twenty-six industrial plants across eight countries—United States, Mexico, Puerto Rico, Venezuela, Japan, Thailand, Turkey, and Yugoslavia, need for self-actualization was ranked as most important across all twenty-six plants. In addition, in each of the eight countries, more educated workers tended to rank security needs as less important than did their less educated workers. Results have to be cautiously viewed since the same survey, the Need Preference Inventory developed by Beer (1968) was used in all eight countries. This instrument consists of 30 items and each item is related to one of five categories of needs suggested by Maslow (1943). This study did not consider the importance placed on including other items that may be deemed important to the particular culture being investigated.

In response to a previous study that showed that managers from India attached moderate to high importance to higher-level needs (Haire et al., 1963), Jaggi (1979) conducted an empirical study to invalidate the earlier study. His hypothesis for the study: Indian managers attach greater importance to lower order needs than higher order needs. Utilizing a modified version of Porter’s questionnaire based on Maslow’s need hierarchy, Indian managers were asked to indicate what they considered to be their most important reason(s) for working in the current firm. The hypothesis was rejected due to results indicating that neither the higher-order nor lower-order needs are likely to be dominant for the sample. The Indian managers ranked the needs in the following order: autonomy, physiological, esteem, social, and security. However, a problem found in the study creates a ranking problem, thus results should be viewed cautiously. To facilitate codification, authors assumed that if a respondent identified levels four and five (upper-level needs) as his highest level of need, then needs at lower levels were fulfilled and his
need expectation had reached the higher order level. This assumption is one of the major flaws with Maslow's hierarchy as indicated by motivation literature (Wahba & Bridwell, 1976; Lawler & Suttle, 1972; Wanous & Zwany, 1977). It states that higher level needs will be pursued only if lower level needs have been satisfied.

In investigating need satisfaction among 248 Mid-eastern managers, Badawy (1980), utilized Porter's need satisfaction instrument that contains thirteen items categorized into a Maslow-type hierarchy of needs and relating to general characteristics of the respondent's work environment using a seven-point Likert type rating scale. The job characteristics are exactly like previous studies (Slocum et al., 1971; Clark & McCabe, 1972; Blunt, 1973) with the exception that an additional characteristic was entered in the "Autonomy Need," that of "Opportunity for participation in methods and procedures". Findings resulted in that Mid-eastern managers were highly dissatisfied with the 'opportunity to participate in setting goals’. Maslow’s (1954) need of autonomy was considered the least satisfied need, followed by self-actualization, esteem, social, and security needs. Self-actualization was considered the most important need and it was also the second most dissatisfied need. The need hierarchy is clearly not cross-culturally based and that culture affects the hierarchy of needs for managers (Badawy, 1979).

As mentioned earlier, each international study conducted reveals some flaws in the methodological areas. Considering that research conducted was in the 1960s to late 1970’s, perhaps ignorance and lack of cross-cultural understanding is to blame as well as lack of cross-cultural methodological literature. Despite of these explanations, as shown in the following paragraphs, current research has no excuse as to not applying cross-cultural research methods.
Silverthorne (1992) initially takes the view of "the strong influence American theoretical work in the area of motivation" specifically citing Maslow's (1970) hierarchy of needs. Despite this cultural view, Silverthorne (1992, p. 1634) simply replicated earlier research (Hersey & Blanchard, 1977) comparing the ranking of ten job attributes by management and workers. Even though this study compared findings among three countries, United States, Russia, and China (Taiwan), no changes were made to the job attributes as given in Table 6.

Table 6

*Job Attributes*

| a. Full appreciation of work done |
| b. Feeling "in" on things         |
| c. Sympathetic help on personal problems |
| d. Job security                  |
| e. Good wages                    |
| f. "Work that keeps you interested" |
| g. Promotion and growth in organization |
| h. Personal loyalty to workers   |
| i. Good working condition        |
| j. Tactful discipline            |

The results indicated an "improved" accuracy between managers' perception of factors that motivate their employees and the factors that workers report for themselves. Comparing it to earlier studies, the supervisor's samples were clearly "less in touch" with their subordinates' rankings. Nevertheless, employees' first attribute was 'full appreciation of work done,' where managers' perception was 'job security'. Russian
managers' rankings had a large discrepancy from subordinate’s rankings. Russian
managers perceived the workers' biggest concern to be 'help on personal problems'.

However, employees ranked 'promotion and growth in organization' as most
important with the managers' perception being ranked eight out of ten attributes. In the
sample from China, the correlation is strong in a positive direction. Chinese managers'
perception of employees’ preference was ‘full appreciation of work done’ whereas
employees ranked this item fourth. Chinese employees rated ‘job security’ as first on
their job preference list, whereas as managers rated this item as sixth. This study
highlighted significant differences both in motivational preferences impacting various
cultures and also the discrepancies between managers and employee in their perceptions
(Silverthorne, 1992).

Fisher and Ya Yuan (1998) followed Kovach's studies (1987, 1995) and
Silverthorne (1992) in examining Chinese employees' job preferences and their
managers' belief of employee preferences. Chinese employees (all three levels: lower-
level, supervisors, managers) ranked 'good wages' as most important followed by 'good
working conditions' and 'personal loyalty from the boss and organization'. Expatriates
ranked 'interesting work' as first on their list. Unlike Kovach (1987) results, Fisher and
Ya Yuan's (1998) study reported that Chinese managers accurately ranked job attribute
preferences similar to their employees. Interestingly, expatriates employed at the same
organization were much less accurate in ranking local subordinate preferences.
Unfortunately, Fisher and Ya Yuan (1998) to facilitate comparison purposes, used the
same list used by Jurgenson (1947, 1978), Kovach, (1987, 1995), and Silverthorne
(1992). They did; however, feel that this particular list “may not include all of the most
important job attribute for Chinese employees” (Fisher & Ya Huan, 1998) thus they added one other currently important benefit: employer assistance with housing. Thus, this study did consider the importance placed on including one other item that may be deemed important to the particular culture being investigated. However, to facilitate comparison with other studies, Fisher and Ya Huan (1998) omitted the additional item (housing subsidy) for assessment purposes. It is important to note that the authors did state that the “one extra item…employer assistance with housing, was seen as extremely relevant and important to these respondents” (Fisher & Ya Yuan, 1998, p. 526).

In concluding this section, recent as well as classic studies clearly give an indication that utilizing U.S. based surveys does not give accurate results of employees’ needs in another setting besides the U. S. In addition, simply replicating the survey or using the same questionnaire or listing is considered inappropriate methods in cross-cultural or international research (Child & Tayeb, 1983; Adler, 1983). To the author’s knowledge, there is no study that attempts to correctly discover what are the specific needs that employees from another country want to satisfy. The next section discusses thoroughly the limitation of generalization when applying needs theories to other cultures.

Global Applicability of Needs Theories

In the global arena, managers must avoid imposing domestic American management practices and theories on their international business practices (Adler, 1997). Since motivation and work behavior issues are not restricted to cultural boundaries, the effect of motivational aspects on an individual’s job performance needs to be reexamined. Tannebaum (1980), discussed the difficulty surrounding the analyzing...
cross-cultural research, stated that even the assumption that members of an organization are motivated by the organization's rewards and incentives may not apply in all cultures.

Along these lines, Hofstede (1980) argues that many Western terms (for instance, "achievement") cannot even be translated into other languages, thus an indication of their lack of appropriateness for use in those cultures. An example of this is in McClelland's (1961) cross-national study, where he measured motivation for achievement to be higher in the United States than in Turkey. The measure captures what appears to be a U.S. concept of achievement in terms of material and career success. Country to country, the cultural differences can affect job performance (Silverthorne, 1992). In the international spotlight, research has focused on comparing motives between American and Chinese employees (Fisher & Ya Yuan, 1998), as well as U.S., Russia, and the Republic of China employees and managers (Silverthorne, 1992).

In regard to needs, international studies include Reitz's (1975) examination of the importance of five categories of needs among workers in eight countries (U.S., Mexico, Puerto Rico, Venezuela, Japan, Thailand, Turkey, and Yugoslavia), Badawy's (1980) investigation of Mideastern managers' needs, Stephens, Kedia, and Ezell's (1980) comparative study of U.S. and Peruvian managers, Jaggi's (1979) study of Indian managers' need importance, and Buera and Glueck's (1979) need satisfaction study of Libyan managers. To date, there is limited research that looks specifically at what actually attracted current employees in selecting the organization they are currently in as well as what aspect of the organization or job motivates them to remain in their current position (Johnson & Marcrum, 1968). As a result, in respect to using inducements in the
attraction and retention of potential and current employees, determining which needs individuals are trying to satisfy becomes important and worthy of investigation.

In sum, research involving these theories concentrated their applicability to current employees. Their focus was that in order to motivate a current employee to contribute effective inputs to a job and perform at a high level, their supervisor must determine what needs the employee is trying to satisfy at work and make certain that the employee receives outcomes that help satisfy those needs. Thus, most studies had employees rank job attributes in order of most important (Jurgensen, 1978; Feldman & Arnold, 1978), or asking employees what motivates them and comparing it to what managers thought their employees would say (Kovach, 1987).

In regard to international applicability, Hofstede (1980) reports the development of a “motivational map of the world” that does not support the idea of a universal order of needs. Redding (1980) also questions the applicability of Western-derived theories that focus on the individual (through the esteem and self-actualization concepts) to non-Western cultures in which the focus is on affiliation and relationships.

Thus, organizational strategies, focusing specifically to attraction and retention, will have different effects in different countries. These differences may not only affect the initial attraction but also affect an individual’s turnover intentions. Organizations must be sensitive to the real needs of potential applicants and attempt to monitor them continually in order to attract and eventually maintain lower turnover rates.

The following section will present an overview on culture. As will be explained, culture may be the underlying factor in explaining which inducements satisfy what needs.
Culture

In this section, discussion will focus on cultural issues that offer support on the belief that individuals from a different country may have unique needs or different dimensions of needs than demonstrated by needs theories. Reviewing need literature, it has been revealed that although needs motivate employees, an individual’s needs and their importance vary from country to country. The significance of an individual’s needs is influenced by their values and beliefs in a given culture (Ronen, 2001). These needs are also constantly changing by present working conditions. In addition, the specific country’s culture must be evaluated prior to this assessment in order for maximum success in the international arena to be achieved. For these reasons, multinational corporations cannot simply transfer U.S. management practices (i.e. reward systems, incentives, benefits) to subsidiaries without taking into account the local setting and culture. Thus, in the following section, focus will be on the culture of another country, Mexico, in relation to individual needs satisfaction.

Mexico and its Culture

Cultural dimensions by Hofstede (1983) as well as socio-economic status are used here as the framework in explaining the Mexican culture and the key factors that may explain why some needs are more important than others. Culture may be the underlying factor in the discovery of their needs. Cultural factors that will be discussed are collectivism, socio-economic status, masculinity/femininity, socio-economic status, and uncertainty avoidance.
Collectivism and Mexican Culture

According to Hofstede (1983), Mexico is shown as being a collectivist country where the “group” (family) is preferred over individualistic roles. Mexican tradition greatly displays “familistic” values: Mexican cultural principles of male dominance (machismo) and age-based authority in decision making are considered the core of Mexican families. The Mexican household is rooted in an intricate extended system of families and friends, based entirely on their collectivist beliefs. Mexican families are also said to be familistic in that solidarity arrangements are not focused on the nuclear family. Instead, the family of origin and the “compadre” ties are supposed to be more important to Mexicans (Teagarden, Butler, & Von Glinow, 1992). Extended families have been the prevailing form of family arrangement in Mexico. It is common for grandparents and other relatives to live with an extended Mexican family. Relatives may also include immediate family members, distant relatives, close family friends (compadres), long-standing neighbors, in-laws, and god-parents (padrinos). In addition, nuclear households, even though they are physically distanced and not part of the household production, remain part of the extended web of family. Mexican families assist extended family members with monetary assistance like lodging, work, money; as well as, non-monetary, like emotional support, advice, or reassurance. As a result, financial responsibilities are shared among family members, thus individual concerns are overlooked for the sake of the family.

Masculinity/Femininity and Mexican Culture

In the Mexican family, “familismo” describes family pride, loyalty, and sense of belonging. The need for survival strengthens the familial bond, because the problem of
one becomes a problem for the entire family. Despite the collectivist view of "all for one, and one for all," a distinct definition of roles is in existence within the family, with an authoritative husband-father who ideally is the breadwinner and a submissive wife-mother who cares for the home and rears the children (Kras, 1995). This statement describes the Mexican culture's belief in Mexican male superiority (machismo). Hofstede (1983) labeled this dimension: "masculinity versus femininity" and found Mexico to be "masculine" with male and female roles clearly delineated in society. In Mexico, machismo does not refer only to ideas, but also to morals and values bestowed on a male (Mirande, 1997). Macho men believe that nature has given authority to them and they act accordingly. This authority makes it "customary" for men and women to believe that "a woman should not work," "that she should obey," among other machismo attitudes (Mirande, 1997). The economic and intellectual dependence to the male, assigns a woman a particular role that places her in an inferior position in Mexico's society. In primary research with 105 Latino men, Mirande (1997) found that Latino men "stressed the importance of being responsible and providing for the needs of the family" (Falicov, 2001, p. 323).

In Mexico, the machismo culture represents not only a view, but a way of life. In masculine dominant societies, males are expected to be more aggressive and controlling than women. This includes the total control of financial matters. As stated earlier, Mexican women are the keepers of the home, but they may make only small daily decisions, depending entirely on the husband for money. Even when Mexican women are employed outside the home, the man is in charge of all major financial decisions, and the women is left to fulfill her full-time responsibilities at home as well as at work. With
the established roles clearly defined in the Mexican family, there appears to be no conflict concerning the issue of money and power (Falicov, 2001). But conflicts may originate when a Mexican male cannot provide for the family, thus losing his position of respect and authority in the family. In the meantime, the woman out of necessity may seek work outside the household making the adjustment for both partners difficult (Falicov, 1998). The male may exhibit more machismo, or aggressive dominant behavior, and upon finding suitable work may force the woman to quit her job (Guendelman, Samuels, & Ramirez, 1998).

**Power Distance and Mexican Culture**

Hofstede (1983) described the concept of “power distance” as the index that indicates that people in a society are unequal. In the workplace, Mexicans workers clearly see that inequality between them and their manager. Even though they know that their boss has power, they want to be treated with respect by employers and coworkers. There have been cases where Mexican employees leave their positions due to employers’ failure of respect or verbal abuse towards the worker (Falicov, 1998). Once respected, Mexicans create a strong emotional relationship with their supervisor. Mexican workers respect their managers and see them as “paternal” often seeking their advice on personal issues and dealing with other institutions (Kras, 1995; Falicov, 1998; deForest, 1981, Schuler, Jackson, Jackofsky, & Slocum, 1996). Mexican workers see their boss as the individual that respects them, looks for their best interest, as well as the source that provides for the family’s well-being (Kras, 1995). The Mexican worker worries about how work is going to impact family time in pursuit of higher productivity. Thus, the Mexican worker may frown upon the idea of working longer hours or working during
undeclared religious holidays. Managers have often instilled changes to the workplace environment with the purpose of increasing motivation and productivity; however, they do so with no inference about the goals and outcomes valued by the workers. Mexican workers perceive outcomes differently. Some workers may work simply for the money involved. Others work for the status and respect given to them by reason of their employment. Still others may work just to bring meaning to their lives.

Socio-Economic Levels and Mexican Culture

In recent statistics, Mexico's population is 97,483,412 where 33,730,210 are employed. In addition, of the employed population 17,201,178 (51%) earn less to 2 times the minimum wage (INEGI, 2002d). As far as education level, the percentage of population (15 years and over), without instruction and who have not completed elementary school is approximately 30% and the average schooling of the population aged 15 years and over is 7.6 (INEGI, 2002c). Considering these facts, many Mexican assembly workers belong to the lowest socio-economic level.

As stated by Falicov (1998), poverty often strengthens the Mexican family. The exchanging of money serves also as a way of enhancing the interaction with family or friends. Money earned among family members is often combined to be used in various ways. As stated earlier, when the extended family lives in close physical distance, there lies the opportunity to share resources daily. However, this idea is also apparent when family members are not in close proximity. Even though monies may be low, the Mexican family members send financial support for elderly parents left behind in other parts of the country. During initial stages of migration, children are sometimes left with
their grandparents. This action increases the already present burden in providing financial assistance for relatives physically not in the immediate household.

Mexicans value time and leisure with family, thus money is seen as contributing to the enhancement of family-shared concepts like picnics or watching television together (Falicov, 2001). Based on these issues, the Mexican’s socio-economic status coupled with collectivistic views brings different beliefs and attitudes in the workplace.

Uncertainty Avoidance and Mexican Culture

Defined as “uncertainty avoidance” by Hofstede (1983), the manner that Mexico deals with the concept of uncertainty and risk avoidance, characterizes them fairly high in this dimension. In Mexican culture, familiarity and security become apparent when emphasis is placed on upholding traditions and preserving family values as well as the attitude of living for today. Mexicans seek present satisfaction and prefer “known” results to “unknown” future outcomes.

In summary, the purpose of addressing foundations of culture is to be knowledgeable and equipped to diagnose a culture. Upon understanding a specific culture can we attempt to understand the impact of culture on a particular management practice in this case, organizational attraction and retention strategies. Societies differ not only in their motivational patterns, but also in values and norms. Thus, the particular need of members to belong, to work, and to advance in the organization may be different in different places, and the problem of motivating members will differ from one society to another. For the Mexican culture, work is considered a “necessary evil” (Kras, 1995, p. 43). While the US culture view work as a reward based on their work production, the Mexican culture see work as necessary to live in order to enjoy worldly pleasures with
family and friends (Kras, 1995). Thus, work is seen entirely different from the view of
the Mexican worker and as a result may cause difficulties in organizational setting (Hulin

Like Hulin and Triandis (1980, p. 338) stated, "...it is misleading to assume that
all workers want "X" out of their jobs-whatever "X" is". This statement cannot be
emphasized enough when dealing with workers from Mexico. This observation supports
the investigation into what exactly Mexican workers need in order for an organization to
implement the inducements necessary to attract and retain workers. The next section will
examine Mexico's maquiladoras: an overview, HRM literature, and attraction and
retention issues.

Mexico and Maquiladoras

As a major partner in the North American Free Trade Agreement (NAFTA) and
its growth of the maquiladora industry, Mexico has been an "attractive" location for
multinational firms. Due to the growth of multinational corporations (MNCs) located in
Mexico and the limited research especially in the area of HRM, innovative research in
Mexico provides an opportunity to serve as a viable contribution to both academics as
well as practitioners. In the following sections, an introduction to the maquiladora
industry, followed by a review of the HRM literature specific to maquiladoras will be
discussed.

The Maquiladora Industry

Mexico's establishment of maquiladoras was mainly to promote foreign
investment and jobs in the poverty-stricken country. Maquiladoras (or "maquilas") have
become the main approach of merging Mexico's economy with the economy of the rest
of the world (Kopinak, 1996; Carrillo & Contreras, 1993). With the North American Free Trade Agreement (NAFTA) in full force, maquiladoras in Mexico have rapidly risen. Since their introduction into Mexico, the maquiladoras had maintained high growth rates until the year 2001. In 1982, there were six hundred plants employing 122,799 persons (workers, technicians and administrative employees), and in January 1998, four years after the signing of NAFTA, nearly 3,200 plants employed 958,135 persons. Over the course of the year 2001, the number of operating maquiladoras plants fell from 3,703 to 3,450, a net loss of 253 plants-facilities that were closed permanently or at least temporarily employing 1,081,526 employed production workers down from 1,214,541 (Maquila Portal, 2002a; INEGI, 2002). However, recent figures (INEGI, 2002, April 2002) show an increase in the number of maquiladoras to 3618, with a decrease of workers to 1,056,489. Despite the increasing lay-offs and plant closures (Maquila Portal, 2002b), many of the manufacturers are beginning to show positive sales numbers that indicates that the situation is improving (Financial Times Information, 2002). Large multinational corporations are even expanding current operations (Maquila Portal, 2002c). As a result, companies will seek to hire workers again. This action indicates the increasing concern about employment equity and cultural equality, especially in the functions maintained by the human resource department regarding attraction and retention issues (Cattaneo, Reavley, & Templer, 1994).

HRM research in maquiladoras

Regarding HR topics, the research has been minimal but major advances have been made. Contributing to the literature, Teagarden, Butler, and Von Glinow (1992) introduced the HRM challenges in relation to maquiladora workers employed in Mexico.
Some key issues discussed were the following: young and inexperienced workers, cross-culture elements, Mexico’s labor law, and coping with collectivist attitudes by workers. Teagarden, et al., (1992) also gave prescriptions toward specific HR activities (recruitment, selection, training, compensation, and performance appraisal) in managing Mexican maquiladora employees. Respectfully, Martinez and Ricks (1989) did perform some empirical work related to the degree of influence U.S. multinational firms have over their Mexican counterparts’ HRM decision; however, no mention of specific HR activities were stated. With the implementation of NAFTA, new challenges were introduced to the already problematical HRM situation in Mexico. However, several studies rose up to the challenge to broaden the existing IHRM literature. Paik and Teagarden (1995) specifically investigated the Mexican maquiladora industry in regards to different approaches in international human resource management (IHRM). Their comparison of HR procedures in Japanese, Korean, and US maquiladoras in Mexico showed that US MNEs were in a “better competitive” position due to their familiarity and acknowledgement of differences between their country and Mexico. A key reason was based on more training and development given to both US and Mexican managers by US firms.

Retention in maquiladoras

INEGI (2002e) indicates the reasons Mexican employees have left their employment. While 38.8% of Mexico’s unemployed population have left their jobs due to lay-offs, it is interesting to note that 39.6% stated job dissatisfaction as the reason for leaving their employment. However, we cannot generalize this reason to the maquiladora industry since this statistic encompasses all unemployed workers. Nevertheless, the
reason why workers have left and the issue of turnover have surfaced as one of the major problems that confront maquiladora management (Thyfault, 1987; Tello & Greene, 1996; Presley, 1997; Miller, Hom, & Gomez-Mejia, 2001). Maquiladoras have estimated to lose $62 million a year due to employee turnover. Recruiting and training costs total to about $22 million and $40 million are due to the productivity loss (Maquila Portal, 2000a). In addition, monthly turnover rates had increased from single digits to 15%, depending on the area (Maquila Portal, 2000b, 2000c). Due to the significant cost associated with turnover, academicians have focused their research on turnover in maquiladoras, reasons for leaving and methods in retaining employees.

*Turnover literature*

Turnover literature focusing entirely in Mexico began in the mid-1980s. Lucker and Alvarez (1985) conducted a study using maquiladora women to investigate personality and demographic characteristics in relation to turnover and longevity. Based on this longitudinal study, Lucker and Alvarez (1985) were able to classify 82.1% of the “continuers” and 37% of the “quitters”. Therefore they recommended that questionnaires or pre-employment tests could be used as effective predictors of worker longevity. Interestingly they did mention, “There will always be environmental manipulations (i.e. inducements) that can be used to induce workers to stay,” but that it makes better sense to hire individuals that are more likely to be “continuers” (Lucker & Alvarez, 1985, p. 7). Thus the importance of inducements has been mentioned in early Mexican turnover literature but not specifically investigated. Another article, Thyfault (1987), investigated four problem areas associated with maquiladoras, including turnover. Her research was based on interviews with four maquiladora managers. No causes of turnover were
mentioned, but that incentives are used to prevent workers from leaving. Incentives cited included cafeterias, food subsidies, food baskets, and pension plans. Nevertheless, since “everyone is providing them” (as one manager mentioned), turnover still exists (Thyfault, 1987, p. 31). In the 1990s, Noll (1990) analyzed the attitude towards work of maquiladora workers. She briefly mentioned causes of turnover being scarcity of labor, compensation packages that are similar among companies, and the housing shortage. Another study, Ochoa (1990) conducted a study looking at the relationship between applicant’s biographical characteristics and their records of turnover and absenteeism. He stated the determinants of turnover being pay, ingratiation with company and coworkers, instrumental and formal communications, centralization, satisfaction, levels of opportunities, perception of equity and employee’s intent. In Noll (1990) and Ochoa (1990), the notion of inducements mentioned, but not analyzed.

In another study, Huerta (1993) tested determinants of turnover for workers in the maquiladora industry in order to identify specific indications about motives people may have which cause them to leave the organization voluntarily. Using the Steers and Mowday (1981) model of turnover, research questions were compiled. Results were that organizational characteristics, job expectations, and job performance were related to affective responses to job. Also non-work influences were not related to intent to stay or leave. “Non-work” influences were the following: state of the economy, alternative opportunities, and organizational determinants like size, pay, job satisfaction and commitment. Important findings were that employees with high levels of satisfaction and commitment were more likely to remain with the organization. This result is similar to the outcome of U.S. studies. More importantly was the idea that maquiladora workers
considered education and training to be an important benefit. While this research did bring new insights about maquiladora turnover, many issues were left without discussion. For instance, work-family issues and more about incentives.

Barajas-Escamilla and Yalan (1995) investigated turnover exclusively women employed in maquiladoras and their reasons for leaving. While other investigators have stated reasons for turnover due to low salaries and inadequate working conditions as well as, searching for better employment, Barajas-Escamilla and Yalan (1995) see turnover as a result of the low living standards present in the worker’s livelihood. They cite lack of housing, water, sewage, lighting, high rent, and lack of transportation. They state that these factors create “instability” and prompt workers to migrate for better conditions and thus turnover results (p. 199). The authors reveal that of the women worker’s residences in Tijuana, only 48.2% had sewage services, 51.1% had indoor restrooms, and 48.2% had indoor plumbing. In addition, in their investigation they did mention firms’ attempts to minimize turnover by applying inducements in the form of higher salaries, bonuses, attendance prizes, recognition systems, and living quarters. Nevertheless, according to their analysis, despite the increase of inducements, turnover still existed in high numbers. They attributed this phenomenon to the firms’ lack of knowledge concerning worker’s needs.

Canales-Ceron (1995) introduced another viewpoint of maquiladora turnover. He stated that individuals go through phases: one being high turnover, two being in transition, and three being stable. In his analysis, Canales-Ceron (1995, p. 150) uncovered profiles of stable workers and those likely to leave (See Table 7). As
informative as Canales-Ceron's (1995) investigation was, no mention of inducements or incentives was identified.

Kavanaugh (1997) investigated one particular maquiladora and the variables that promote the retention of Mexican professional employees. After interviewing 14 Mexican professionals (managers, supervisors, and engineers), Kavanaugh's (1997) findings were the following: health, safety, cleanliness, and comfort of the plant; friendly working environment (camaraderie); freedom (controlling their own work); and the extra things this particular maquiladora provides. Interviewees mentioned that this particular maquiladora provides "extra things not required by law" (Kavanaugh, 1997, p. 183).

Table 7

Profile of Stable and Non-stable Maquiladora Worker

<table>
<thead>
<tr>
<th>Socio-Demographic Characteristics</th>
<th>Stable</th>
<th>Likely To Leave (Rotators)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Adults (greater than 25)</td>
<td>Less than 20 years</td>
</tr>
<tr>
<td>Gender</td>
<td>Predominately female</td>
<td>Predominately male</td>
</tr>
<tr>
<td>Marital Status</td>
<td>At one time married</td>
<td>Single</td>
</tr>
<tr>
<td>Children</td>
<td>With children</td>
<td>Without children</td>
</tr>
<tr>
<td>Education</td>
<td>Elementary schooling</td>
<td>At least one year of</td>
</tr>
<tr>
<td></td>
<td>secondary complete or less</td>
<td>schooling</td>
</tr>
<tr>
<td>Relation to Head Of Household</td>
<td>Head of household, or spouse of</td>
<td>Children of head of household</td>
</tr>
<tr>
<td>Migration Status</td>
<td>Migrants with more than five years of residence</td>
<td>Natives or migrants with less than five years of residence</td>
</tr>
</tbody>
</table>
Some "extras" mentioned were awarding scholarships to employees and their families, employing family members of present employees, listening to employees when problems arise, recognizing employees for initiatives presented, and allowing for completion of graduate degrees. This particular maquiladora also provided a new cafeteria and clean working conditions as well as, conducted award ceremonies as "personal" as possible (Kavanaugh, 1997).

In addition, Kavanaugh (1997) also mentioned factors that reduced employee commitment. Based on unstructured interviews, the following factors resulted: lack of planning and excess workload, lack of career development, discrimination, unfair promotion methods (using politics and impression management), and managerial focus inconsistencies between Mexican managers and supervisors. Finally, Kavanaugh (1997) revealed factors that lead to both retention and turnover: quality, training, and salary and benefits. He stated that despite the maquiladora's emphasis in quality, strenuous training, and competitive salary and benefits; these are the reasons employees are leaving. After completion of quality programs and training, these employees become "attractive" to other maquiladoras and are lured away by their inability to "resist the very lucrative opportunities that they are offered" (Kavanaugh, 1997, p. 227). While the mentioning of inducements took place, further investigation did not. However, this study did warrant the need to probe further into this stream of research; in particular, in examining other levels of maquiladora employees.

Presley (1997) conducted interviews with four maquiladora managers investigating perceptions managers have of workers, including employee reasons for leaving and methods of inducements to promote retention. Managers mentioned that
employees mainly leave due to family-related reasons. An example was given that one man quit because he was assisting his brother on arranging a wedding. In retaining employees, managers that used individual incentives had lower turnover rates than managers that used team rewards. In addition, the facility with the lowest turnover, used not only monetary bonuses to reward above-average employees, but also gave individual recognition like posting the employee's picture on a bulletin board.

Pelled and Hill (1997b) found that participative management in maquiladoras was associated with increased performance and also lower turnover. They claimed that participative management, which can be a form of inducement, is "insensitive" to cultural differences and likely to have a positive effect in Mexico. Even realizing the relatively high power distance in this country, Pelled and Hill (1997b) still found that participative management will be successful after receiving surveys from upper managers. They failed to go to the source...the lower and mid-level workers who will be subjects to this inducement. On the other hand, Pelled and Hill (1997a) conducted another study going directly to the source, the workers in determining the values that can play a role in the attachment of an organization. The research idea was worthy, but again, they used values developed from U.S. studies and subjects. They also mentioned the sample was production workers and that questionnaires were given. Widely-known is the fact that lower-level workers have little to no education and since questions were directly taken from U.S. scales, the possibility exists of inconsistencies, mistranslation issues; as well as not being as literate as needed. Interestingly, they recommend qualitative research to validate results.
Interviewing 148 women who had quit working in the maquiladoras, Guendelman, Samuel, and Ramirez (1998), reported the following as reasons for quitting: personal non-occupational illness, vital events such as pregnancy and marriage, family obligations such as child care, leaving town to care for a sick family member, and partner opposition to work. From these results, it seems that non-work factors (or work-family conflict) played a major role in quitting work in the maquiladora. In addition, if inducements had been introduced like a child-care center, medical assistance programs, maternity leave, and family activities, there would be a possibility of minimizing the turnover problem in these particular cases.

Based on Mexico literature, Maertz (1999) investigated the possible linking of background characteristics to voluntary turnover. He examined work-family conflict, likelihood of migrant border shock, and identification with an unstable work group as well as demographic variables like education, age, and marital status. The results were that living with parents and number of maquiladoras worked in previously “significantly contributed” to predicting turnover among Mexican workers (Maertz, 1999, p. 112).

In a recent study Pena, (2000) pointed out that maquiladora employees cannot be discussed as one homogeneous group with high turnover rates. She found in her study that skilled universal operators were employed more than 24 months, unskilled line operators, 9.7 months, skilled technicians and line managers, 7.6 months, unskilled support staff, greater than 24 months, professional executives, 4.5 months and skilled supervisors, greater than 24 months. Pena (2000) also investigated the industry type and found that the automobile plant by far showed greater employee stability when compared to chemical (1), electronics (2), and textile plants (2). Pena (2000); however, briefly
mentioned reasons dissatisfied workers were quitting, like long working hours and low wages.

Miller et al., (2001) were the first to examine if maquiladora “perks and benefits” reduce turnover. Their focus; however, was limited to the inducement of compensation. They found no support for higher fixed pay, seniority and attendance bonuses, vacation days, meal subsidies, and aquinaldo as deterrents to lower turnover. They did find support for productivity bonuses and profit sharing. The major concern with this study is that organizational data was gathered instead of individual perspectives. In addition, general managers of 115 maquiladoras supplied the statistics used in testing hypotheses. Social desirability as well as other bias may have occurred.

Maertz, Stevens, and Campion (in press) did develop a turnover model for explaining the causes of Mexican employees in maquiladoras in Mexico. They did include important antecedents that were not incorporated in earlier turnover models. For instance, non-work roles, co-worker and supervisor attachment, “reciprocal obligations,” and group interactions (Maertz, et al, in press). Interviewing 47 employees, the researchers analyzed workers’ attitudes and feelings in order to better comprehend factors that influence turnover intentions.

An interesting finding is the result of 31 responses stating “family members” as the entity that they are most loyal to compared to 10 “friends and neighbors,” 10 “their work,” and 7 “supervisor or group leader”. In responding to the questions of organizational attachment; 10 responses were “I must make a living somewhere,” and “Like the job/Easy work”. Nine responses were “Plant close to home” and 8 responses were “Good relations with coworkers” and “Don’t want to search for another job”.

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Considering that work-family issues have minimally been mentioned in the turnover literature, it seems to play a major influence in the Mexican culture. While Maertz, et al (in press) did mention moderating variables like adequate compensation, flexibility for non-work roles, development opportunities, harmonious environment, and non-aversive work in their model; they were incorrectly classified as "values".

Values are basic beliefs a person has about what is "right and wrong," as well as initiate a certain attitude followed by a behavior based entirely on how he or she feels about the particular value (Adler, 1997, 2002). While one's values may change over time, they do tend to remain deeply ingrained in one's personality. An example by Adler (1997) mentions "loyalty to the family" as a value that prompts Latin American managers to employ family members in their place of business when feasible. A better definition to the Maertz et al (in press) variables would be job characteristics. The stated "values" are forms of benefits or job characteristics that when "enhanced" may be classified as inducements (Rynes & Barber, 1990).

Attraction in maquiladoras

Due to high levels of turnover in maquiladoras, academic literature on methods of attracting potential employees has virtually been non-existent. There has been practitioner literature on the subject during the time when maquiladora growth rates were increasing. However, the majority of the articles looked at methods in attracting upper-level or technical employees (Forbes, 1997; Noecker, 1997, 1998; Sunoo, 2000) not lower-level assembly-line workers.

In summarizing this section, turnover studies in maquiladoras are growing due to their importance in the Mexican economy. However, studies conducted have mainly
involved interviews with upper level managers and HR managers. In addition, many of the empirical studies fell prey to simply translating questionnaires, thus totally implicating U.S. based responses to another culture. Nevertheless, the research does bring some insight in the area of inducements and their probability of success in maquiladoras. The maquiladoras that are skillful at effectively utilizing inducements in their attraction and retention strategies will have a significant competitive advantage. In order for maquiladoras to receive these outcomes of attracting potential employees and reducing turnover, focus needs to be on the workers. The next chapter brings together in form of propositions what this study will investigate. We know that people differ in their needs and this is meaningful in attempting to explain behavior in organizations. In addition we know that investigating behavior in a different country merits considerable attention due to minimal studies in this area. Despite this barrier, the differences in a culture’s laws, norms, attitudes, skills, values, and motives, provides a basis for expecting differences between workers’ needs in different societies.

The next section will introduce the propositions developed in attempting to predict the inducements that Mexican lower-level workers deem as important and the basis for their attraction and retention to the maquiladora.
CHAPTER III

PROPOSITIONS

As previously mentioned, one of the primary goals of this dissertation is to uncover the needs workers have. Previously conducted U.S. studies have performed this task by using a survey instrument with inducements as surrogates for needs. Since this dissertation will be investigating another culture as well as another level of employees, established U.S. surveys cannot be administered. As a result, before determining the individual's needs, inducements that are important to this particular culture must first be revealed. Once this is accomplished can we then extract the underlying needs by way of valued inducements.

This chapter presents the propositions that were developed based on the thorough literature review that included theoretical foundations of culture and needs theories. The propositions take into account cultural aspects of collectivism, masculinity/femininity, power distance, socio-economic status, and uncertainty avoidance of maquiladora assembly-line workers and will be presented in that order.

Collectivism

The importance of family and relationships is overwhelming in the Mexican culture and this value carries over to the workplace. Mexican lower-level employees' need for affiliation and camaraderie seems to be precedence in seeking employment
where other friends or relatives are employed and to staying in a position because of the established friendships.

**Proposition 1:** Due to the collective nature and need for relationships apparent in Mexican lower-level employees, the more family-oriented or relationship-oriented inducements, the more attracted employees were and the more likely present employees will remain in their job.

**Masculinity/Femininity**

In Hofstede's study (1983), Mexico was classified as being fairly high in the masculinity dimension. While male and female roles are clearly defined in Mexico, the importance of women and their role in the maquiladora workforce is apparent in the distribution of assembly-line workers. Currently, 462,592 (54.24%) out of 852,742 of the "obreros" or general maquiladora workers are female (INEGI, 2002a). Even though the position of assembly-line worker require low skills and are given lower wages (Kenney & Goe, 1998), maquiladoras are considered attractive (Sargent & Matthews, 1999) and a major source of employment for women (Wilson, 2002).

In addition, low socio-economic standards necessitate women to enter the labor market while still being responsible for the maintenance of the home and children. A look at the total maquiladora employees does indicate more men are employed; however, the fact still remains that the majority of "obreros," lower level maquiladora workers, are indeed women. Coupled with this fact, is the low tenure present in lower-level workers. The average tenure for maquiladora operators was 10 months compared with 34 months for administrative (non-operator) personnel (Kenney & Goe, 1998). For these reasons, maquiladora managers, should focus attraction and retention policies for women. In a
study by Guendelman et al., (1998) that investigated specifically women maquiladora workers, they found that more personalized inducements that show individualized recognition; for instance, baby showers, birthdays, and anniversaries were necessary in decreasing the number of women that left the maquiladora. Hofstede’s classification of Mexican society as “masculine” may not generalize to the lower-level maquiladora workforce.

Proposition 2: Due to the high number of women employed as lower-level workers in the maquiladoras, the more personal inducements are, the more attracted employees were, and the more likely present employees will remain in their job.

Power Distance

While status in Mexico is clearly defined with a large upper-class and a large lower-class, hierarchical levels in the workplace are also recognized by the lower-level workers. They have high respect for their supervisors. The higher the level the more respect is given. Workers accept decisions made by their supervisor and do what they are instructed to do with all their ability. Even though total respect is demonstrated towards the supervisor, workers expect the manager to show respect and concern for their well-being as well as being recognized when excellent work has been performed. Mexican workers view the organization as able to provide for all their needs, the more the better.

Proposition 3: Due to the high power distance, a high need for patronage (sponsorship) becomes apparent in Mexican lower-level employees; thus, the more inducements offered by the maquiladora, the
more potential employees were attracted and the more likely employees will remain at their present job.

*Proposition 4:* As a result of the need for patronage (sponsorship) apparent in Mexican lower-level employees, the more inducements that recognizes and rewards them based on their work performance, the more attracted employees were and the more likely present employees will remain in their job.

*Socio-Economic Status*

Even by U.S. standards, wealthy families do exist in Mexico. However, the socio-economic status of the individuals under investigation live in a state of poverty (Lewis, 1963). Even though there is a minimum wage mandated by the Mexican Federal Labor Law, the minimum wage that is currently at 42.15 pesos a day ($4.20/day) is beyond comparison to U.S. standards (Twin Plant News, 2002). In addition, this minimum wage has been known to be a "wage ceiling" that maquiladora managers have discretely accepted not to increase (Wilson, 2002). Thus the necessity for basic needs is more compelling than managers assume. While U.S. research shows that firms do provide all basic needs for their employees, this view comes as a result of managers' interviews not from employees. As of yet, there are no studies that have investigated if maquiladoras in Mexico provide the basic needs to the worker.

As a result of standard wages among maquiladoras, workers seeking employment look beyond the minimum wage to other incentives that the firms provide (Wilson, 2002). Coupled with the fact that they belong to a lower socio-economic class, Mexican workers seek immediate rewards in the workplace for the sake of survival. Maquiladora
lower-level workers view the organization as paternal, like a father obligated to be the provider and satisfier of all their needs, especially physiological needs (Pelled & Hill. 1997; Kras, 1995).

Proposition 5: Due to the low socio-economic status apparent in Mexican lower-level employees, the more inducements offered by the maquiladora that satisfy their basic needs (or lower-level needs) the more attracted employees were and the more likely present employees will remain in their job.

Proposition 6: Due to the low socio-economic status apparent in Mexican lower-level employees, the more extrinsic inducements offered by the maquiladora, the more attracted employees were and the more likely present employees will remain in their jobs.

Based on the desire for immediate benefits, long-term planning or thinking is not evident based on the conduct of maquiladora lower-level employees. Instances have shown that workers seek to earn money for material items, travel, or gifts; and once that is achieved, work is no longer important. Another example is the Mexican Federal Labor Law that obligates maquiladoras to present workers with an "aguinaldo," a Christmas bonus, at the end of the year. Maquiladora workers have been known to receive their bonus and not return to work after the holidays. They know that if they are employed, they will receive this bonus. On the other hand, under the Retirement Savings System mandated by the Mexican Federal Labor Law, employers must pay 2% of a worker's salary to a retirement fund in a bank account under the worker's name. This long-term
benefit, while it may be for the benefit of the employee, the uncertainty and the inability to predict the future may lessen the “attraction”. Based on this uncertainty and survival needs, workers would find better use for the money now. Their desire for immediate outcomes is part of the livelihood of lower-level workers. Oscar Lewis’ (1963) “Children of Sanchez” identifies this characteristic in the portrayal of a lower class Mexican family whose main desire is to satisfy deprivations as timely as possible. This cultural characteristic linked with a low socio-economic status indicates the need for immediate or short-term satisfiers.

Proposition 7: Due to the low socio-economic status apparent in lower-level maquiladora workers, the more visible and faster inducements can be received, the more attracted employees were and the more likely present employees will remain in their jobs.

Uncertainty Avoidance

According to Hofstede’s (1983) dimensions, Mexico is seen as fairly high in uncertainty avoidance. Not being able to know the future creates anxiety and aggressiveness in high uncertainty avoidance cultures, and as a result, organizations need to act in accordance with this cultural aspect. In the workplace, Mexican workers need to be able to clearly see the link between the reward and the assigned task. They prefer organizations that follow clear and consistent rules and when an additional benefit, like an attendance bonus is promised, they want their guaranteed reward as indicated by the set rules. Any ambiguity and risk present in workplace may generate insecurity and mistrust towards the organization. A recent example is the stoppage of work by union workers at three Mexican Ford Company plants in Hermosillo, Sonora, and Chihuahua.
(Maquila Portal, 2002d). They had expected an entitlement, a small percentage of the company’s profits, and were in disbelief with Ford’s claim of zero profits. This unexpectedness of events created chaos and upheaval to the point of actually stopping work. This unanticipated event and the workers’ actions illustrated their need for certainty and security. Other recent examples are the increase in temporary work contracts (Maquila Portal, 2002e) and decreasing work hours from one week to the next (Maquila Portal, 2002f) in the maquiladora industry. This type of situations in the workplace creates uncertainty and nervousness for the maquiladora worker because the possibility exists of not receiving what was normally customary. What were once predetermined payments are now in a state of risk or contingent on the external environment.

**Proposition 8:** Due to the fairly high uncertainty avoidance present in lower-level maquiladora workers, the more inducements that are contingent or at risk, offered by the maquiladora, the less attracted employees were and the more likely the present employees will leave their job.

The following chapter will present the research methodology selected to properly collect and analyze data received in order to test the above stated propositions.
CHAPTER IV

RESEARCH METHODOLOGY

This chapter will describe the methods used to investigate the propositions offered in this research. In order to perform this investigation, qualitative methods were used to allow us to identify important inducements that were then used to extract the underlying needs. Detailed descriptions of the design and other relevant characteristics of the research method will be discussed next.

Research Design

The research consisted of an in-depth exploration of lower-level workers needs. While many needs investigations have taken place, all have been conducted using survey instruments developed and validated by U. S. researchers and subjects. Since this investigation focuses on lower-level workers in a developing country, a qualitative field study was conducted in order to best capture significant variables relevant to the needs of this group of maquiladora workers. Field studies allow for the discovering of relations and interactions among psychological variables in real social structures (Kerlinger, 1992). Due to proximity to the university, field studies were conducted in a total of five maquiladoras, three in Reynosa and two in Matamoros, Tamaulipas. To fully understand maquiladora workers, in-depth personal interviews were conducted. The personal qualitative interview offers the best method to gather information to discover employee’s
reasons for doing or believing something (Kerlinger, 1992; Patton, 2002). The personal interview is valuable due to the large amount of rich information that can be received.

Data collection techniques

As termed by Patton (2002, p. 343), open-ended questions via an "interview guide" was used. The questions merely served as a "guide" in that the researcher was free to explore, probe, and ask questions that will reveal the subject of interest that of the needs of the workers. The researcher remained "free to build a conversation, to word questions spontaneously, and to establish a conversational style" but with the focus on the predetermined subject that of the discovery of the underlying needs of the maquiladora workers (Patton, 2002, p. 343). In addition by combining several interview approaches, informal conversational and interview guide, questions about new areas of inquiry that were not originally anticipated in the interview instrument’s development were asked. The qualitative interview served as the best method by offering the workers being interviewed the opportunity to respond in their own words and to express their own personal perspective of their experiences in working in a maquiladora.

While the bulk of the maquiladora worker literature entails investigations of managers, expatriates, engineers, or technicians, this study will contribute to the established literature by only interviewing lower-level assembly-line workers. In addition, according to INEGI (2003a), based on recent February 2003 figures, 865,128 (80%) of the 1,090,529 Mexican maquiladora employees are production or assembly-line workers. Specifically, in Reynosa, 77.7% of the 66,091 maquiladora workers are production or assembly line workers (INEGI, 2002b). Also, Matamoros posts similar
figures of 82.8% of the 66,023 maquiladora workers being production or assembly line workers (INEGI, 2002b).

Questionnaire Development

The open-ended interview questions can be viewed in Appendix A (English version) and Appendix B (Spanish version). Since qualitative studies investigating lower-level workers were limited (Sargent & Matthews, 1997; Kenney & Goe, 1998; Ochoa, 1990), the questions developed are based on relevant literature and the similar studies. The open-ended interview questions were developed to extract desired and undesired inducements from (1) previous employment; (2) current employment; (3) friends/relatives previous employment; (4) friends/relatives current employment; (5) job and organizational changes in previous and current employment; and (6) job and organizational changes in friends/relatives previous and current employment. The reason for including information on friends and relatives is based on Kolb, Rubin, and McIntyre (1971) and their use of projective testing. The responses to the later questions should reflect the interviewee’s own needs and drives. McClelland (1985) also used this type of testing for the discovery of individual needs. However, as will be stated in the results section, this means of information retrieval was minimally successful. The questions developed were for the retrieval of different types of inducements in order to extract the underlying needs of lower-level maquiladora workers. For relevancy an HRM professor familiar with qualitative studies and research interests reviewed questions. The questions were then translated by this Spanish-speaking author and then given to a Mexican national who is fluent in English and who taught Spanish for non-Spanish speakers in Mexico, for a back translation. A pilot test was also conducted to test the questions based
on length and clarity, as well the ability of the questions to obtain the concepts necessary to answer research questions.

Maquila Sample

A convenience sample of five maquiladoras was used for gaining entry for interviewing workers. Due to the obvious complexities involved in getting clearance to conduct studies in maquiladoras, selected companies were based entirely on prior contacts made with plant managers. The five maquiladoras were assembly plants whose parent company was in the United States. Due to the confidentiality given to the plant managers, a brief summary of the main characteristics of the plants is given in Table 8.

Table 8

Characteristics of Maquiladora Plants

<table>
<thead>
<tr>
<th>Location</th>
<th>Plant 1</th>
<th>Plant 2</th>
<th>Plant 3</th>
<th>Plant 4</th>
<th>Plant 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reynosa</td>
<td>Matamoros</td>
<td>Reynosa</td>
<td>Reynosa</td>
<td>Matamoros</td>
<td></td>
</tr>
<tr>
<td>Average Plant Size (# of employees)</td>
<td>420</td>
<td>1050</td>
<td>519</td>
<td>3058</td>
<td>2038</td>
</tr>
<tr>
<td>Industry</td>
<td>Comm.</td>
<td>Other</td>
<td>Appliances</td>
<td>Electronic</td>
<td>Auto</td>
</tr>
</tbody>
</table>

Maquiladora Worker Sample

As presented in other maquiladora worker studies (Sargent & Matthews, 1997), 75 maquiladora workers were interviewed. Purposive sampling was used in selecting the lower-level assembly-line workers in maquiladora plants. In this study, purposive sampling was used in order to obtain gender diversity to best reflect the actual lower-
level workers’ workforce gender ratio (Patton, 2002). However, in each plant, the 15 employees were selected using a systematic sampling method. Upon receiving a list of workers from plant or HR manager, selection of sample was constructed by selecting every $k$th element in the sampling frame. For instance, if there were 150 lower-level workers, every 15th name would be selected (Zikmund, 2003). When a “selected” employee was absent, the next name on the list was selected. As a result, 46 females and 29 men were interviewed. Table 9 summarizes characteristics of the 75 workers interviewed.

Procedure

Researcher visited plant managers one week prior to interviews being conducted. The plant managers provided the researcher with a list of lower-level employees. One day prior to interviews, researcher would email list of the five selected employees to the plant manager. Researcher would go to the plant three times within a two-week period. Five employees were interviewed each day. The researcher was given a private office close to the plant floor. Selected employees were interviewed one at a time. Selected workers were asked if they wanted to answer questions regarding work at a maquiladora. They were also asked if tape-recording was acceptable. Upon acceptance, workers were assured full confidentiality and anonymity. In addition, in order to gain trust and openness from the worker, the researcher indicated to the employee that there was no affiliation between the researcher and the particular maquiladora. In order to improve the accuracy of the interviews, observational notes and key information were written after the completion of each interview.
### Table 9

*Characteristics of Lower-Level Maquiladora Workers*

<table>
<thead>
<tr>
<th>Plant</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg. Age</td>
<td>26.6</td>
<td>25.2</td>
<td>22.8</td>
<td>26.1</td>
<td>22.9</td>
<td>24.7</td>
</tr>
<tr>
<td>% Female</td>
<td>47%</td>
<td>67%</td>
<td>80%</td>
<td>41%</td>
<td>60%</td>
<td>60%</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>single</td>
<td>7</td>
<td>6</td>
<td>10</td>
<td>2</td>
<td>10</td>
<td>35</td>
</tr>
<tr>
<td>separated</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>married</td>
<td>5</td>
<td>9</td>
<td>2</td>
<td>13</td>
<td>2</td>
<td>31</td>
</tr>
<tr>
<td>widowed</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>living together</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>Avg. Time Employed</td>
<td>4.3 yrs.</td>
<td>2.6 yrs.</td>
<td>5 mo.</td>
<td>2.4 yrs.</td>
<td>2 yrs.</td>
<td>2.4 yrs</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>elementary</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>junior high</td>
<td>12</td>
<td>10</td>
<td>6</td>
<td>7</td>
<td>9</td>
<td>44</td>
</tr>
<tr>
<td>high school</td>
<td>2</td>
<td>2</td>
<td>8</td>
<td>5</td>
<td>1</td>
<td>18</td>
</tr>
<tr>
<td>post hs</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Dependents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>8</td>
<td>7</td>
<td>12</td>
<td>6</td>
<td>9</td>
<td>42</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>3</td>
<td>13</td>
</tr>
<tr>
<td>2</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

All interviews were conducted in Spanish and all employees allowed for tape-recording of interviews. The length of the interviews ranged from 40 to 55 minutes.
Data Analysis

The process of preserving data from notes and tape recordings have to be performed in an organized manner in order to increase the accuracy of the data analysis. The organization and analysis of the data involved five phases. Phase one consisted of the transcribing and translating of the interviews. Phase two consisted of two steps. Step one is the content analysis of the raw statements directly received from the respondents. In step two, these statements were then categorized into inducement categories that were created based on the results of step one. Third, inducement categories were then grouped in respect to the propositions. Fourth, the dependent variable, “intention to stay” was developed. Finally, in determining which inducements can predict the dependent variable, intention to stay of an individual, logistic regression analysis was conducted. A more detailed explanation is given in the following sections.

Phase One

Transcribing. The researcher performed all of the transcribing for all 75 interviews. The actual transcribing provided the researcher an “opportunity to get immersed” in the data (Patton, 2002, p. 441). Transcripts of each interview ranged from 10-15 single-spaced pages of text.

Translation. As recommended by Behling and Law (2000), translation/back-translation of the interviews was performed using the following steps:

1. Bilingual researcher translated the Spanish interview into English.
2. A second bilingual individual with extensive experience in teaching English to Mexican nationals translated the interview back into the source language.
3. The original interview and back-translated versions were compared.
4. Minor differences were present but not great enough to justify a third iteration.

**Phase Two**

Similar to Herzberg et al., (1959), *a posteriori* approach of content analysis was the methodology used to analyze the data. This type of analysis differs slightly from content analysis in that the categories for sorting data statements are not established prior to the analysis, but allowed to emerge from the data (Tesch, 1990). Content analysis allowed the researcher to quantify and analyze the presence, meanings and relationships of such words and concepts from the transcripts and then to make inferences about the messages within the texts (Neuendorf, 2002). Statements ranged from as little as 36 to as many as 96 per interview. These statements were then used to create categories. Inductive analysis was used in creating categories. Because there were no prior categories or a start list of codes, categories were allowed to emerge out of the data (Herzberg et al., 1959; Strauss & Corbin, 1998; Tesch, 1990). Inductive analysis is advised especially when developing a codebook for content analysis (Patton, 2002). The category process will next be fully discussed.

**Category formulation and coding details**

The coding of qualitative data entails assigning labels to text passages that contain references to specific categories of information (Miles & Huberman, 1994). For this study, the focus was on first developing and assigning a list of categories that corresponded to each separate inducement that was mentioned by the workers. Prior to the research, little was known about what lower-level maquiladora workers preferred in
the workplace; thus the creation of the categories or code list was an inductive task based solely on the workers' responses.

Neuendorf (2002, p. 51) recommends that the research along with another coder "work together to find out whether they can agree on the coding of the variables". With this in mind, an additional coder, a management professor, was asked to develop categories from the interview statements. Working independently, an initial category listing was developed by each coder. Categories that were in each listing were accepted. Discussion took place between the coders in respect to other categories. After conferring with each other, discrepancies were resolved through an interactive process. Intercoder reliability at this stage ultimately reached 100% with both coders accepting the categories. To facilitate coding, categories were fully explained and described as recommended by Neuendorf (2002) and Miles and Huberman (1994). These 32 categories were then used to code the statements revealed from the transcripts. A listing of the categories of inducements is given in Table 10. A listing of the 32 categories with definitions is presented in Appendix C.

Working independently, the researcher and the management professor performed all of the coding for the 3,644 statements derived from the workers' interview transcripts. Inter-rater reliability was assessed using proportion of agreement at 96.15% (Miles & Huberman, 1994). To correct the inter-rater differences of coding of 140 statements, a third rater familiar with the study, was brought in to resolve the discrepancies.

**Phase Three**

At this phase, further categorizing of the inducements was conducted. This phase was necessary in order to address the propositions developed that considered Hofstede's
### Table 10

**Listing of Categories of Inducements (in alphabetical order)**

<table>
<thead>
<tr>
<th>Benefits</th>
<th>Medical Facilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonuses</td>
<td>Networks</td>
</tr>
<tr>
<td>Cafeteria</td>
<td>Overtime</td>
</tr>
<tr>
<td>Coworker</td>
<td>Pay</td>
</tr>
<tr>
<td>Education</td>
<td>Plant Conditions</td>
</tr>
<tr>
<td>Family</td>
<td>Plant Culture</td>
</tr>
<tr>
<td>Flexibility</td>
<td>Plant Policies</td>
</tr>
<tr>
<td>Health</td>
<td>Plant Size</td>
</tr>
<tr>
<td>Hours</td>
<td>Promotion</td>
</tr>
<tr>
<td>HR Dept</td>
<td>Recognition</td>
</tr>
<tr>
<td>Individual</td>
<td>Security</td>
</tr>
<tr>
<td>Job</td>
<td>Shifts</td>
</tr>
<tr>
<td>Job Availability</td>
<td>Social Events</td>
</tr>
<tr>
<td>Learn &amp; Development</td>
<td>Supervisors</td>
</tr>
<tr>
<td>Location</td>
<td>Training</td>
</tr>
<tr>
<td>Managers</td>
<td>Transportation</td>
</tr>
</tbody>
</table>
dimensions and the Mexican culture. Using another management professor as an inter-rater, the categories were grouped together based on addressing the propositions. No prior grouping had been developed or discussed. Inter-rater reliability in this phase was assessed using percent agreement and was significant at 98%. A list of the grouped categories as well as the proposition they will be addressing is shown on Table 11.

**Phase Four**

As mentioned in Chapter I, one of the goals of this dissertation was to provide practitioner assistance in determining which inducements are more likely to be most important to lower-level maquiladora workers, which in turn will increase their intention to stay at the maquiladora. Due to historically high turnover rates, retaining employees in maquiladoras is important. In order to run more elaborate statistical tests, the development of a dependent variable “intention to remain” was necessary to test its predictive power and association with the categories of inducements and the propositions.

The “intention to remain” variable was collected through the interviews and the transcripts. Using a 3-point ordinal scale (1-not likely to remain; 2-maybe/unsure; 3-likely to remain), the researcher along with a management professor independently rated each worker in regards to their intention to stay in the plant. Inter-rater reliability was calculated at 95% (Miles & Huberman, 1994). The four cases in which the raters disagreed on were evaluated and rated by a third person that was familiar with the study. Once this variable was assembled, the inducement categories also had to be divided into positive and negative (i.e. coworker-positive, coworker-negative; bonuses-positive, bonuses-negative) statements regarding the particular inducement. In order to specifically determine the level of the inducement, workers, that intend to stay
Table 11

Distribution of Inducement Categories based on Proposition

<table>
<thead>
<tr>
<th>Propositions</th>
<th>Inducement Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>networks</td>
</tr>
<tr>
<td></td>
<td>social events</td>
</tr>
<tr>
<td></td>
<td>family</td>
</tr>
<tr>
<td></td>
<td>coworkers</td>
</tr>
<tr>
<td>2</td>
<td>social events</td>
</tr>
<tr>
<td></td>
<td>recognition/appreciation</td>
</tr>
<tr>
<td></td>
<td>bonuses</td>
</tr>
<tr>
<td></td>
<td>benefits</td>
</tr>
<tr>
<td></td>
<td>family</td>
</tr>
<tr>
<td></td>
<td>shifts</td>
</tr>
<tr>
<td></td>
<td>plant policies</td>
</tr>
<tr>
<td>3</td>
<td>supervisors</td>
</tr>
<tr>
<td></td>
<td>managers</td>
</tr>
<tr>
<td>4</td>
<td>bonuses</td>
</tr>
<tr>
<td></td>
<td>recognition</td>
</tr>
<tr>
<td></td>
<td>promotion</td>
</tr>
<tr>
<td>5</td>
<td>pay</td>
</tr>
<tr>
<td></td>
<td>bonuses</td>
</tr>
<tr>
<td></td>
<td>benefits</td>
</tr>
<tr>
<td></td>
<td>transportation</td>
</tr>
<tr>
<td></td>
<td>overtime</td>
</tr>
<tr>
<td></td>
<td>plant conditions</td>
</tr>
<tr>
<td></td>
<td>medical facilities</td>
</tr>
<tr>
<td></td>
<td>security</td>
</tr>
<tr>
<td></td>
<td>job availability</td>
</tr>
<tr>
<td></td>
<td>health</td>
</tr>
<tr>
<td></td>
<td>cafeteria</td>
</tr>
<tr>
<td>6</td>
<td>pay</td>
</tr>
<tr>
<td></td>
<td>bonuses</td>
</tr>
<tr>
<td></td>
<td>benefits</td>
</tr>
<tr>
<td></td>
<td>transportation</td>
</tr>
<tr>
<td></td>
<td>overtime</td>
</tr>
<tr>
<td>7</td>
<td>pay</td>
</tr>
<tr>
<td></td>
<td>bonuses</td>
</tr>
<tr>
<td></td>
<td>recognition</td>
</tr>
<tr>
<td></td>
<td>cafeteria</td>
</tr>
<tr>
<td></td>
<td>social events</td>
</tr>
<tr>
<td>8</td>
<td>bonuses</td>
</tr>
<tr>
<td></td>
<td>benefits</td>
</tr>
<tr>
<td></td>
<td>overtime</td>
</tr>
<tr>
<td></td>
<td>flexibility</td>
</tr>
<tr>
<td></td>
<td>promotion</td>
</tr>
</tbody>
</table>
prefer, the partition of each inducement category was necessary. The researcher accomplished this task by reading all 3,644 statements and referring them as either "positive" or "negative". As per the propositions, "positive" comments should relate more to the "likely to stay" group than any other group. Without this distinction within the categories it would not have been impossible to distinguish between the groups.

Once the dependent variable "intention to stay" was assembled and the statements were separated, statistical tests were performed to answer the propositions as well as address the inducements that are important to maquiladora workers intention to remain in the plant. The outcome of these analysis as well as more descriptive data will be explained in the Results section.

In summary, this chapter explained the methodology used in this research. It also justified the usage of both qualitative and quantitative methods in addressing the research propositions. It also provided details on the transcription, content analysis and the coding process used in summarizing the transcripts. This chapter also provided the list of inducement categories as well as basic characteristics of the sample interviewed. The following chapter will provide detailed statistics answering the propositions as well as the final determination of what inducements are considered most important to lower-level maquiladora workers and their relation to "intent to remain."
CHAPTER V

RESULTS

The aim of this dissertation was to discover the needs of lower-level maquiladora workers by way of their reference to certain inducements. In addition, identification of these particular inducements was necessary in order to suggest methods to decrease turnover in the maquiladoras. To accomplish these tasks, both qualitative and quantitative methods were necessary to accomplish both discovery and justification within a single research project. Discovery as defined by McCall and Bobko (1990, p. 382) is

...anything related to the creation of new theories or interpretive applications, including anything related to adopting novel approaches to measurement, inventing, or uncovering new constructs, or inventing or uncovering original theoretical perspectives from which to view organizational phenomenon.

In this dissertation, discovery was accomplished by using qualitative data to review theoretical ideas about organizational inducements and their importance to assembly line maquiladora workers. Justification is defined as “the empirical evaluation and confirmation of theory” (McCall & Bobko, 1990, p. 382). To evaluate the theoretical propositions and need theories, content analysis was used on the transcripts to quantify the inducements and then apply statistical inference techniques to conduct tests. Unlike previous research in the international HR literature that focuses mainly on justification
(i.e. quantitative research), this study uses both realms (discovery and justification) to better address the research questions and the overall significance of the results.

This chapter will reveal the findings from this study using a combination of both qualitative and quantitative methods. The first section will give details on basic statistical data based on the content analysis findings. The second section will disclose the findings based on the propositions using logistic regression analysis.

In concluding, an overall summary of the findings will be discussed.

Section One

Discussion of Basic Frequency Tables

The content analysis provided the transformation of qualitative verbal responses into categorical variables that allowed for a more systematic method of presenting the findings. Particular to the research questions and propositions are the following tables of information. Table 12 presents the categories of inducements and the number of times mentioned by the sample of 75 maquiladora workers and Table 17 shows the “Intention to Remain” frequencies. Each of these tables will be discussed in the next sections.

Basic Statistical Data: Frequencies

Categories of Inducements

The first table of frequencies, Table 12, illustrates the categories of inducement most mentioned. As noted by Weber (1990) higher category counts reflects a higher concern with the topic. A review of the four highest concerns will be discussed.
Table 12

*Categories of Inducements and their Frequencies (# of times mentioned)*

<table>
<thead>
<tr>
<th>Category</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisors</td>
<td>438</td>
</tr>
<tr>
<td>Job</td>
<td>365</td>
</tr>
<tr>
<td>Plant Policies</td>
<td>237</td>
</tr>
<tr>
<td>Pay</td>
<td>222</td>
</tr>
<tr>
<td>Bonuses</td>
<td>203</td>
</tr>
<tr>
<td>Coworker</td>
<td>196</td>
</tr>
<tr>
<td>Recognition</td>
<td>189</td>
</tr>
<tr>
<td>Cafeteria</td>
<td>175</td>
</tr>
<tr>
<td>Promotion</td>
<td>171</td>
</tr>
<tr>
<td>Social Events</td>
<td>134</td>
</tr>
<tr>
<td>Flexibility</td>
<td>117</td>
</tr>
<tr>
<td>Shifts</td>
<td>99</td>
</tr>
<tr>
<td>Job Availability</td>
<td>95</td>
</tr>
<tr>
<td>Benefits</td>
<td>91</td>
</tr>
<tr>
<td>Overtime</td>
<td>89</td>
</tr>
<tr>
<td>Plant Culture</td>
<td>87</td>
</tr>
<tr>
<td>Transportation</td>
<td>85</td>
</tr>
<tr>
<td>Education</td>
<td>76</td>
</tr>
<tr>
<td>Plant Conditions</td>
<td>68</td>
</tr>
<tr>
<td>Health</td>
<td>67</td>
</tr>
<tr>
<td>Managers</td>
<td>62</td>
</tr>
<tr>
<td>Hours</td>
<td>59</td>
</tr>
<tr>
<td>Learn &amp; Development</td>
<td>54</td>
</tr>
<tr>
<td>Location</td>
<td>43</td>
</tr>
<tr>
<td>Networks</td>
<td>42</td>
</tr>
<tr>
<td>Security</td>
<td>33</td>
</tr>
<tr>
<td>Training</td>
<td>32</td>
</tr>
<tr>
<td>Family</td>
<td>31</td>
</tr>
<tr>
<td>Individual</td>
<td>26</td>
</tr>
<tr>
<td>Plant Size</td>
<td>24</td>
</tr>
<tr>
<td>HR Dept</td>
<td>21</td>
</tr>
<tr>
<td>Medical Facilities</td>
<td>13</td>
</tr>
</tbody>
</table>

Based on the frequencies, the "highest concern" category shows that "Supervisor-related" inducements were the most mentioned by the maquiladora workers. The quantity of 438 (12% of 3644 total statements) includes both positive and
negative statements having to do with their supervisor. Examples of positive and negative statements are given below in Table 13.

Table 13

*Examples of Positive and Negative Statements under "Supervisor"

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Supervisor respects the workers.&quot;</td>
<td>&quot;Supervisor always yelling.&quot;</td>
</tr>
<tr>
<td>&quot;Supervisor convinces workers to stay.&quot;</td>
<td>&quot;Supervisor has favorites.&quot;</td>
</tr>
<tr>
<td>&quot;Supervisor gets along with the workers.&quot;</td>
<td>&quot;Supervisor is never satisfied.&quot;</td>
</tr>
<tr>
<td>&quot;Supervisors are fair.&quot;</td>
<td>&quot;Supervisor doesn’t care about the workers.&quot;</td>
</tr>
<tr>
<td>&quot;Supervisor listens to workers.&quot;</td>
<td>&quot;Supervisor is very strict&quot;</td>
</tr>
</tbody>
</table>

The second most important inducement category mentioned was "Job". Job inducement statements include comments based on the type of job the workers were performing, how they felt performing the job, attributes of the job, and improvements of the job task. Examples of positive and negative comments are shown on Table 14.

The third most important inducement category was "Plant Policies". This category included all statements that mentioned rules, policies or procedures that impacted the workers to any extent. Examples of comments are given below on Table 15.
Table 14

Examples of Positive and Negative Statements under "Job"

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;The job is very easy to do.&quot;</td>
<td>&quot;I get tired. I'm standing all day.&quot;</td>
</tr>
<tr>
<td>&quot;The job is not stressful&quot;</td>
<td>&quot;I get bored. The job is very repetitive.&quot;</td>
</tr>
<tr>
<td>&quot;The job is not demanding&quot;</td>
<td>&quot;I have to pick up heavy materials.&quot;</td>
</tr>
<tr>
<td>&quot;The work I do is very challenging.&quot;</td>
<td>&quot;I'm very frustrated with my job.&quot;</td>
</tr>
</tbody>
</table>

Table 15

Examples of Positive and Negative Statements under "Plant Policies"

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Plant takes extra care of the pregnant women.&quot;</td>
<td>&quot;They change the work shift monthly.&quot;</td>
</tr>
<tr>
<td>&quot;They provide a snack for the afternoon break.&quot;</td>
<td>&quot;No break during overtime.&quot;</td>
</tr>
<tr>
<td>&quot;Plenty of breaks given.&quot;</td>
<td>&quot;No tolerance time.&quot;</td>
</tr>
</tbody>
</table>

The last inducement category worth mentioning is "Pay". This category of inducements that came in fourth after "plant policies" was mentioned a total of 222 times (6% of 3644). Pay is a topic that is consistently referred to when talking about maquiladora workers. Pay in the eyes of the worker is something "secure" and fixed as
to when they are to receive it. As de Forest (1994) stated it, "...payment now for services rendered now." In this study, pay was the number one reason for workers leaving their previous jobs and why some were considering leaving their present jobs. The Federal Labor Law establishes a minimum amount that must be paid to all employees in cash, without deductions, or withholding on a weekly basis. The set wage varies for each of the economic regions into which the country is divided (Twin Plant News, 2001).

For instance, geographic area A, the area that includes Reynosa and Matamoros, the minimum wage was just raised Jan 2003 from 42.15 pesos to 43.65 pesos a day—roughly the equivalent to US$ 4.35 (INEGI, 2003; "Mexico increases minimum wage", 2002). Despite the increase, the workers in this study mostly gave negative comments regarding pay. Examples of comments of pay are given in Table 16.

Table 16

Examples of Positive and Negative Statements under "Pay"

<table>
<thead>
<tr>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;In Reynosa, there was more opportunity for better jobs with more pay.&quot;</td>
<td>&quot;The pay is so low (where my husband works) that I had to work to cover all of our necessities.&quot;</td>
</tr>
<tr>
<td>&quot;In maquiladoras, the pay is better than in <em>comercio</em> (stores).&quot;</td>
<td>&quot;...maquilas work you too much for very little pay.&quot;</td>
</tr>
<tr>
<td>&quot;There is no other maquila that pays more than this one.&quot;</td>
<td>&quot;(Everyone) always comments about the pay and how little they pay us.&quot;</td>
</tr>
</tbody>
</table>
Dependent variable: Intention to remain

The following table, Table 17 displays the dependent variable, "Intention to Remain" and the frequencies and percentages of workers in each category. This table shows the total number of individuals whose intention is to stay in the maquiladora, leave, or not sure. Despite of the high number of negative comments especially in pay, job, and supervisor, 36 workers (46%) were classified by way of their interviews that they were very likely to stay in the maquiladora, 26 workers (34.7%) were classified as uncertain/unsure in their plans to stay or leave, and only 13 workers (17.3 %) were classified that they would be leaving the plant. A chi-square test signaled that the differences were significant (p< .01).

Table 17

Intention to Remain

<table>
<thead>
<tr>
<th>Groups</th>
<th>Frequency</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>not likely to stay</td>
<td>13</td>
<td>17.3</td>
</tr>
<tr>
<td>maybe</td>
<td>26</td>
<td>34.7</td>
</tr>
<tr>
<td>likely to stay</td>
<td>36</td>
<td>48.0</td>
</tr>
<tr>
<td>Total</td>
<td>75</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Note. Chi-square=10.640, df=2, p<.01


Discussion on Section One

Supervisor

The large quantity of "supervisor" statements given by the workers is not surprising. A number of maquiladora researchers have concluded that the supervisor is an important part of the worker's life. Based on their research, Teagarden, Butler, and Von Glinow (1992) state that the worker expects the supervisor to "care" for them. In addition, the "workers become a manager's extended family" (p. 42). Thus it is a reciprocal situation for both the supervisor and the worker. That being the case, it is not uncommon for workers to be upset when their supervisor is less than "caring" or shows no interest in them. Teagarden et al., (1992); Stephens and Greer (1995), and de Forest (1994) also mention not only the significance in the workers showing respect towards the supervisor but the supervisor also returning the respect to the worker. In return for their dedication to their supervisors, the workers expect a certain level of emotional support and trust. This type of patronage relationship goes back to traditional agrarian communities common throughout Central and Latin America. Like Lindsley (1999. p. 8) writes, "Workers' dedication to their patrons resulted not only in workers' sustenance needs, like housing and food being met, but their emotional and familial support needs being fulfilled as well." This type of relationship between the supervisor and the worker has deep ingrained roots in the Mexican work culture.

Job

The characteristics of the "job" in maquiladoras have also been a research topic of interest. The maquiladora literature is filled with the characteristics of workers being young, uneducated "green hands," workers that have no previous maquiladora
experience (Teagarden et al., 1992) and thus the only type of job fit for them to perform are monotonous, repetitive, and easy tasks. However, this characteristic is changing and thus workers are demanding more challenging and more variety in their jobs.

In this small sample of workers, the mean number of previous maquilas they had worked in was two. Many workers had worked in numerous (as many as five) previous plants before. Also, while 58% of the sample being investigated had completed the equivalent to junior high, a high percentage 25% had also completed high school. While the integration of manufacturing technology has been implemented in many maquilas, research has shown that its positive realization has not yet reached the unskilled operators (Sargent & Matthews, 1997). Nevertheless, this study did show the workers' desire to learn more challenging tasks on the job and to ultimately increase their skill level. The "job" aspect was indeed mentioned extensively, 365 (10% of 3644), the majority of them (about 72%) were negative comments.

Plant Policies

Unlike "supervisor" and "job" categories, plant policies have not received as much exposure in the maquiladora literature. In this research, plant policies included regulations and rules concerning tolerance time, breaks, wage deductions, hiring policies, and anything else where a rule or policy was initiated. While de Forest (1994, p. 38) made the implication that the Mexican way of life is "less disciplined" with "loosely applied set of guidelines" in the workplace; this ideal is what made this topic surface continuously during the interviews.

As mentioned in Stephens and Greer (1995), the workers interviewed seemed to be eager for policies to be better explained and adhered to. For instance in the
tolerance time, one particular maquiladora had no tolerance for late workers; however, some workers were not penalized while others were. They demanded to know the policies regarding the excused and unexcused but were either afraid to confront either their supervisor or human resources or if they did ask, they were not given adequate explanation. The workers felt that the “said” rules should apply to everyone equally. Another example is the rules concerning education assistance. Many workers were either not informed at all or misinformed based on the variety of comments regarding this subject. Other areas of concern pertained to cafeteria policies. In one particular plant, several workers did not understand why office staff could have additional servings while they could not. According to the rules given to the workers, no one was to receive “seconds.” Several workers did comment on this and felt that the plant was unfair in their application of the rules.

While de Forest (1994. p. 38) did state that rules in Mexico are “an indication of what ought to be, but not necessarily what’s done”, this is precisely what workers are not satisfied with. They spoke very highly about plants that adhered to policies equally among the workers as well as longing for changes to occur when policies were unfair.

Pay

The maquiladora employees interviewed were very expressive in their thoughts and beliefs about the low pay. The majority of the workers mentioned at one point that the pay was too low and many were hoping for increases in other areas (i.e. overtime, bonuses, profit-sharing) to compensate for the low fixed pay. One interviewee went as far as saying.
“Some plants here give transportation and some don’t and some give lunch and others don’t, but that’s not important. The pay is still low. The other things are separate. If I could change something it would be that the pay, not just here but in all the plants. The pay is terribly low. Why do they do that to us? They will pay when they are burning in hell for everything they did to us.”

These results are in total contradiction to a recent study on maquiladora compensation that found higher fixed pay did not deter turnover intentions (Miller, Hom, & Gomez-Mejia, 2001). The majority of workers in this study expressed their dissatisfaction concerning the pay they were receiving. To support these recent findings, Young and Fort (1994) in comparing the wages of maquiladora and non-maquiladora workers with equivalent match in terms of social class background, age range, and urban experience, found “that maquiladora workers and their households are not as well paid or as well off economically as other workers and their households” (p. 667). Despite the low pay and living conditions apparent in maquiladora workers, the earnings, while they may be small, are vital to the household well-being.

Intention to stay

The higher number that “intend to stay” in the maquiladora is not surprising considering the economic downturn experienced by the maquiladora industry in the past couple of years (Canas & Coronado, 2002). From October 2000 to June 2002, 240,000 maquiladora jobs were lost and 76 percent of these losses came from plants on the border. Also the number of maquiladoras declined, from May 2001 to June 2002, 420 plant closed. 75% of them coming from border areas (Canas & Coronado, 2002). In addition, in a couple of the plants that were in this study, lay-offs had just occurred.
days prior to the interviews being conducted. Nevertheless, the "talk" of new plants ("Whirlpool to operate," 2003) and new opportunities for the coming years allow for several workers to plan on leaving to other plants.

Section Two

As mentioned in the beginning of the chapter, more elaborate statistical tests were also performed to seek further explanation and prediction of the worker's intention to remain in the maquiladora. Eight propositions based on Hofstede's model of national culture and the Mexican culture literature were developed and were tested using Logistic Regression. After testing for the assumptions of normality, it was discovered that the data was not normally distributed and also heteroscedasticity (unequal variances) was present. Variables were also examined for multicollinearity and considering the inter-relationships (positive and negative), tolerance values were not less than .1 and the VIF values were not greater than 10. Therefore, multicollinearity was not an issue for conducting statistical analysis. However, due to the fact that violations in the assumptions were determined, logistic regression was the appropriate method due to its relaxed rules in meeting normality. While multiple discriminate analysis (MDA) would have been the preferred choice, due to having an ordinal dependent variable (3 groups), MDA relies on strictly meeting the assumptions of normality. While adjustments to the dependent variable "intention to stay" had to be performed, logistic regression is the recommended technique due to being "less affected than MDA when the basic assumptions are not met" (Hair, Anderson, Tatham, & Black, 1995, p. 183). The adjustment made was having to group together the "maybe/unsure" and "not likely to remain" together. In other words, three groups were
transformed to two groups. The group “likely to stay” was categorized as “1” and the other group, “maybe/unsure” and “not likely to stay” was categorized as “0”. This change coincided with the goal of this study, to predict or explain group membership (that of “likely to remain” in the plant) by a set of independent variables (inducement categories) selected by the researcher that correspond to each proposition (See Table 11 in Chapter IV for listing).

The first table, Table 18, tests the potential differences between “likely to stay” and “maybe/not likely to stay” groups using only descriptive variables. These variables were tested using SPSS for Mann-Whitney U test for two independent samples (Gibbons, 1993). This specific test is the non-parametric equivalent to the classical t test. This analysis was conducted to examine demographic data and their effect if any on “intention to stay.” Based on the results, only age was significantly different between the groups. Examining the table, workers < 20 years are more likely to leave where the workers > 30 are more likely to stay. Following the table each proposition and its analysis will be discussed in detail.

*Findings on Propositions*

*Proposition One*

Proposition One is concerned with the collective nature apparent in Mexican society. According to Hofstede (1983), Mexico is seen as a collective society, that which cherishes relationships, camaraderie, and families. With that in mind, the inducement categories included in the analysis were families, social events, coworkers, and social networks. Logistic regression, “enter” method was performed with all propositions due primarily to the assumption that all of the independent variables
Table 18

*Descriptive Data of "likely to stay" and "unsure/not likely to stay"

<table>
<thead>
<tr>
<th></th>
<th>Likely to stay (n=36)</th>
<th>Unsure/not likely to stay (n=39)</th>
<th>Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>15</td>
<td>14</td>
<td>U=661.50</td>
</tr>
<tr>
<td>Female</td>
<td>21</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 20</td>
<td>5</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>20-30</td>
<td>21</td>
<td>24</td>
<td></td>
</tr>
<tr>
<td>31-41</td>
<td>10</td>
<td>4</td>
<td>U=528.5*</td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elementary</td>
<td>7</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Junior-High</td>
<td>22</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>High-School</td>
<td>7</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>Post HS</td>
<td>0</td>
<td>1</td>
<td>U=597.00</td>
</tr>
<tr>
<td>Marital Status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single/Sep/Wid</td>
<td>14</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>19</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Living Together</td>
<td>3</td>
<td>4</td>
<td>U=639.00</td>
</tr>
<tr>
<td>Tenure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 1 year</td>
<td>11</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>1-2</td>
<td>10</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>2-3</td>
<td>3</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>3-4</td>
<td>5</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>4-5</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>5-6</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>6-7</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>&gt;7 years</td>
<td>2</td>
<td>3</td>
<td>U=699.00</td>
</tr>
<tr>
<td>Dependents</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>20</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>5</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>4 or more</td>
<td>1</td>
<td>2</td>
<td>U=651.00</td>
</tr>
</tbody>
</table>

*<.05

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included would predict the presence or absence of "likely to stay". Table 19 displays
the Wald statistic for each independent variable entered in the analysis. As noted, each
inducement category was divided by positive and negative statements in an attempt to
better explain the dependent variable.

Table 19

Results of Logistic Regression: Proposition One

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(B)</th>
<th>95% C.I. for EXP(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Family Positive</td>
<td>.185</td>
<td>.432</td>
<td>.184</td>
<td>1</td>
<td>.668</td>
<td>1.204</td>
<td>.516  2.806</td>
</tr>
<tr>
<td>Family Negative</td>
<td>-8.236</td>
<td>57.324</td>
<td>.021</td>
<td>1</td>
<td>.886</td>
<td>.000</td>
<td>.000  1.65E+45</td>
</tr>
<tr>
<td>Social Events Positive</td>
<td>.167</td>
<td>.215</td>
<td>.602</td>
<td>1</td>
<td>.438</td>
<td>1.181</td>
<td>.776  1.799</td>
</tr>
<tr>
<td>Social Events Negative</td>
<td>-.450</td>
<td>.365</td>
<td>1.518</td>
<td>1</td>
<td>.218</td>
<td>.638</td>
<td>.312  1.304</td>
</tr>
<tr>
<td>Coworker Positive</td>
<td>.419</td>
<td>.193</td>
<td>4.728</td>
<td>1</td>
<td>.030*</td>
<td>1.520</td>
<td>1.042 2.218</td>
</tr>
<tr>
<td>Coworker Negative</td>
<td>-.271</td>
<td>.271</td>
<td>.999</td>
<td>1</td>
<td>.318</td>
<td>.763</td>
<td>.449  1.297</td>
</tr>
<tr>
<td>Network Positive</td>
<td>-.544</td>
<td>.447</td>
<td>1.481</td>
<td>1</td>
<td>.224</td>
<td>.580</td>
<td>.242  1.394</td>
</tr>
<tr>
<td>Network Negative</td>
<td>-7.368</td>
<td>33.316</td>
<td>.049</td>
<td>1</td>
<td>.825</td>
<td>.001</td>
<td>.000  1.4E+25</td>
</tr>
<tr>
<td>Constant</td>
<td>-.195</td>
<td>.535</td>
<td>.133</td>
<td>1</td>
<td>.715</td>
<td>.823</td>
<td></td>
</tr>
</tbody>
</table>

*p<.05

A review of the significance levels of the individual variables shows that on a
enter method of analysis, all the variables entered in the analysis; however, only
"coworker positive" made a significant contribution to the model (p. <.05). The
variable with the largest Wald statistic that of “coworker positive” was the most important discriminator that divides the two groups of those “likely to stay”, and the other group that combines “not sure”, and “not likely to stay.”

To determine the appropriate fitness of the data to the model, an examination of the chi-square is necessary. The chi-square when no predictors are used is 103.852. \( df = 1 \). When the eight variables were included in the regression, the chi-square decreased to 81.447. The reduction of the chi-square was 22.405, which, when evaluated with the appropriate \( df = 8 \) (degrees of freedom) was significant for \( p < .005 \). This significant difference in the chi-square indicates that the predictors contributed to the overall predictability of the model.

The statistic to be reviewed for overall “goodness of fit” of the model is the Hosmer and Lemeshow test (Hosmer & Lemeshow, 1989; Menard, 1995). The Hosmer and Lemeshow test assess how well the chosen model fits the data. This statistic tests the hypothesis that the observed data are significantly different from the predicted values from the model. So, in effect, we want a non-significant value for this test. For this particular model, the chi-square of 8.036 with \( df = 8 \) results in a non-significant p-value of .329. This non-significant result means that the model does predict the outcome variable.

The final statistic to be reviewed is the Cox & Snell \( R^2 \), similar to the \( R^2 \) in a linear regression in that it measures the proportion of the variation in the response that is explained by the model. The measure varies between 0 (predictors are useless at predicting the outcome variable) and 1 (model predicts the outcome variable
perfectly). Similar to $R^2$ in linear regression the closer it is to "1" the more the model predicts the outcome variable. The Cox & Snell $R^2$ square for this model equals .258.

**Summary of Proposition One Results**

While the model emerging from "relationship" related inducement categories was classified as "satisfactory" it is obvious that only one particular inducement contributed significantly to the model. "Coworker positive" was the inducement that demonstrated a significant difference between the "likely to stay" group and the "maybe and not likely to stay group". According to the odds ratio [Exp (B) = 1.5, it means that when "coworker positive" frequency increases by 1, the likelihood of the participants being in the "likely to stay" group increases by 1.5 times. The other variables did not contribute significantly to the model or in practical terms, there was no difference between the groups in relation to the other variables only "coworker positive".

Good relations with coworkers is very important in the maquiladora and based on the findings, this is what differentiates the "likely to stay" group with the other group that is "not sure" or "not likely to stay". Based on the results, the workers "likely to stay" had more significantly positive statements about their coworkers than the other group. In sum, Proposition One was as a whole significant in predicting the group membership likelihood of the subjects, although the seven non-significant predictors did substantially weaken the model. The seven variables did not contribute anything significant to the explained variance of the data. Nevertheless, Proposition One is supported.
Proposition Two

Proposition Two was developed mainly due to the higher number of females than males working in the maquiladoras specifically looking at the personal inducements possible (i.e. mother’s day and maternity related inducements). The personal inducements included, however, were seen as attractive to females as well as males. The categories included in this analysis were social events, recognition, bonuses, benefits, family, shifts, and plant policies (due to its maternity related procedures).

Logistic regression, “enter” method was performed due primarily to the proposition that indicated that all of the independent variables would predict the presence or absence of “likely to stay”. The following table displays the Wald statistic for each independent variable entered in the analysis. Table 20 shows all the variables in the equation.

To determine the appropriate fitness of the data to the model, an examination of the chi-square is necessary. The chi-square when no predictors are used is 103.852, \( df = 1 \). When the fourteen variables were included in the regression, the chi-square decreased to 84.724. The reduction of the chi-square was 19.126, which, when evaluated with the appropriate \( df = 14 \) (degrees of freedom) was not significant for \( p = .05 \) (the critical chi-square for \( p = .05 \) is 23.685. This non-significant difference in the chi-square indicates that the predictors did not contribute to the overall predictability of the model.

A review of the significance levels of the individual variables shows that on an enter method of analysis, two of the variables (bonus-negative and benefits-negative)
Table 20

Results of Logistic Regression: Proposition Two

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(B)</th>
<th>95% C.I. for EXP(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Lower          Upper</td>
</tr>
<tr>
<td>Social Events Positive</td>
<td>.003</td>
<td>.234</td>
<td>.000</td>
<td>1</td>
<td>.991</td>
<td>1.003</td>
<td>.634           1.586</td>
</tr>
<tr>
<td>Social Events Negative</td>
<td>-.220</td>
<td>.458</td>
<td>.230</td>
<td>1</td>
<td>.631</td>
<td>.803</td>
<td>.327           1.970</td>
</tr>
<tr>
<td>Family Positive</td>
<td>.098</td>
<td>.406</td>
<td>.059</td>
<td>1</td>
<td>.808</td>
<td>1.103</td>
<td>.498           2.445</td>
</tr>
<tr>
<td>Family Negative</td>
<td>-5.606</td>
<td>34.036</td>
<td>.027</td>
<td>1</td>
<td>.869</td>
<td>.004</td>
<td>.000          3.4E+26</td>
</tr>
<tr>
<td>Appreciation Positive</td>
<td>.140</td>
<td>.157</td>
<td>.787</td>
<td>1</td>
<td>.375</td>
<td>1.150</td>
<td>.845           1.565</td>
</tr>
<tr>
<td>Appreciation Negative</td>
<td>-.899</td>
<td>.549</td>
<td>2.687</td>
<td>1</td>
<td>.101</td>
<td>.407</td>
<td>.139           1.192</td>
</tr>
<tr>
<td>Bonus Positive</td>
<td>.269</td>
<td>.187</td>
<td>2.057</td>
<td>1</td>
<td>.151</td>
<td>1.309</td>
<td>.906           1.890</td>
</tr>
<tr>
<td>Bonus Negative</td>
<td>-.441</td>
<td>.223</td>
<td>3.930</td>
<td>1</td>
<td>.047*</td>
<td>.643</td>
<td>.416           .995</td>
</tr>
<tr>
<td>Benefits Positive</td>
<td>.434</td>
<td>.367</td>
<td>1.403</td>
<td>1</td>
<td>.236</td>
<td>1.544</td>
<td>.753           3.167</td>
</tr>
<tr>
<td>Benefits Negative</td>
<td>-1.131</td>
<td>.568</td>
<td>3.962</td>
<td>1</td>
<td>.047*</td>
<td>.323</td>
<td>.106           .983</td>
</tr>
<tr>
<td>Shifts Positive</td>
<td>.769</td>
<td>.732</td>
<td>1.105</td>
<td>1</td>
<td>.293</td>
<td>2.158</td>
<td>.514           9.054</td>
</tr>
<tr>
<td>Shifts Negative</td>
<td>-.199</td>
<td>.240</td>
<td>.690</td>
<td>1</td>
<td>.406</td>
<td>.820</td>
<td>.512           1.311</td>
</tr>
<tr>
<td>Plant Policies Positive</td>
<td>.454</td>
<td>.384</td>
<td>1.397</td>
<td>1</td>
<td>.237</td>
<td>1.575</td>
<td>.742           3.346</td>
</tr>
<tr>
<td>Plant Policies Negative</td>
<td>.009</td>
<td>.188</td>
<td>.002</td>
<td>1</td>
<td>.963</td>
<td>1.009</td>
<td>.698           1.457</td>
</tr>
<tr>
<td>Constant</td>
<td>-.288</td>
<td>.689</td>
<td>.174</td>
<td>1</td>
<td>.676</td>
<td>.750</td>
<td></td>
</tr>
</tbody>
</table>

*p<.05

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made a significant contribution to the model at the p. < .05 level. The Hosmer and Lemeshow test for this particular model results in the chi-square of 14.867 with df = 14 and a significance of .038. Thus, this significant value makes it an "invalid" model. Nevertheless, a closer look at the significant variables in the table is warranted.

A non-parametric test for testing the variables was used (Gibbons, 1993). The Mann-Whitney U test specifically tested "bonus-negative" and "benefit-negative" as well if there is a difference between the two groups (n1 = 36, n2 = 39). For bonuses-negative, U = 495.000 (p< .05) and benefits-negative, U=655.500 (p<.05) thus both variables did result in differences between the two groups. Conducting a crosstabs with both of the variables indicate that workers "unsure/likely to leave" are more likely to give negative comments about bonuses and benefits related issues than workers that are "likely to stay."

Summary of Proposition Two Results

While the model emerging from "personal" related inducement categories was classified as "unsatisfactory", only two particular inducements contributed significantly to the model. All the categories, positive and negative of social events, recognition, bonuses-positive, benefits-positive, family, shifts, and plant policies did not predict group membership of plant employees. In practical terms, given these "personal" inducements of benefits and bonuses, we can predict that workers that give more negative related statements are more likely not to stay in the plant. Even though we did find significant inducements in this analysis, the model as a whole was not significant. Therefore, Proposition Two is not supported.
Proposition Three

Proposition Three is concerned with the patronage and sponsorship nature apparent in Mexican society. With that in mind, the inducement categories included in the analysis were supervisors and managers (positive and negative). The following table displays the Wald statistic for each independent variable entered in the analysis.

Table 21

Results of Logistic Regression: Proposition Three

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>95% C.I. for EXP(B)</th>
<th>Exp(B) Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisor Positive</td>
<td>.187</td>
<td>.105</td>
<td>3.162</td>
<td>1</td>
<td>.075</td>
<td>1.205</td>
<td>.981</td>
<td>1.480</td>
</tr>
<tr>
<td>Supervisor Negative</td>
<td>-.024</td>
<td>.072</td>
<td>.107</td>
<td>1</td>
<td>.744</td>
<td>.977</td>
<td>.848</td>
<td>1.125</td>
</tr>
<tr>
<td>Manager Positive</td>
<td>.212</td>
<td>.234</td>
<td>.815</td>
<td>1</td>
<td>.367</td>
<td>1.236</td>
<td>.780</td>
<td>1.956</td>
</tr>
<tr>
<td>Manager Negative</td>
<td>-.863</td>
<td>.430</td>
<td>4.028</td>
<td>1</td>
<td>.204</td>
<td>.422</td>
<td>.182</td>
<td>.980</td>
</tr>
<tr>
<td>Constant</td>
<td>-.273</td>
<td>.408</td>
<td>.447</td>
<td>1</td>
<td>.504</td>
<td>.761</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

A review of the significance levels of the individual variables shows that on a enter method of analysis, none of the variables entered in the analysis reached $p = .05$ level. The model was not able to discriminate between the two groups in regard to their likelihood of remaining in the plant specifically looking at "patronage" and "sponsorship" inducements provided mainly by the supervisors and managers. Of the four predictors, none were significant at the $p = .05$. In addition, when only the constant was included in the regression equation the chi-square equaled 103.852
with $df = 1$. After the variables are included the chi-square decreased to 96.202 with $df = 4$. The difference from including only the constant to including the variables was not significant (chi-square = 7.650, $df = 4$, $p = .105$). Also, the Cox & Snell $R^2$ resulted in .097, which indicates a very low amount of variance explained by the model.

**Summary of Proposition Three Results**

The model emerging from "patronage" related inducement categories, was classified as "unsatisfactory". It is obvious that not one particular inducement contributed significantly to the model. All the categories, positive and negative of supervisors and managers did not discriminate between the two groups. In practical terms, given these "patronage" inducements we cannot predict which of the two groups a worker is likely to belong to. Based on these results, Proposition Three is not supported.

**Proposition Four**

Proposition Four is concerned with the recognition and attention based on the workers performance in the maquiladora. With that in mind, the inducement categories included in the analysis were bonuses, recognition/appreciation, and promotion. The following table displays the Wald statistic for each independent variable entered in the analysis.

A review of the significance levels of the individual variables shows that on an enter method of analysis, all the variables entered in the analysis; however, only "promotion positive", "bonuses positive", and "bonuses negative" made a significant contribution to the model ($p < .05$). These variables with the significant Wald statistics
were the most important discriminators that differentiate the two groups of those “likely to stay”, and the other group that combines “not sure”, and “not likely to stay.”

Table 22

Results of Logistic Regression: Proposition Four

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(B)</th>
<th>95% C.I. for EXP(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appreciation Positive</td>
<td>.047</td>
<td>.151</td>
<td>.099</td>
<td>1</td>
<td>.753</td>
<td>1.048</td>
<td>.781 1.408</td>
</tr>
<tr>
<td>Appreciation Negative</td>
<td>-.530</td>
<td>.419</td>
<td>1.602</td>
<td>1</td>
<td>.206</td>
<td>.588</td>
<td>.259 1.337</td>
</tr>
<tr>
<td>Promotion Positive</td>
<td>.622</td>
<td>.260</td>
<td>5.703</td>
<td>1</td>
<td>.017*</td>
<td>1.862</td>
<td>1.118 3.101</td>
</tr>
<tr>
<td>Promotion Negative</td>
<td>-.361</td>
<td>.259</td>
<td>1.942</td>
<td>1</td>
<td>.163</td>
<td>.697</td>
<td>.419 1.158</td>
</tr>
<tr>
<td>Bonuses Positive</td>
<td>.327</td>
<td>.155</td>
<td>4.446</td>
<td>1</td>
<td>.035*</td>
<td>1.387</td>
<td>1.023 1.879</td>
</tr>
<tr>
<td>Bonuses Negative</td>
<td>-.520</td>
<td>.251</td>
<td>4.270</td>
<td>1</td>
<td>.039*</td>
<td>.595</td>
<td>.363  .974</td>
</tr>
<tr>
<td>Constant</td>
<td>-.194</td>
<td>.517</td>
<td>.140</td>
<td>1</td>
<td>.708</td>
<td>.824</td>
<td></td>
</tr>
</tbody>
</table>

*p<.05

As important as the significant variables are summary statistics about the model as a whole are necessary. The chi-square with \( df = 1 \), when no predictors are used is 103.852. When the six variables were included in the regression, the chi-square decreased to 77.682 (\( df = 6 \)). The reduction of the chi-square was 26.170, which, when evaluated with the appropriate \( df = 6 \) (degrees of freedom) was significant for \( p = .000 \), the critical chi-square for \( p = .005 \) is 18.548. This significant difference in the chi-square indicates that the predictors contributed to the overall predictability of the model. When only the constant was included the chi-square was 103.852 and with the
variables it was reduced to 77.682. This figure represents a very good model once the variables were entered.

The Hosmer and Lemeshow Goodness of Fit test for this particular model indicates the chi-square of 8.036 with \( df = 6 \) to be a non-significant value of .670. This means that the model's estimates fit the data at an unusually high level. The final statistic to be reviewed is the Cox & Snell \( R^2 \). This value equals .295, which indicates that a considerable amount of variance is explained by the model.

**Summary of Proposition Four Results**

While the model emerging from "work-related recognition" inducement categories was classified as "satisfactory" it is obvious that only three inducements contributed significantly to the model. "Promotion- positive", "bonuses positive" and "bonuses negative" were the inducements that demonstrated a significantly discrimination between the "likely to stay" group and the "maybe and not likely to stay group". According to the odds ratio [\( \text{Exp} (B) \)] of 1.862, means that when "promotion-positive" frequency increases by 1, the likelihood of the participants staying in the "likely to stay" group increases by 1.862; also the odds ratio [\( \text{Exp} (B) \)] of 1.837 means that when "bonuses-positive" frequency increases by 1, the likelihood of the participants staying in the "likely to stay" group increases by 1.837. The other variables did not contribute significantly to the likelihood of staying.

Having a good experience in being recognized is very important in the maquiladora and based on the findings, this is what differentiates the "likely to stay" group with the other group that is "not sure" or "not likely to stay". Based on the results, the workers "likely to stay" had more significantly positive statements about
their promotions and bonuses than the other group. In sum, Proposition Four was as a whole, significant in predicting the group membership likelihood of the subjects, although the three non-significant predictors did substantially weaken the model. The three variables did not contribute anything significant to the explained variance of the data. Therefore, based on the appropriate of the model to the variables, Proposition Four is supported.

*Proposition Five*

Proposition five was developed mainly due to the low socio-economic status experienced by workers in the maquiladoras. The inducements that satisfy their basic needs included in this analysis were pay, bonuses, benefits, transportation, overtime, plant conditions, medical facilities, security, job availability, health, and cafeteria. The following table displays the Wald statistic for each independent variable entered in the analysis. The variable “medical facilities-negative” was not included in the analysis since it was constant for all cases.

A review of the significance levels of the individual variables shows that on an enter method of analysis, only three of the variables made a significant contribution to the model at the p. = .05 level. Of the twenty-two predictors, health negative, bonus-negative, and benefit-positive were significant contributors at the p < .05. To verify the fit of the model with the variables, the Hosmer and Lemeshow goodness of fit test was calculated (Hosmer and Lemeshow, 1989; Menard, 1995). For this particular model, the chi-square of 3.768 with df = 21 results in a non-significant value of .806. This means that the model’s estimates fit the data at an extremely acceptable level.
Table 23

Results of Logistic Regression: Proposition Five

<table>
<thead>
<tr>
<th>B</th>
<th>S. E</th>
<th>Wald</th>
<th>df</th>
<th>Sig</th>
<th>Exp(B)</th>
<th>95% C.I. for EXP(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pay Positive</td>
<td>.221</td>
<td>.899</td>
<td>.061</td>
<td>.805</td>
<td>1.248</td>
<td>1.214 - 7.264</td>
</tr>
<tr>
<td>Pay Negative</td>
<td>-.279</td>
<td>.412</td>
<td>.459</td>
<td>.498</td>
<td>.757</td>
<td>.338 - 1.695</td>
</tr>
<tr>
<td>Bonus Positive</td>
<td>.016</td>
<td>.240</td>
<td>.004</td>
<td>.947</td>
<td>1.016</td>
<td>.634 - 1.628</td>
</tr>
<tr>
<td>Bonus Negative</td>
<td>-.727</td>
<td>.339</td>
<td>4.598</td>
<td>.032*</td>
<td>.484</td>
<td>.249 - .939</td>
</tr>
<tr>
<td>Benefits Positive</td>
<td>1.032</td>
<td>.495</td>
<td>4.354</td>
<td>.037*</td>
<td>2.808</td>
<td>1.065 - 7.406</td>
</tr>
<tr>
<td>Benefits Negative</td>
<td>-1.203</td>
<td>1.171</td>
<td>1.055</td>
<td>.304</td>
<td>.300</td>
<td>.030 - 2.982</td>
</tr>
<tr>
<td>Transportation Positive</td>
<td>.238</td>
<td>.674</td>
<td>.125</td>
<td>.724</td>
<td>1.269</td>
<td>.339 - 4.757</td>
</tr>
<tr>
<td>Transportation Negative</td>
<td>.542</td>
<td>.483</td>
<td>1.260</td>
<td>.262</td>
<td>1.720</td>
<td>.667 - 4.431</td>
</tr>
<tr>
<td>Overtime Positive</td>
<td>-.364</td>
<td>.611</td>
<td>.355</td>
<td>.552</td>
<td>.695</td>
<td>.210 - 2.303</td>
</tr>
<tr>
<td>Overtime Negative</td>
<td>.086</td>
<td>.454</td>
<td>.036</td>
<td>.850</td>
<td>1.090</td>
<td>.447 - 2.653</td>
</tr>
<tr>
<td>Cafeteria Positive</td>
<td>-.027</td>
<td>.798</td>
<td>.001</td>
<td>.973</td>
<td>.973</td>
<td>.204 - 4.649</td>
</tr>
<tr>
<td>Cafeteria Negative</td>
<td>.472</td>
<td>.264</td>
<td>3.190</td>
<td>.074</td>
<td>1.603</td>
<td>.955 - 2.689</td>
</tr>
<tr>
<td>Security Positive</td>
<td>-2.001</td>
<td>1.322</td>
<td>2.291</td>
<td>.130</td>
<td>.135</td>
<td>.010 - 1.804</td>
</tr>
<tr>
<td>Security Negative</td>
<td>3.267</td>
<td>1.186</td>
<td>3.076</td>
<td>.081</td>
<td>2.024</td>
<td>2.565 - 268.4</td>
</tr>
<tr>
<td>Job Available Positive</td>
<td>-.441</td>
<td>.474</td>
<td>.863</td>
<td>.353</td>
<td>.644</td>
<td>.254 - 1.630</td>
</tr>
<tr>
<td>Job Available Negative</td>
<td>1.951</td>
<td>.197</td>
<td>2.655</td>
<td>.103</td>
<td>7.034</td>
<td>.673 - 73.489</td>
</tr>
<tr>
<td>Plant Cond. Positive</td>
<td>1.056</td>
<td>1.066</td>
<td>.982</td>
<td>.322</td>
<td>2.876</td>
<td>.356 - 23.252</td>
</tr>
<tr>
<td>Plant Cond. Negative</td>
<td>-.580</td>
<td>.428</td>
<td>1.838</td>
<td>.175</td>
<td>.560</td>
<td>.242 - 1.295</td>
</tr>
<tr>
<td>Health Positive</td>
<td>1.340</td>
<td>.781</td>
<td>2.949</td>
<td>.086</td>
<td>3.821</td>
<td>.827 - 17.64</td>
</tr>
<tr>
<td>Health Negative</td>
<td>-2.024</td>
<td>.729</td>
<td>7.707</td>
<td>.006*</td>
<td>.132</td>
<td>.032 - .551</td>
</tr>
<tr>
<td>Constant</td>
<td>.139</td>
<td>1.213</td>
<td>.012</td>
<td>.909</td>
<td>1.149</td>
<td></td>
</tr>
</tbody>
</table>

*p<.05

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Also, the Cox & Snell $R^2$ value is .503. However, we have to be very cautious about the results as far as the overall model due to its high number of variables entered. There is a risk of overfitting the data. Nevertheless, a closer look at “bonus-negative,” “health-negative” and “benefits-positive” is warranted.

The results of the Mann-Whitney U test specifically looking at these three variables and if there is a difference between the two groups ($n_1$ = 36, $n_2$ = 39) was calculated. Apparently there is a significant difference between the two groups based on “health-negative,” $U = 479.500$ at $p < .01$, “benefits-positive,” $U = 524.000$ at $p < .05$, and “bonus-negative,” $U = 495.000$ at $p < .05$. Conducting a crosstabs with the variables indicate that workers “unsure/likely to leave” are more likely to give negative comments about “health” and “bonuses” related issues than workers that are “likely to stay.” However, workers that are “likely to stay” will state more positive comments about benefits than workers “unsure/not likely to stay.”

To determine the appropriate fitness of the data to the regression model, an examination of the chi-square is necessary. The chi-square when no predictors are used is 103.852 with $df = 1$. When the 21 variables were included in the regression, the chi-square decreased to 51.338 with $df = 21$. The reduction of the chi-square was 52.464, which, when evaluated with the appropriate $df = 21$ (degrees of freedom) was significant for $p = .000$, the critical chi-square $p = .005$ it is 41.401. This significant difference in the chi-square indicates that the predictors contributed to the overall predictability of the model.
Summary of Proposition Five Results

While the model emerging from “basic needs” related inducement categories was classified as “satisfactory” it is obvious that only three particular inducements contributed significantly to the model at the p< .05 level. All the categories, positive and negative of pay, transportation, overtime, plant conditions, medical facilities, security, job availability, and cafeteria were not considered to be different between the two groups. However, the model-fitting abilities of all variables were satisfactory. The only categories found significantly to contributing to the model were “health-negative,” “bonus-negative,” and “benefits-positive”. As mentioned earlier, based on the findings in reference to “basic needs,” the “unsure/not likely to stay” group is more likely to say negative statements about “health,” and “bonuses,” than the group that will likely to stay in the maquiladora. In regard to “benefits”, based on the odds ratio [Exp (B)] of 2.808, when “benefit-positive” frequency increases by 1, the likelihood of the participants being in the “likely to stay” group increases by 2.808 times. In sum, Proposition Five was as a whole, significant in predicting the group membership likelihood of the subjects, although the 18 non-significant predictors did substantially weaken the model. The 18 variables did not contribute anything significant to the explained variance of the data. However, as a result of the overall findings, Proposition Five is supported.

Proposition Six

Proposition Six was also developed mainly due to the higher number of workers in the low socio-economic level. This proposition specifically looked at extrinsic inducements that would seem favorable to the workers. The categories included in this
analysis were pay, bonuses, benefits, transportation, overtime, cafeteria, and medical facilities. Table 24 displays the Wald statistic for each independent variable entered in the analysis. The variable "medical facilities-negative" was not included in the analysis since it was constant for all cases.

Table 24

*Results of Logistic Regression: Proposition Six*

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(B)</th>
<th>95% C.I. for Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pay Positive</td>
<td>-.369</td>
<td>.635</td>
<td>.338</td>
<td>1</td>
<td>.561</td>
<td>.691</td>
<td>.199 2.400</td>
</tr>
<tr>
<td>Pay Negative</td>
<td>.030</td>
<td>.248</td>
<td>.015</td>
<td>1</td>
<td>.904</td>
<td>1.030</td>
<td>.634 1.675</td>
</tr>
<tr>
<td>Bonus Positive</td>
<td>.229</td>
<td>.165</td>
<td>1.932</td>
<td>1</td>
<td>.165</td>
<td>1.258</td>
<td>.910 1.737</td>
</tr>
<tr>
<td>Bonus Negative</td>
<td>-.667</td>
<td>.250</td>
<td>7.115</td>
<td>1</td>
<td>.008*</td>
<td>.513</td>
<td>.315 .838</td>
</tr>
<tr>
<td>Benefits Positive</td>
<td>.745</td>
<td>.334</td>
<td>4.988</td>
<td>1</td>
<td>.026*</td>
<td>2.107</td>
<td>1.096 4.052</td>
</tr>
<tr>
<td>Benefits Negative</td>
<td>-.628</td>
<td>.583</td>
<td>1.162</td>
<td>1</td>
<td>.281</td>
<td>.534</td>
<td>.170 1.672</td>
</tr>
<tr>
<td>Transp. Positive</td>
<td>.092</td>
<td>.423</td>
<td>.047</td>
<td>1</td>
<td>.828</td>
<td>1.096</td>
<td>.479 2.509</td>
</tr>
<tr>
<td>Transp. Negative</td>
<td>.130</td>
<td>.312</td>
<td>.173</td>
<td>1</td>
<td>.677</td>
<td>1.139</td>
<td>.618 2.098</td>
</tr>
<tr>
<td>Overtime Positive</td>
<td>-.031</td>
<td>.470</td>
<td>.004</td>
<td>1</td>
<td>.947</td>
<td>.969</td>
<td>.386 2.436</td>
</tr>
<tr>
<td>Overtime Negative</td>
<td>.163</td>
<td>.269</td>
<td>.368</td>
<td>1</td>
<td>.544</td>
<td>1.177</td>
<td>.695 1.993</td>
</tr>
<tr>
<td>Cafeteria Positive</td>
<td>.081</td>
<td>.505</td>
<td>.026</td>
<td>1</td>
<td>.872</td>
<td>1.084</td>
<td>.403 2.915</td>
</tr>
<tr>
<td>Cafeteria Negative</td>
<td>.118</td>
<td>.165</td>
<td>.508</td>
<td>1</td>
<td>.476</td>
<td>1.125</td>
<td>.814 1.555</td>
</tr>
<tr>
<td>Medical Facil. Positive</td>
<td>-1.287</td>
<td>.804</td>
<td>2.561</td>
<td>1</td>
<td>.110</td>
<td>.276</td>
<td>.057 1.335</td>
</tr>
<tr>
<td>Constant</td>
<td>-.418</td>
<td>.690</td>
<td>.368</td>
<td>1</td>
<td>.544</td>
<td>.658</td>
<td></td>
</tr>
</tbody>
</table>

*p<.05

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A review of the significance levels of the individual variables shows that on an enter method of analysis, only two of the variables made a significant contribution to the model at the p = .05 level. Of the thirteen predictors, only two (Bonus-negative and Benefit Positive) was significant at the p < .05. The Hosmer and Lemeshow test for this particular model shows the chi-square of 7.141 with df = 13 to result in a non-significant value of .414. This non-significant value means that the model’s estimates fit the data at an acceptable level. In addition, the Cox & Snell R$^2$ value is .288.

However, we have to be very cautious about the results as far as the total model due to its high number of variables entered. There is a risk of overfitting the data. In sum, it is clear that there is a significant difference between “likely to stay” and “unsure/not likely to stay” groups when it comes to the inducements of “bonus-negative” and “benefits-positive.”

The next important results necessary for assessing fit are the summary statistics about the model as a whole. The chi-square when no predictors are used is 103.852 with df = 1. When the 13 variables were included in the regression, the chi-square decreased to 78.365 with df = 13. The reduction of the chi-square was 25.487, which, when evaluated with the appropriate df = 13 was significant for p = .05, the critical chi-square = 22.362, and for p = .025, it is 24.736. This significant difference in the chi-square indicates that the predictors contributed to the overall predictability of the model.

**Summary of Proposition Six Results**

While the model emerging from “extrinsic” related inducement categories was classified as “satisfactory” it is obvious that only two particular inducements
contributed significantly to the model at the p<.05 level. The categories found significant were “bonus-negative” and “benefit-positive”. Thus there is a significant difference between the two groups when it comes to stating negative comments about “bonuses” and positive remarks about “benefits”. The “unsure/not likely to stay” group is more likely to mention negative statements about “bonuses” than the “likely to stay” group. Based on the odds ratio [Exp (B)] of 2.107, when “benefits-positive” frequency increases by 1, the likelihood of the participants being in the “likely to stay” group will increase by 2.107 times. In sum, Proposition Six was as a whole significant in predicting the group membership likelihood of the subjects, although the 11 non-significant predictors did substantially weaken the model. The 11 variables did not contribute anything significant to the explained variance of the data. Nevertheless, Proposition One is supported.

Proposition Seven

Proposition Seven was also developed based on the low socio-economic level apparent in lower-level maquiladora workers. The categories included in this analysis included “faster and more visible” inducements. The categories were pay, bonuses, recognition, cafeteria, social events, job availability, overtime, transportation, and medical facilities. Table 25 displays the Wald statistic for each independent variable entered in the analysis. The variable “medical facilities-negative” was not included in the analysis since it was constant for all cases.

A review of the significance levels of the individual variables shows that on an enter method of analysis, only two variables (bonus-negative and appreciation/recognition-negative) made a significant contribution to the model at the p. < .05 level.
### Table 25

**Results of Logistic Regression: Proposition Seven**

<table>
<thead>
<tr>
<th></th>
<th>B</th>
<th>S.E.</th>
<th>Wald</th>
<th>df</th>
<th>Sig.</th>
<th>Exp(B)</th>
<th>95% C.I for EXP(B)</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pay Positive</td>
<td>-.106</td>
<td>.603</td>
<td>.031</td>
<td>1</td>
<td>.861</td>
<td>.900</td>
<td>.276</td>
<td>2.933</td>
<td></td>
</tr>
<tr>
<td>Pay Negative</td>
<td>.209</td>
<td>.263</td>
<td>.631</td>
<td>1</td>
<td>.427</td>
<td>1.233</td>
<td>.736</td>
<td>2.065</td>
<td></td>
</tr>
<tr>
<td>Bonus Positive</td>
<td>.320</td>
<td>.203</td>
<td>2.484</td>
<td>1</td>
<td>.115</td>
<td>1.377</td>
<td>.925</td>
<td>2.043</td>
<td></td>
</tr>
<tr>
<td>Bonus Negative</td>
<td>-.496</td>
<td>.212</td>
<td>5.466</td>
<td>1</td>
<td>.019*</td>
<td>.609</td>
<td>.402</td>
<td>.923</td>
<td></td>
</tr>
<tr>
<td>Transp Positive</td>
<td>.038</td>
<td>.458</td>
<td>.007</td>
<td>1</td>
<td>.933</td>
<td>1.039</td>
<td>.423</td>
<td>2.550</td>
<td></td>
</tr>
<tr>
<td>Transp Negative</td>
<td>.481</td>
<td>.365</td>
<td>1.741</td>
<td>1</td>
<td>.187</td>
<td>1.618</td>
<td>.792</td>
<td>3.307</td>
<td></td>
</tr>
<tr>
<td>Overtime Positive</td>
<td>-.031</td>
<td>.468</td>
<td>.004</td>
<td>1</td>
<td>.947</td>
<td>.969</td>
<td>.387</td>
<td>2.425</td>
<td></td>
</tr>
<tr>
<td>Overtime Negative</td>
<td>.086</td>
<td>.277</td>
<td>.096</td>
<td>1</td>
<td>.756</td>
<td>1.090</td>
<td>.633</td>
<td>1.876</td>
<td></td>
</tr>
<tr>
<td>Cafeteria Positive</td>
<td>-.134</td>
<td>.490</td>
<td>.075</td>
<td>1</td>
<td>.785</td>
<td>.875</td>
<td>.335</td>
<td>2.283</td>
<td></td>
</tr>
<tr>
<td>Cafeteria Negative</td>
<td>.238</td>
<td>.169</td>
<td>1.979</td>
<td>1</td>
<td>.159</td>
<td>1.269</td>
<td>.911</td>
<td>1.768</td>
<td></td>
</tr>
<tr>
<td>Medical Fac. Positive</td>
<td>.234</td>
<td>.895</td>
<td>1.842</td>
<td>1</td>
<td>.201</td>
<td>.096</td>
<td>.017</td>
<td>.556</td>
<td></td>
</tr>
<tr>
<td>Job Available Positive</td>
<td>-.624</td>
<td>.388</td>
<td>2.584</td>
<td>1</td>
<td>.108</td>
<td>.536</td>
<td>.250</td>
<td>1.147</td>
<td></td>
</tr>
<tr>
<td>Job Available Negative</td>
<td>.685</td>
<td>.753</td>
<td>.827</td>
<td>1</td>
<td>.363</td>
<td>1.984</td>
<td>.453</td>
<td>8.678</td>
<td></td>
</tr>
<tr>
<td>Appreciation Negative</td>
<td>-1.204</td>
<td>.525</td>
<td>5.255</td>
<td>1</td>
<td>.022*</td>
<td>.300</td>
<td>.107</td>
<td>.840</td>
<td></td>
</tr>
<tr>
<td>Social Events Positive</td>
<td>-.135</td>
<td>.253</td>
<td>.286</td>
<td>1</td>
<td>.593</td>
<td>.873</td>
<td>.532</td>
<td>1.435</td>
<td></td>
</tr>
<tr>
<td>Social Events Negative</td>
<td>.418</td>
<td>.547</td>
<td>.582</td>
<td>1</td>
<td>.445</td>
<td>1.518</td>
<td>.520</td>
<td>4.437</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-.149</td>
<td>.829</td>
<td>.033</td>
<td>1</td>
<td>.857</td>
<td>.861</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p < .05

The Hosmer and Lemeshow goodness of fit test was analyzed. For this particular model, the chi-square of 8.202 with df = 17 results in a non-significant value of .315. However, we have to be very cautious about the results as far as the total
model due to its high number of variables entered. A more detailed examination of
"bonus-negative" and "appreciation/recognition-negative" was performed to explain
their significance to the model.

The Mann-Whitney U test was used to specifically look at "health-negative"
and "bonus-positive" and if there is a difference between the two groups (n1 = 36, n2 = 39). Apparently there is a significant difference between the two groups based on
"bonus-negative" U= 495.000 at p < .01 and "appreciation/recognition-negative," U=
588.000 at the p < .05. Conducting a crosstabs with both of the variables indicate that
workers "unsure/likely to leave" are more likely to give negative comments about
"bonuses" and "appreciation/recognition" related issues than workers that are "likely to
stay."

In sum, it is clear that there is a significant difference between "likely to stay"
and "unsure/not likely to stay" groups when it comes to "bonus-negative" and
"appreciation/recognition-negative" inducements. The "unsure/not likely to stay"
group is more likely to state negative comments based on "bonuses" and
"appreciation/recognition" than the group that is "likely to stay."

To determine the appropriate fitness of the data to the model, an examination of
the chi-square is necessary. The chi-square when no predictors are used is 103.852
with \(df = 1\). When the 17 variables were included in the regression, the chi-square
decreased to 74.653. The reduction of the chi-square was 29.199, which, when
evaluated with the appropriate \(df = 17\) was significant for \(p = .05\), the critical chi-square
= 27.587. This significant difference in the chi-square indicates that the predictors
contributed to the overall predictability of the model. In evaluating the Cox & Snell \(R^2\)
for this model, the value is .322. This indicates that 32% of the variance is explained by the model and its predictors.

**Summary of Proposition Seven Results**

All the categories, positive and negative of pay, bonuses, recognition, cafeteria, social events, job availability, overtime, transportation, and medical facilities were not considered different between the two groups. In practical terms, given these "faster and more visible" inducements we can predict which of the two categories a worker is likely to belong to based on negative "bonuses" and negative "appreciation/recognition". Based on the findings, workers that are "unsure/likely to leave" will have more negative comments to say about "bonuses" and "appreciation/recognition" inducements than workers that are "likely to stay". In sum, Proposition Seven was as a whole, significant in predicting the group membership likelihood of the subjects, although the 16 non-significant predictors did substantially weaken the model. The 16 variables did not contribute anything significant to the explained variance of the data. However, as a result of the overall findings, Proposition Seven is supported.

**Proposition Eight**

Proposition Eight is concerned with the high uncertainty avoidance nature apparent in Mexican society. According to Hofstede (1983), Mexico was seen as a high in uncertainty avoidance. With that in mind, the inducement categories included in the analysis were "contingent or at-risk" inducements. The categories included were bonuses, benefits, overtime, flexibility, and promotion. Table 26 displays the Wald statistic for each independent variable entered in the analysis.
A review of the significance levels of the individual variables shows that on a enter method of analysis, all the variables entered in the analysis; with "bonus-positive", "bonus-negative", "benefit-positive", and "promotion-positive" making a significant contribution to the model (p. <.05). These variables were the most important discriminators that divide the two groups of those "likely to stay", and the other group that combines "not sure", and "not likely to stay."
The next step is to analyze the summary statistics about the model as a whole. The chi-square when no predictors are used is 103.852 with \( df = 1 \). When the 10 variables were included in the regression, the chi-square decreased to 70.652. The reduction of the chi-square was 33.200, which, when evaluated with the appropriate \( df = 10 \) was significant for \( p = .000 \), the critical chi-square > 25.188. This significant difference in the chi-square indicates that the predictors contributed to the overall predictability of the model. In evaluating the Cox & Snell \( R^2 \) for this model, the value is .358. This indicates that 36% of the variance is explained by the model and its predictors.

Another important statistic is the Hosmer and Lemeshow Goodness of Fit test (Hosmer and Lemeshow, 1989; Menard, 1995). For this particular model, the chi-square of 4.465 with \( df = 10 \) results in a non-significant value of .725. This means that the model’s estimates fit the data at an extremely acceptable level.

**Summary of Proposition Eight Results**

While the model emerging from “contingent or at risk” related inducement categories was classified as “acceptable” with four variables contributing significantly to the model. “Bonus-positive”, “Bonus-negative”, “Benefits-positive”, and “Promotion-positive” were the inducements that demonstrated a significant difference between the “likely to stay” group and the “maybe and not likely to stay group”. According to the odds ratio \([\text{Exp} \ (B)]\) of 1.426, it means that as “benefits-positive” frequency increases by 1, the likelihood of the participants “likely to stay” increases by 1.426 times. The odds ratio \([\text{Exp} \ (B)]\) of 2.172 means that when “bonuses-positive” frequency increases by 1 the likelihood of the participants being
in the “likely to stay” group increases by 2.172. Finally, the odds ratio \([\text{Exp (B)}]\) of 2.236 means that when “promotion-positive” frequency increases by 1 the likelihood of the participants being in the “likely to stay” group increases by 2.236. As mentioned in other propositions where “bonus-negative” was significant, this variable also distinguished both groups. In practical terms, the “unsure/not likely to stay” group is more likely to state negative statements in regard to bonuses than the other group. As for the other variables, they did not contribute significantly to the model or in practical terms, there was no statistical difference between the groups in relation to the other variables.

Contingent or at-risk inducements are considered unwanted in the maquiladora workforce due entirely to their uncertainty. As for explaining if a worker will likely to leave or stay, these variables were able to distinguish between both groups. Individuals with positive statements to say about benefits, bonuses, and promotion are more likely to stay in the plant. On the other hand, if more negative statements regarding bonuses are mentioned, these workers are more likely to leave.

In sum, Proposition Eight was as a whole, significant in predicting the group membership likelihood of the subjects, although the seven non-significant predictors did substantially weaken the model. However, as a result of the overall findings, Proposition Eight is supported.

Summary

The following table, Table 27, lists the proposition and the overall results that of “supported” or “not supported.” Examining the results, based on the findings of the propositions, the following inducements statistically differ between the two groups:
**Table 27**

*Summary of Findings*

<table>
<thead>
<tr>
<th>Proposition</th>
<th>Details</th>
<th>Supported/Not Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proposition 1:</td>
<td>Due to the collective nature and need for relationships apparent in Mexican lower-level employees, the more family-oriented or relationship-oriented inducements, the more attracted employees were and the more likely present employees will remain in their job.</td>
<td>Supported</td>
</tr>
<tr>
<td>Proposition 2:</td>
<td>Due to the high number of women employed as lower-level workers in the maquiladoras, the more personal inducements are, the more attracted employees were, and the more likely present employees will remain in their job.</td>
<td>Not Supported</td>
</tr>
<tr>
<td>Proposition 3:</td>
<td>Due to the high power distance, a high need for patronage (sponsorship) becomes apparent in Mexican lower-level employees; thus, the more inducements offered by the maquiladora, the more potential employees were attracted and the more likely employees will remain at their present job.</td>
<td>Not Supported</td>
</tr>
<tr>
<td>Proposition 4:</td>
<td>As a result of the need for patronage (sponsorship) apparent in Mexican lower-level employees, the more inducements that recognizes and rewards them based on their work performance, the more attracted employees were and the more likely present employees will remain in their job.</td>
<td>Supported</td>
</tr>
<tr>
<td>Proposition 5:</td>
<td>Due to the low socio-economic status apparent in Mexican lower-level employees, the more inducements offered by the maquiladora that satisfy their basic needs (or lower-level needs) the more attracted employees were and the more likely present employees will remain in their job.</td>
<td>Supported</td>
</tr>
<tr>
<td>Proposition 6:</td>
<td>Due to the low socio-economic status apparent in Mexican lower-level employees, the more extrinsic inducements offered by the maquiladora, the more attracted employees were and the more likely present employees will remain in their jobs.</td>
<td>Supported</td>
</tr>
<tr>
<td>Proposition 7:</td>
<td>Due to the low socio-economic status apparent in lower-level maquiladora workers, the more visible and faster inducements can be received, the more attracted employees were and the more likely present employees will remain in their jobs.</td>
<td>Supported</td>
</tr>
<tr>
<td>Proposition 8:</td>
<td>Due to the fairly high uncertainty avoidance present in lower-level maquiladora workers, the more inducements that are contingent or at risk, offered by the maquiladora, the less attracted employees were and the more likely the present employees will leave their job.</td>
<td>Supported</td>
</tr>
</tbody>
</table>
Coworker-positive, bonus-positive, bonus-negative, benefit-positive, benefit-negative, promotion-positive, health-negative, and appreciation/recognition negative. These inducements were statistically different between the groups "likely to stay" and the "unsure/not likely to stay."

There were several inducement categories that were not included in any of the propositions and deserve to be analyzed for differences. A Mann-Whitney U test (n1 = 36, n2 = 39) to test for differences between means when there are two separate groups was conducted on the following positive and negative inducements of job, plant culture, education, plant conditions, hours, learn & development, location, training, plant size and HR department. According to the results, only "job-positive" was significant (U = 435.500) at the p< .01. Thus, the following table, Table 28 shows all of the inducements that were classified as statistically different between the two groups.

Table 28

Statistically Significant Inducements

<table>
<thead>
<tr>
<th>Coworker positive</th>
<th>Benefit negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonus positive</td>
<td>Bonus negative</td>
</tr>
<tr>
<td>Benefit positive</td>
<td>Health negative</td>
</tr>
<tr>
<td>Promotion positive</td>
<td>Appreciation/recognition negative</td>
</tr>
<tr>
<td>Job positive</td>
<td></td>
</tr>
</tbody>
</table>

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The workers that are “likely to stay” mentioned significantly more positive comments regarding coworkers, benefits, bonuses, promotions, and their job. On the other hand, workers that were “unsure/not likely to stay” mentioned significantly more negative comments regarding bonuses, benefits, health, and appreciation/recognition.

This chapter presented the results of the content analysis and statistical analysis that followed. Frequencies of the inducement categories were performed and explained. In addition, propositions developed were examined using logistic regression as well as other statistical tests (i.e. Mann-Whitney U). The discussion of the findings will be given in the following chapter.
CHAPTER VI

CONCLUSION

The outcome of the propositions reveals that Mexican culture, coupled with Hofstede's dimensions, does affect a maquiladora worker's "intention to stay." The propositional findings indicated that these particular level of workers are content and likely to stay due to relationship-oriented inducements, work performance-related inducements, extrinsic and more visible inducements, as well as inducements that satisfy their basic needs. Also, lower-level maquiladora workers are more likely to leave their jobs if they are discontent with contingent inducements. Each proposition's outcome including those "not supported" will be explained in the following sections.

This chapter is divided into several sub-sections. The first section will examine the findings of the propositions. The next section will look into the nine significant inducements as well as connect these particular inducements to the classic needs theories to determine the workers' needs. The next section will entail the development and assessment of needs as they relate to the inducements deemed important to the workers. The section that follows will focus on another goal of this dissertation, that of determining practical implications on what attracts and retains workers to a particular maquiladora. The remaining sections will discuss the
limitations of the study, future research, and ultimately closing with the final conclusion.

Discussion of Findings

Propositions

Proposition One

The need for relationships and camaraderie was evident based not only on the statistical significance but also the practical. Maquiladora workers enjoy meeting people and talking to their coworkers during working hours. They frown upon the idea when their supervisors forbid them to talk to each other while working. For many, especially women, this is the only opportunity they have to talk to anyone else outside their household. A female worker mentions the following, “The work environment with my coworkers is very relaxed but the supervisors don't let us talk at all. We would enjoy working better (if they did).” Many workers enjoy coming to work because of their friends. For instance, a female worker noted the following, “I got to be good friends with my coworkers. That’s what I like the most about working here.” She also mentioned, “If I didn’t feel comfortable working with them (coworkers), I would quit.”

The interviews were filled with positive comments about the enjoyment they experience when social events are held. For the worker, the events that are sponsored by the plant, like the Posadas and anniversary parties, are enjoyable to participate in. They look forward to being with their coworkers outside the realm of work and especially not under the scrutiny of their supervisors. Thus plants engaging more in activities for the socialization of the workers as well as allowing the workers to talk to
each other is viewed favorably by the workers and as a result are more likely to stay in the particular maquiladora.

**Proposition Two**

Personal inducements were not significant when it came to retaining workers. While personal inducements like bonuses and benefits were seen to significantly differentiate between workers that will stay or go, as a whole, personal inducements were not likely to affect a worker's intention to stay. The assumption carried by this proposition was that workers, especially women, like to be “singled” out and take pleasure in the attention they receive due to their gender. Examples include Mother's Day celebrations, pregnancy-related perks (i.e. eating and leaving early), and leniency on being late while being pregnant and increased tolerance time for getting to work. Since the majority of workers are women, this proposition was reasoned to be true.

However, based on the findings, the overall model was not significant and thus, not supported. Personal inducements did not differentiate between workers that will stay or leave. Apparently personal inducements due to gender were not seen as “attractive.” While many women did appreciate these particular services targeted to them, they attributed the services as obligatory rather than purposeful to satisfy them. The women felt that the plant is compelled to take care of pregnant women and thus not a factor in “intention to stay.”

**Proposition Three**

The “more the merrier” was the basis for Proposition Three. The assumption for this proposition was that lower-level maquiladora workers would be attracted and likely to stay in the plant, the more inducements they receive. The workers attribute
the "giving" of inducements to their supervisors and managers. However, for this particular sample, the model was not significant and thus not supported. For these particular inducements, the dependent variable, "likely to stay," was not affected. This finding means that there is no difference between the two groups based on the number of inducements they receive. While the conversations did point out the need for more inducements, they were particular in stating which ones.

Proposition Four

Inducements that recognize and reward workers based on their work performance were seen as significant in determining whether one is likely to stay or leave. While this proposition seems similar to Proposition Two, this proposition specifically includes "work performance-related" recognition. Many of the conversations included comments regarding how they were not recognized for their work only for their errors. The workers sought positive reinforcements when it came to their work performance and mostly in a monetary form like monetary bonuses not items like shirts, certificates, and sports jerseys. For example, this women comments about the "reward" for not being absent all year, "No, it doesn't get my attention. You are not absent all year and they give you a shirt." Another worker mentioned the need for recognition, "Based on the goal of the plant, if the workers meet it, they need to be rewarded so they can do it again." As the conversations dictated, there was a significant difference in the two groups regarding these types of inducements.

Workers that were more "satisfied" (i.e. gave more positive statements) about "work performance" inducements are more likely to stay in the maquiladora while workers...
that were “dissatisfied” (i.e. gave more negative statements) are more likely to leave their jobs.

Proposition Five

The ability to obtain a job, be in good health, and receive payment for their work are absolute necessities for the lower-level plant worker. These basic necessities served as the basis for Proposition Five. Based on the results, workers that are fulfilled with their satisfaction of basic needs (i.e. positive statements regarding basic necessity inducements) are more likely to stay in the particular plant than workers whom basic necessities have not been fulfilled (i.e. negative statements). While both groups are in the lowest socio-economic bracket, the first group seems to be more content on the fulfillment of their basic needs than the latter.

Proposition Six

Due to the worker’s economic status, Proposition Six was supported based on the fact that it is extrinsic inducements that they are looking for. Favorable extrinsic inducements like pay, bonuses, benefits, overtime, cafeteria, medical facilities and transportation were seen as significantly able to differentiate between the workers that will stay or go. A female worker signals her need for extrinsic rewards rather than verbal praise, “Positive comments like that shows that she (supervisor) appreciates me and they make me feel good, but I don't need good comments I need money for my family.” Workers that will likely stay were more content with extrinsic inducements (i.e. saying more positive comments) than workers that will likely not stay.
Proposition Seven

Being in the lowest income bracket, lower-level maquiladora workers work in order to provide for themselves and their families. Thus, the faster and more visible inducements are, the more likely the workers will be satisfied and consequently stay in the plant. Based entirely on their low economic status, this proposition was supported. Workers favorably mentioned how happy they were to receive a job in a short amount of time (one or two days) as well as receive bonuses and benefits by the end of the week. A male worker mentions, “I came one day and by the next day I was working already.” A female worker also states, “I was very happy that I was hired the first day. I did not have to be walking around looking for work.” This is important to them and as a result, the workers who had positive comments to say about these type of inducements are more likely to stay than those that stated negative comments about these inducements.

Proposition Eight

Being high in uncertainty avoidance, one would reason that in Mexico incentive pay would not work. However, based on this study, incentive pay is suitable and desired by lower-level workers. Yet they are not pleased with uncertainty when it comes to the amount or timing of the payment they are entitled to. When changes are made to their bonuses or benefits and other money-related inducements like overtime and promotion, they are not pleased and thus more likely to be unsatisfied and ultimately leave. This was indeed the fact for the support of Proposition Eight. For instance the following comment is from a woman who expressed her disappointment and frustration due to unknown changes in the plant.
"Workers see the small "aguinaldo", they see the small raises and they change the (national) holiday, these things quickly discourages people." Another worker expresses her frustration. "They should have told us what they were planning to do, don't just stop. Many of us were waiting for it (bonus) and it never came." Workers that proclaimed their dissatisfaction regarding "contingent" inducements are more likely not to stay in a maquiladora while others who were not affected with contingent inducements chose to stay in the maquiladora.

Summary of proposition findings

The supported propositions did indicate how culture plays a part in a worker's intention to stay in a maquiladora. These particular propositions contributed in the revelation of certain inducements that made the models significant. These significant inducements will be discussed in the next section.

Significant inducement categories

The results of the analysis brought to view the particular inducements that may play a role in predicting if a worker will likely stay or leave the maquiladora. This examination of inducement categories derived from the content analysis resulted in nine particular inducements that maquiladora managers should carefully take into consideration.

The results indicate that the chances that a maquiladora worker will stay are enhanced if coworker relations are positive, experiences performing their job are positive, promotion experiences are positive, and bonuses and benefits received are positive. The more of these five factors workers perceive to have in their favor, the better the possibility that workers will remain in the maquiladora. However, in
addition to determining which inducements positively aid in decreasing turnover, four other inducements were discovered in increasing turnover. The results indicate that chances that a maquiladora worker will leave are enhanced if experiences with appreciation/recognition are negative, health-related comments are negative, and benefits and bonuses received are negative. As for the remaining 23 inducement categories, while they were “important” since they were mentioned by the workers, they were not significant in differentiating the workers that will likely stay and those that will not likely stay.

Overall, while only nine inducement categories were considered “statistically significant” in determining workers that will “likely stay” or “unsure/not likely to stay,” all of the inducements are valuable in beginning to understand the needs of the lower-level maquiladora worker. The following section will begin by comparing the inducement categories with the classic needs theories.

Discussion of Theoretical Findings

One of the goals of this dissertation was to “test” the applicability of the classic needs theories (i.e. Maslow, Herzberg, & McClelland) to a sample of maquiladora workers. With this in mind, the theoretical frameworks previously established were expected to explain this unique sample’s needs as well. The findings will be discussed in the next section.

Assessment of Needs Theories

Now that we have found out the categories of inducements that are important to lower-level maquiladora workers, the next step is to find the “meaning” of these findings derived from our data through theoretical comparisons (Strauss & Corbin.
1998). Considering that no formal hypotheses were given, a general discussion of the findings coupled with the theory in question will be discussed in the following subsections.

Maslow's Hierarchy of Needs Theory

Physiological needs. Maslow describes physiological needs as "homeostasis" such as hunger and thirst. He does not go into a "laundry list" of what entails physiological needs, but he does mention "these needs are the most preponent of all needs" (p. 37). With respect to our particular sample, they are indeed "preponent."

Based on the interviews, the worker's basic needs include monetary-type inducements (i.e. pay, benefits, bonuses, overtime) as well as transportation, job availability, health and cafeteria.

Regardless of which maquiladora I was in, the interviews were encompassed with the pleas of how basic needs were not being met and the workers' desire for plant management to focus on these particular insufficiencies. A female worker comments on the situation, "I don't think I am ever going to make enough." In US literature, this demand would be considered "ground-breaking" since basic necessities are considered "adequately satisfied" (Porter, 1961, p. 1). Even so, in maquiladora literature, pay was not seen as a retention method (Miller et al., 2001). This is contradicting the interviewed workers' comments that repeatedly stated that low pay (a lack of a basic necessity) was the driving force to leave a particular maquiladora and that a higher pay was an attraction to go to another plant. A female worker states, "This friend (in the plant) told me that we should go to the other plant that paid more money and so we went. I had to go to the plant that paid the most." An increase in
monetary-related inducements like pay, bonuses, and overtime were continuously mentioned as “needed” for survival and for thoughts of leaving not to surface. Additional comments focused on the workers’ pressures to not have their pay reduced, for instance a male worker mentions the following, “I don’t want to be late, or absent or do anything that will decrease my pay. I really need the money.”

**Safety needs.** Maslow (1970, p. 39) mentions safety needs as “security; stability; dependency; protection; freedom from fear, from anxiety and chaos; need for structure, order, law, limits; and strength in the protector.” To a certain extent, some of these elements may be characterized under the need for patronage (i.e. dependency, protection, and strength in the supervisor). One can make the comparison between those specific factors and the supervisor’s obligation and dutiful responsibilities to the workers that is apparent with this particular sample.

**Belongingness and love needs.** Considering all the inducement categories that involve a familial or affiliation aspect (coworkers, family, social events, and networks), there is no doubt that this particular need is very important to the worker. Earlier sections have brought to terms the collective nature of Mexicans and this particular characteristic is carried into the workplace. Workers enjoy a good time in the workplace and enjoy being with their coworkers “outside” of work like during breakfast, lunch and afternoon breaks. Due to the long hours of work involved in a maquiladora, this time given to interact with each other is the only time they have to relax with their friends. After work social activities are virtually none, especially for the women with the added responsibilities of child-care and home maintenance.
However for the men, a new trend is surfacing due to the demands of work endured by both the husband and the wife. For many working couples, child-rearing responsibilities have to be shared equally. They rely on working in different shifts (preferably in the same plant, since shift hours differ among plants) in order to take turns caring for their children without the expense of child-care. As a result, the need for "adult" conversation and social activities during working hours is necessary.

**Esteem needs.** Maslow (1970, p. 45) claimed "all people in our society have a need for a stable, firmly based, usually high evaluation of themselves for self-respect, or self-esteem, and for the esteem of others." This need includes the desire for recognition, attention, importance, status, and appreciation. If this need is not met, feelings of helplessness and failure develop (Maslow, 1970).

These feeling of helplessness and failure were unfortunately present while speaking to the workers. The sentiments of "failure" and "lost opportunities" filled the majority of the conversations. Many of the male workers desired opportunities to perform other more challenging jobs; specifically for the recognition they felt they deserved for their continuous high levels of work performance and seniority. For many workers, several years had gone by without an indication of how they were doing or even an opportunity to do something else. For instance, a female worker stated the following, "There are people here that have been here 5-6 years and they are in the same position." More importantly, for these workers who are members of a very low socio-economic class in Mexico, their desire for recognition or promotion was based mainly on the monetary increases that go along with these inducements. A male worker commented the following, "The weekly pay we get is barely enough for
the necessities, so we depend on the over time to buy other things.” One could argue that for these workers recognition and promotion are just a means to fulfilling lower level physiological needs. The following comment expressed by a male worker sums it up, “This (monetary bonuses) also motivates us to work harder. We know that if we work harder and make more production, we can receive more money.”

**Self-Actualization needs.** According to Maslow (1970, p. 46), self-actualization refers to a “man’s desire for self-fulfillment, namely to the tendency for him to become actualized in what he is potentially.” While the need to self-actualize was not expressively clear throughout the interviews, there was a clear indication that a need to learn and develop was present. The idea of improving oneself was apparent in many of the interviews. To become “self-actualized” is for the individual to perform at high levels in what the person is “fitted” for and to be content (Maslow, 1970). Unfortunately, for many lower level maquiladora workers, they are not content in what they are doing. This is clear due to high negative responses in the “Job” inducement category. For the majority of the maquiladora workers this level may never be reached due to their discontent of the job and not having a choice as far as the job they are performing. Relating to this theme, a woman worker stated the following comment, “Many don’t like it here, but where else are we going to work?”

**Summary of Maslow’s Hierarchy**

While Maslow never claimed his theory to generalize to all cultures, he did have confidence in that his proposed needs would be similar. Thus, it is clear that one could fit Maslow’s needs to “coincide” with the needs evident by the workers’ interviews. But what is important to emphasize is that unlike US-based samples
whom seek upper-level satisfaction like esteem and self-actualization needs, this particular sample seeks lower-level physiological needs. Thus, for this theory to be useful to lower-level workers, lower-level needs must be emphasized. The needs expressed by the workers were overwhelmingly concentrated on basic necessities. A worker comments, “The thing is that in Mexico it is just for the food. You earn just to get by, just for food.” Another worker states a similar conclusion, “I have a responsibility to myself, I need to work in order to eat.” As mentioned earlier, this particular need is usually “forgotten” or assumed met by organizational leaders.

_Herzberg's Two-Factor Theory_

Herzberg et al., (1959) found that when the respondents in their study felt happy with their jobs, they responded with factors that were related to the particular job they were performing as well as situations that made them feel that they were performing satisfactory. On the other hand, when the respondents reported unhappy situations, they mainly were associated with “conditions that surround the doing of the job” (Herzberg et al., 1959, p. 113). In this dissertation, similar to Herzberg et al., (1959) a listing of inducement categories were developed based on positive and negative comments. Appendix D display the rankings based on frequencies of the positive and negative inducement categories. An overview of the highest ranking in each category will be discussed.

As seen by the frequencies of positive inducements, the “supervisor” category was the most mentioned in a positive attribution and second highest in the negative list. Whether the workers were “likely to stay” or “unsure/likely to leave” they seek respect and equal treatment from their supervisors. As mentioned earlier, the
supervisor has responsibilities beyond what is expected and any deviation results in negative comments. According to Herzberg et al., (1959), supervision is considered a "hygiene" meaning that good supervision will not lead to a positive job attitude, only that the worker will not be dissatisfied. A worker states her disappointment with her supervisor. "They think that just because they are supervisors they think they are better than us, they try to humiliate us in front of other coworkers and other supervisors to show that they are important." Another worker mentions this. "The supervisor exploits us. He knows he is the supervisor and does whatever he wants with us." Finally a worker stated what supervisors should focus on, "I know that supervisors have other things on their mind, that they feel is more important. But the workers are the ones doing the job, what is more important than that?" The high positive and negative statements do indicate the "need" for supervisors to be "good" supervisors in order for a worker to make positive comments about them. A male worker recommends the following, "Getting to know the worker better makes the worker trust you and want to work for you."

Another similarity to Herzberg et al., (1959) was the "job" category. "Job" was the most mentioned "negative" experience as well being fifth in the positive list. Negative comments included their frustration with the job. A male worker comments, "I would like to change positions to something else. I just want to do something else. Perhaps each year have a different position." Based on these figures, the job itself is very important, but not a motivator to the workers and thus similar to Herzberg et al., (1959) is a hygiene. However, many workers that were more "likely to stay" in the
plant mentioned their job as a positive experience than workers that were “unsure/not likely to stay.”

On the other hand, there were several inducement categories that were contradicting to Herzberg et al., (1959) findings. One example is the “appreciation/recognition inducement.” Herzberg et al., (1959) found that “recognition” leads to a positive job attitude and thus a “motivator.” In this research, workers that were more “likely to leave” or “unsure” responded with more negative comments associated with “appreciation/recognition” than the workers that are “likely to stay.” However, we need to remember that while showing appreciation is wanted by the workers, monetary rewards are preferred as noted by the following worker, “But what do we gain with a "congratulations." They want us to work harder for the same pay. What do we gain by working harder? They should give us something extra for working (harder). That is not motivation for us.” In this particular situation, while workers would like encouraging comments and signs of appreciation and recognition, it is not a “motivator” as Herzberg et al., (1959) explained.

Finally, there is the inducement category of pay. With pay, bonuses will be included due to bonuses being monetary. In addition, pay can also be seen as being associated with “plant policies” due to the majority of the policies mentioned like tolerance, pay categories, and absentee punishment resulted in payroll deductions (or increases). The majority of the statements regarding the inducement of “Pay” were indeed “negative.” Whether workers were “likely to stay” or “unsure/not likely to stay” pay concerns were often negative. While Herzberg et al., (1959) classified “Pay” as hygiene factor since “salary defines the job situation” (p. 83), in this
particular scenario, “Pay” is indeed a motivator. A worker mentions the following, "That motivates us to work hard all the time because as you move up the categories your pay also moves up." Another worker states, “The pay is better here even when I had just started I was getting paid more than in the other plants.” However, as evidenced by the interviews, pay can also be considered hygiene. In reference to turnover reasons, “Pay” was the leading cause for leaving a particular plant or employment. A male worker comments the following, “They (workers) quit if they hear that another plant offers more money and more ‘prestaciones’.” Another worker mentions, “If an opportunity presents itself, say in Matamoros that pays better, I will probably go.” Finally another worker comments on why he left the third maquiladora plant he worked in, “I liked the (previous) job and I earned good money. But my friend told me about this job that paid a little more so I wanted to come here.” Many of the workers interviewed were “more likely to stay” if pay was increased as well as “not likely to stay” if they found another employment with higher pay.

Summary of Herzberg’s Two-Factor Theory

Herzberg et al., (1959) research project was unique and the inspiration for this researcher to “go to the source,” and discover the feelings, thoughts, and opinions about maquiladora employment through the eyes of the lower-level maquiladora worker. While many of the same factors were produced, they were not equally seen as “satisfiers” or “dissatisfiers” and sometimes seen as both “hygiene” and “motivator” as witnessed for the inducement of “Pay.” A worker comments on this theme, “There is always something about the plant and different people like different things about the same plant. What one likes, the other doesn’t.” Thus, as most often witnessed in
reference to Herzberg's findings, is that one man's motivator is another man's
hygiene. A worker sums it up nicely when asked what motivates his coworkers, "It
all depends on the person and what their needs are."

McClelland's Needs Theory

Need for Achievement. McClelland (1985, p. 228) meant the need for
achievement to be "doing something better for its own sake, for the intrinsic
satisfaction of doing something better." In this respect, this particular "need for
achievement" was not apparent in this particular sample of lower-level maquiladora
workers. While some workers did claim to demonstrate a need to be more productive
workers than others, their sole reason was for an extrinsic benefit, be it a particular
bonus or a monetary reward. A worker mentions his attribution towards overtime,
"But we like getting extra time because we earn more money." Another worker
mentions her idea of achievement, "They should give us a bonus or some big prize,
not just a certificate. After 5 years I think we deserve more than that." (talking about
the reward of a certificate for working 5 years). For all workers, the incentive to
work was a transactional agreement. Work was performed for pay. The need for
achievement as intended by McClelland (1985) was not observed in this particular
sample of maquiladora workers. A worker sums it up, "But I would like to have a
higher position. I would like to better myself for no reason other than for reasons of
economy. The thing is that an operator's salary is very low. And life here is too
expensive as to compared to Posa Rica. Here I have to pay rent, water, and
electricity. As for the operators we work just to live day by day."
Need for Affiliation. The need for relationships and friendship among workers was evident based on the high number of statements regarding coworkers and social events. A female worker echoes this sentiment, “I look forward to coming to work because of my friends.” Another worker states, “I like to work and also my coworkers. I look forward to talking to them.” Another worker mentions the following regarding social events, “Any type of activity that involves the workers outside of work is fun and needed for the worker to feel excited about working here.” Thus, in this respect, the need for affiliation is indeed high and definitely a “need” applicable to this particular sample of lower-level workers. A female worker mentions, “While one will not leave if they do not have parties or celebrations, having them makes us feel good and happy to work here.”

Need for Power. The need for power is the desire to impact, control, or influence another person or group (McClelland, 1985). While many men in this study did demonstrate the need to be promoted to be leaders in their particular workgroup, their underlying need was not to control others but for the increase in pay they would receive upon receiving this higher position. A male worker explains, “I really think that they should open the opportunity for the capable people. There are many of us that can do it. There are many hard workers here. I guess it is because of the necessity and we need more money.” Women, on the other hand, rarely aspired to be in a higher position with “power” even though they too had a high need for additional monetary resources. Their concern was their lack of education and experience necessary to be leaders of a group. They refused to accept additional responsibility and control over their group. A female worker stated the following, “No, I am fine
where I am at. I'm comfortable in what I am doing. There is more pressure and responsibility in higher positions and with my daughters and husband I don't think I can handle that."

**Summary of McClelland's Needs**

In sum, McClelland's Needs had only one similarity in reference to the needs of lower level workers. The need for affiliation was perceived through the interviews and also shown to be a factor in a worker's "intention to stay". As for the other two needs, there is no indication that lower-level workers desire to "achieve" for intrinsic reasons or to "control" other coworkers.

**Summary of Needs Theories**

While an attempt was made to try to apply current needs theories to this particular sample, it was unsuccessful. It is clear that these theories are not totally applicable to this sample and should not be applied. Any prescriptions for attempting to satisfy the needs of lower-level maquiladora workers should adhere specifically to the specific worker's characteristics (Hulin & Triandis, 1981).

**The Discovery of Maquiladora Workers' Needs**

As proposed in this dissertation, the inducements that affect intention to remain and leave can be analyzed to discover the underlying needs of lower level maquiladora workers. By way of the inducement categories and propositions, an attempt was made through the mode of discovery in determining maquiladora workers' needs. The needs developed are "Need for Basic Necessities," "Need for Patronage," "Need for Relationships," "Need for Stability/Order," and "Need for Development." These needs will be discussed in the following sections.
Need for Basic Necessities

Proposition Five was developed due to the obviously low standards of living experienced by all lower-level maquiladora workers. Their claims and pleas for the inability to make ends meet was unmistakably clear throughout the interviews. For instance, a woman states her need for additional money, "Everything I make goes to pay the (children’s) school and then day care also. I will not have any money left after making those expenses." Another worker states, "Well, the workers need money, it really is not enough to live." But what are "basic necessities" for the maquila worker?

Based on the interviews and also addressed in Proposition 5, basic needs are anything related to money (pay, bonuses, overtime, and benefits), health (health, medical facilities, and plant conditions), job (transportation, job availability, and security), and food (cafeteria). A male worker states his frustration in providing for his family, "Pay has not changed much in 9 years." Another worker states her lack of providing the basic necessities for her family, "What they pay us is not enough." Additional comments by the maquiladora workers pertaining to their need for basic necessities are shown in Appendix E.

Need for Patronage

Based on the results of Proposition Three that indicated the "need for patronage" or sponsorship as being detrimental in predicting the likeliness for a worker to remain in the plant, coupled with the fact that "Supervisor" inducement category was the highest in frequency counts, confidently one can state that "need for
patronage (sponsorship)” is extremely high and very important for lower level workers in the workplace. A male worker mentions the following comment, “Supervisors and managers need to keep their eyes open to what is going on with the workers.”

For the maquiladora workers, the supervisor is expected to provide for them and look out after them like a “father-figure.” A worker mentions his thoughts on supervisors, “I think if it is going to affect us they (supervisors) need to tell us. Even if they think it may not affect us, they need to let us know.” The more assistance, respect, and attention they receive from their immediate “leader,” the more workers’ trust and admiration strengthens toward him. A worker mentions the following advice to supervisors, “Getting to know the worker better makes the worker trust you and want to work for you.” A male worker mentions what he would do with his workers if he would be a supervisor, “I would listen to them and take what they say into consideration. I would trust them in what they said and I would try to work with them as much as possible.” Appendix F includes additional passages taken from separate interviews that describe this relation.

Need for Relationships

Proposition One reflects on the need for relationships. The importance of this need to the workers is highly significant according to the frequency data (403 total). For many of the maquiladora workers, relationships and camaraderie amongst each other is of major importance. For especially the female workers, the friendships gained with their co-workers are most essential to their job satisfaction. A female worker states her motivation to come to work, “I’m already getting used to the job and
especially my friends. That's what makes me get up early and come to work.”

Coworkers have influence in making the workplace a good or bad place to work in. A female worker states, “We work many hours together so we cherish our friendship for the sake of our job.” Another worker mentions, “I like my work, but the relationship I have with my coworkers is very important to the job and if they don't respect me I don't need to be here.” Also plants providing social events like Halloween and anniversary parties, and providing soccer teams are events that the workers look forward to participating in. For more examples, view Appendix G that includes comments taken from the interviews.

Need for Order (Stability)

In reviewing the propositions, Proposition 8 refers to the high uncertainty avoidance and the categories that comprise it. In addition, the frequency data resulted in a high number (237) for “plant policies.” All statements for that category coupled with Proposition 8 categories (675) totaled 912. In view of this, lower-level workers certainly place importance on stability and order in the workplace. As stated in describing uncertainty avoidance, workers frown on uncertainty of rewards and changes in their work environment.

In the interview conversations, anxiety and nervousness is clearly indicated based on changes in policies, layoffs, or merely uncertainty of receiving rewards. A worker states her feelings about the uncertainty of layoffs, “We did not know anything about the layoffs, and who was next.” A worker expresses her thoughts, “They tell us to be patient and that there will be changes. What changes will occur? They haven’t told us anything so many grow impatient and leave. They should give
us a time frame so we know.” Additional comments by the workers can be read in Appendix H.

Need for Development

The last dimension extracted from the interviews and validated by the frequencies is “Need for development/improvement”. Summing inducement categories of “promotion”, “flexibility”, “education,” and “learning & development”, one can safely state that lower-level workers want to improve their lives through being promoted, being moved to new and different positions, and being involved in classes inside or outside of the plant. A male worker expresses his desire to move to a higher position, “Well, I do like it here and I do plan on staying here. There is going to be opportunities for better positions with more pay later. So I want to “superar”, move up to a higher post. I know that I can do it.” All for the sake of learning new and different tasks and ultimately being rewarded financially (we are back to basic necessities). A male worker states, “I would like an opportunity to move up. I don't want to stay in the same level.” A female worker states, “I want to improve myself, for my family and their well-being.” This desire to improve their proficiency and knowledge was clear in the majority of the interviews. A male worker states the following, “For the ‘confianza’ people, they do pay all the cost of school. And that's my goal. I want to move up to a ‘confianza’ position so that they will pay for all my school costs in order to learn English.”

While some, especially women, seemed satisfied in their present situation, they also expressed their desire to gain from their experiences in the maquiladora. A female worker states, “I like to be moved to different jobs, that way I can learn new
things." A female worker thinks about the possibility of moving to a higher position upon receiving more education, "With more education and the years I have here, I think that I would take a higher position. I know that my supervisor values the work I do." Some additional commentaries relevant to this theme are included in Appendix I.

Summary of Workers Needs

The dimension of needs of lower level workers extracted by way of the interviews and supported by the frequencies of the inducement categories, are as follows in order of frequencies (highest to lowest).

- Need for Basic Necessities
- Need for Order/Stability
- Need for Patronage
- Need for Development/Improvement
- Need for Relationships

Only one need, Need for Relationships, is exactly the same as the "belonging and love needs" as stated by Maslow (1970) and Need for Affiliation (McClelland, 1970). While the others may show "some" similarities (i.e. safety needs has qualities as "need for patronage"), the bottom line is that the needs dimensions extracted from the interviews and categories are distinctive and unique to this particular sample.

Looking at the frequencies of the needs, the "Need for Basic Necessities" is the highest with 1141 statements by the workers, referring to the aspect of "basic necessities". This dimension includes pay, bonuses, benefits, transportation, overtime, plant conditions, medical facilities, security, job availability, health and cafeteria.
Based on the high frequencies, this particular need is of the highest importance to the workers and based on the findings, these needs are not being met by the maquiladoras. Also noting the high number of negative statements regarding basic necessities of 775 (approximately 70%), this finding is contradicting to a previous statement, "organizations have done a better job of satisfying the basic needs of their workers" (Kovach, 1987, p. 59).

Many studies, unfortunately, have not tested an organization’s attempt to satisfy "physiological needs." For instance, Porter (1961, p. 1) did not include any questions relating to "the most preponent needs, physiological needs" in his study due to those particular needs being "so adequately satisfied". Thus, how does one imply that basic needs like physiological needs are satisfied if the questionnaires/survey surrounding the studies are not addressing these particular needs? In this study it was evident based on the interviews that basic needs were not being met by the maquiladoras.

Discussion of Practical Implications of Findings

Attraction in the maquiladoras

One goal of this dissertation was to discover what "attracts" workers to certain maquiladoras. The interviews clearly indicated that there is no "attraction" present. Their high "need for basic necessities" does not allow for selective practices when looking for a job. Many of the interviewees along with their friends and family came from other parts of the country and acquiring a maquiladora job became their most important objective. While they would have preferred to work alongside friends and family, most of the time that was not possible. Thus, time being of the essence and
rather than wait for an opening where a relative or friend worked in, they would seek work elsewhere, anywhere.

Therefore, even if the particular plant was considered "attractive," unemployed individuals overlooked the attractiveness in order to secure a job whether it be in that particular maquiladora or another. The worker's statements related to this theme are obvious as seen in the commentaries on Appendix J.

In regard to maquiladora management, using the inducements as "attractive" methods are unnecessary and not successful. Many workers mentioned some "attractive" details (i.e. nice supervisors, high amount of bonuses, higher pay) about previous plants they or friends worked in but if these plants are not hiring, they will settle for any job. Even workers aware of "higher-paying" plants may not risk leaving due to their seniority and uncertainties involved in moving to another maquiladora.

These interviews revealed that a maquiladora's reputation is developed by "word-of-mouth" of current and previous workers and disseminated throughout the maquiladoras. Some are known as "good paying but hard work," "girls work," and "low pay, but easy work." All plants are judged by their pay and work levels. Conversations entailed workers regretting to "learn more" about the plant prior to beginning work since all they are concerned about is finding the opportunity to work and earn a living. If any recommendations are to be given to plant management concerning the recruitment of workers, the following would apply.
1. Make sure the applicant is well aware of what is manufactured in the plant. In addition, let them know if they will be standing or sitting. There were several male workers that expressed that if they would have known prior that the job entailed sewing they would not have accepted the job.

2. Similar to #1, is the idea of relaying a realistic job preview to the applicants. Make sure applicants are aware of the different shifts, overtime requirements, and hours per shift. Yes, potential applicants are in desperate need of a job; however, they do have other responsibilities (i.e. children) and arrangements to be concerned with.

3. Make sure applicants know the amount of pay before bonuses (i.e. transportation, attendance, food coupons) and benefits are included. Several cases mentioned that the plant gave them inaccurate information regarding the pay.

4. Finally, make sure applicants understand what is being told to them. Many recently hired workers spoke of initial "trainings" that were not clear and not all information was heard or understood. Many of the workers in this particular level in the maquiladoras have little to no education and require a more basic overview suitable to their level. As seen in this sample of workers, education levels ranged from elementary school to high school equivalent and thus their range of understanding is very different.
Retention in the maquiladoras

The dimensions created by the interviews and the inducement categories carry much significance in beginning to explain workers intention to stay in the organization. As stated in the previous section, maquiladora management should not focus mainly on "recruiting" and "attracting" potential applicants. Their focus should lie in the "retention" of their current employees. Throughout the interviews with workers, many suggestions were made to improve this very significant factor. On the other side, the talks I had with plant managers, echoed similar desires in minimizing turnover. If both sides want the same thing, why is it not happening? Why do workers continue to leave maquiladoras? Based on the interviews and findings of this dissertation, recommendations for management are the following.

1. Money as a motivator. As much as Herzberg et al., (1959) does not want to accept this belief, for lower-level maquiladora workers, money definitely is a motivator. However, do not just increase pay levels, workers want to "earn" their pay and like the idea that money is given based on higher work productivity. Many workers stated that there was no incentive to work at higher levels if everyone earns the same regardless of their work effort. Many workers introduced this concept that both sides will win. Since workers want more pay, and management wants more production, reward individual workers that put more effort and produce at higher levels. In certain maquiladoras, this idea was expressed but also mentioned as "impossible" due to the inability to distinguish among "individual production." In this case, team rewards may be appropriate.
2. Training for supervisors. How difficult can it be to manage lower-level workers? It is apparent that this act is under-rated and taken for granted. The interviews were filled with comments regarding the unprofessional actions by supervisors. As stated throughout this dissertation, the expectations on the supervisor is “more than expected” and supervisors need to be prepared for this responsibility. Themes surrounding favoritism, inequality, harassment, profanity, undue pressure and stress, and yelling were very common in the workplaces. These workers are people, and should be treated with respect, not animals, like many mentioned they felt like.

3. Promotion from within. For many workers, their work careers will begin and end in a maquiladora. Their aspirations lie in learning everything they can about the plant and to someday surface above the “sindicato” (operator) rank to the prestigious rank of “confianza” (position of trust/management). Like mentioned in previous sections, the underlying motivator is to earn more money. Nevertheless, many workers commented on the pleasure they felt when a higher-level position would open and a fellow operator would receive the job. Many workers, while disappointed that they did not receive the job, they seemed pleased to hear that they were hiring from “their own.” This action by management is a motivator and leaves the possibility that one day, another operator will rise above the “sindicato” ranks. On the other hand, displeasure was obviously shown when certain maquiladoras would hire someone from the “outside”
at a much higher salary and not know anything about the plant or how things are done. There was a particular instance when a “new” technician was hired and he was asking the operators how to do a particular task. The workers desired a type of program that allowed operators to descend into higher positions through “hands-on” training and classes. Many workers echoed their sentiments that a “career-plan” for operators was necessary and a motivator to stay in the plant since there was something to work forward to.

4. Consistent rules and procedures. This recommendation would apply also to #2, since supervisors enforce most of the rules. However, there has to be consistency among the supervisors, HR department, and group leaders. Rules on deduction of pay, absentee excuses, tolerance violations, cafeteria rules, overtime schedules, shift changes, education reimbursements, amount of bonuses, and break times have to be clear and specific so that everyone will be aware of them. During the interviews, different workers working in the same plant, mentioned specific “rules” differently, like in the amount of attendance bonuses and food coupons, and whether they had a tolerance level or not. These basic inquiries have to be understood and applied to all so that there will be no “favoritism” in the eyes of the workers.

5. Recognition and appreciation. As mentioned in #1, money is a motivator; however, the act of recognizing and appreciating of employees is a must. Workers claimed that they only heard from the supervisors when they
were performing at a lower level. They never heard from the supervisors when they were doing a good job. This sentiment was heard throughout the maquiladoras that a gesture of appreciation was necessary. For many maquiladoras, the economy really affected their ability to show their appreciation to their workers. Where there used to be monthly and annual celebrations, there were none due to monetary constraints. For the workers, they look forward for these gatherings and feel unappreciated when other plants who are also in an economic crisis still manages to have at least cake and coke for its employees in celebrating the plant’s anniversary. As small as it could be, the act of appreciation must continue.

Summary of Discussion

The recommendations are based entirely on the interviews of the workers. No previous research was used. Prior to this dissertation, many suggestions to “attract” and “retain” maquiladora workers came from the managers or via surveys given to workers that resulted in inaccuracies. The most significant feature of this dissertation was the actual conversations with the workers themselves. Their feelings, opinions, and beliefs regarding attraction and retention issues in maquiladoras were openly expressed and used to derive the given recommendations.

Despite the strengths evident in conducting qualitative research there are several limitations that need to be addressed. In addition to the limitations, future research ideas and the final conclusion will be addressed in the concluding sections.
Limitations of the Study

This study must be seen as exploratory in that, while much of the literature describes many of the characteristics or inducements that "may be" favorable to lower-level maquiladora workers, to the author's knowledge no empirical research has specifically looked at which inducements are conducive in improving retention rates. Noting the significance in this study, attempts to meet the demanding standards of the scientific method were a main focus throughout the whole research process. Despite the overall efforts to procure this objective, the following sub-sections describe the limitations of this study that of methodology, sample size, interviewer bias, and social desirability bias.

Methodology

This dissertation's main goal was to determine the needs of lower-level workers. This task was accomplished as intended by analyzing the inducements that were mentioned by way of semi-structured interviews. Another objective of this dissertation was to determine which of the mentioned inducements significantly influenced a worker's "intention to stay". To accomplish this objective, propositions were developed and statistical analyses were conducted to determine the specific inducements that affect a worker's "intention to stay". The problem with the results is that the statements that were analyzed included the worker's current and prior maquiladora employment, as well as other type of employment. By way of projective questioning, workers also mentioned the maquiladora experiences of their spouses, relatives, and friends. All of the inducements mentioned were used to predict the
dependent variable of "intention to stay." Analysis should only have covered the individual worker's present employment commentaries.

This particular limitation was unforeseen which is expected due to the dissertation's exploratory nature. This limitation may be remedied, however; due to the overwhelming time and resources necessary, this undertaking will be performed as a future research project.

Sample size

Due to time limitations and adequate access to interview workers, it was important to set a time frame and a priori number of workers to interview (Miles & Huberman, 1994). Unlike quantitative research that deals with large numbers of workers to sample, this research was qualitative; thus preparations were done to work with a small sample of people. While the sample size was 75 workers, this number was adequate based on the purpose of the inquiry. As Patton (2002, p. 244) states, "There are no rules for sample size in qualitative inquiry." Nevertheless, the 75 workers that were interviewed did come from only five plants.

As stated earlier, gaining entrance into a plant is not an easy task, much less obtaining access to interview the workers. Substantial effort was involved to gaining entrance to plants that were different in sizes, location, and industry. Also, systematic random sampling was performed with the list of the employees of each of the plants. Unfortunately, generalizing the responses of 75 workers to the population of approximate 825,000 lower-level production employees in Mexico is not possible, but these "face-to-face" interviews did allow for the important themes to emerge from the workers themselves. More qualitative studies in other areas in Mexico are necessary.
Interviewer Bias

Patton (2002) said it best when advising students thinking about conducting qualitative research. He states that one needs to “prepare to be changed” (p. 35). Concentration and focus was necessary and maintained in remaining in an objective mode while listening to workers’ beliefs and especially their personal experiences.

Tape-recording the interviews also alleviated the intent to write down only personally subjective thoughts. In addition, an experienced inter-rater was used in every single phase of the content analysis as well as subsequent analyses.

Social Desirability Bias

Another bias of concern is social desirability bias. Social desirability bias occurs when people do not report accurately or truthfully certain behaviors not deemed acceptable by the majority (Nederhof, 1985). Even though the a priori questions served mainly as a guide, caution was exercised against asking questions that were leading and anticipating of a desirable answer. The researcher insisted to the interviewees that “there is no right or wrong answer” to the questions.

In addition, social desirability was also a concern due to the setting in which the interviews were held. All interviews were held in their prospective workplaces. It would seem difficult to state any negative aspects of the job while being tape-recorded. The workers faced a dilemma of whether to represent themselves favorably (stating just positive comments) or unfavorably (seen as a complainer or whiner and in a worst case scenario, being punished). In addition, in order to reduce social desirability bias, the researcher used projective questioning asking workers
"how their friends or relatives” would respond or react in certain situations (Sudman & Bradburn, 1982) as well as assuring total anonymity and confidentiality.

Even though precautions were set in place, the researcher found no bias apparent in the workers’ accounts. As mentioned in the results section, the “most-mentioned” inducement categories, that of supervisor, job, pay, and plant policies, the majority of the comments were negative. In addition, the negative comments were NOT attributed to their friends’ or relatives’ views, but their own. The workers demonstrated no fear in speaking on their views and perspectives concerning working in a maquiladora.

Even with the magnitude of the stated limitations, a large amount of future research will hopefully be initiated by way of this qualitative study. Future research projects will be discussed in the following section.

Future Research

The results of this qualitative/quantitative study contributed to the growing maquiladora literature especially in the human resources area. As claimed earlier, this research is one of the firsts to investigate lower-level workers’ needs by way of their most important inducements in the workplace. Despite of its milestone, it is clear that many uncertainties remain and inquiries that need investigating. These ideas for future examinations will be discussed in the following sub-sections.

*Longitudinal Study*

An area that this study can be improved on is to continue with the study but longitudinally. For some of the workers, working in a maquila is a temporal phase as noted by the high turnover rates and the average number of previous maquiladoras the
workers have worked in. It will be interesting to conduct a "follow-up" interview, one year from the original date. Considering the short length of time that is common among maquiladora workers to stay in one plant, much will be learned from the workers if they are no longer employed in the plant. If they are employed, another interview will be conducted. A comparison of their needs then and now will be noted and investigated.

**Development of an Standardized Instrument**

As noted in the "Literature Review" section, no previous study encompassed all the characteristics of this particular study. This study included qualitative methods in deriving inducement categories deemed important by an often-neglected sample, lower-level workers maquiladora. It also included quantitative methods in determining which inducements may be associated with reducing turnover among lower-level maquiladora workers. Utilizing both methods will allow for the development of a more standardized lists of inducements for a particular population, that of lower-level maquiladora workers.

Previous studies conducted on mostly US workers included a rank-based standardized list of "inducements" of which employees would rank the list according to what they deemed "most important (or most motivating)". As explained in an earlier chapter, that particular list would not be applicable with the sample from this study due mostly to cultural and socio-economic differences. By conducting this research, the inducements were allowed to emerge from the interviews, thus a possible "list" now is available. This listing facilitates surveying workers and thus further testing needs to be conducted.
Conclusion

The goal of this dissertation was to discover the needs of the lower-level maquiladora workers. On the way to discovering the worker's needs, categories of inducements were uncovered based on what is important to the workers. The categories worth mentioning include “supervisor,” “job,” “plant policies,” and “pay” related inducements. Using the categories, propositions were tested for confirmation. This act resulted in six out of the eight propositions being supported.

The needs of the workers were developed based on the frequencies of the inducement statements and compared with the established needs theories. There was little similarity between the lower-level maquiladora workers needs and the need categories established by Maslow, Herzberg, and McClelland. Nevertheless, this exploratory research did confirm that these theories are not sufficient to explain the needs of this particular sample.

This dissertation is by no means the answer to decreased absenteeism or turnover in maquiladoras. However, it is definitely a beginning. For maquiladora management focused on increasing retention rates, this dissertation offers suggestions that may be considered in developing adequate human resource management practices for this level of maquiladora workers. For the academic community it provides the strategies in contributing to this growing theme in maquiladora literature where the focus lies in management principles contingent on the worker's culture and background.
REFERENCES


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Appendix A

Interview Questions (English version)

Demographics
Gender
Age
Marital status
Children or dependents

Education

Previous Employment
1. How many jobs and types of jobs have you had including this one?
2. Is this your first maquiladora job? If not, how many have you worked in?
3. What was your previous job? How long was your stay?
4. What did you like about your previous job?
5. What did you dislike about your previous job?
6. Why did you leave?

Current Employment
7. Why did you want to work in a maquiladora?
8. How long have you worked in this maquiladora?
9. How did you hear about this job?
10. Why did you want to work at this particular maquiladora?
11. What did you find attractive about this particular maquiladora?
12. Tell me some things you like about your job.
13. Tell me some things you do not like about your job.
14. If you could change something about your job, what would it be?
15. Do you have relatives/friends working in this firm?
16. Why do you think they work here?
17. Have you had friends/relatives that have left this maquila?
18. If yes, why did they leave?
19. Do you have relatives/friends working in other maquiladoras?
20. Why do you think they work there?
21. What are some good things that they have mentioned about their jobs?
22. What are some bad things that they have mentioned about their jobs?
23. Do you have relatives/friends working in other types of jobs instead of maquiladoras?
24. What are some good things that they have mentioned about their (non-maquila) jobs?
25. What are some bad things that they have mentioned about their (non-maquila) jobs?

**Organization**

26. What are some things that you like about the maquila you work at?
27. What are some things that you do not like about the maquila you work at?
28. If you could make changes, what would they be?
29. Regarding friends or relatives that have left the maquila, what could the organization have done to keep them from leaving?

**Future**

26. How likely is it that you will stay in this maquila?
31. Where do you see yourself in three years?
32. What would you like to learn?
33. What would your friends in the maquila like to learn?
34. What position would you like to have?
35. What position would your friends like to have?
Appendix B

Interview Questions (Spanish version)

*Características Generales*

Genero

Edad

Estado Civil

Ninos o dependientes?

Nivel de educacion

*El Empleo Previo*

1. ¿Cuántos y que tipo de empleos tuvo en el pasado?
2. ¿Es su primer trabajo con una maquiladora? (¿Si no, cuántos?)
3. ¿Qué era su último trabajo? ¿Cuánto tiempo estuvo en su último trabajo?
4. ¿Qué aprecio usted acerca de su último trabajo?
5. ¿Qué no aprecio usted acerca de su último trabajo?
6. ¿Por qué se salió?

*El Empleo*

7. ¿Por qué quiso usted trabajar en una maquiladora?
8. ¿Cuánto tiempo tiene trabajando en esta maquiladora?
9. ¿Cómo oyó usted acerca de este trabajo?
10. ¿Por qué quiso usted trabajar en esta maquiladora particular?
11. ¿Qué encontró usted atractivo acerca de este maquiladora particular?
12. Dígame diez cosas que le gusta acerca de su trabajo.
13. Dígame diez cosas que no le gusta acerca de su trabajo.
14. ¿Si podría cambiar usted algo acerca de su trabajo, qué sería?
15. ¿Tiene usted parientes/amigos que trabajan en esta maquiladora?
16. ¿Por qué piensa usted que ellos trabajan aquí?
17. ¿Ha tenido usted amigos/parientes que han dejado este maquila?
18. ¿Sí sí, por qué se salieron?
19. ¿Tiene usted parientes/amigos que trabajan en otras maquiladoras?
20. ¿Por qué piensa usted que ellos trabajan allí?
21. ¿Qué son algunas cosas buenas que ellos han mencionado acerca de sus trabajos?
22. ¿Qué son algunas cosas malas que ellos han mencionado acerca de sus trabajos?
23. ¿Tiene usted parientes/amigos que trabajan en otros tipos de trabajos en lugar que maquiladoras?
24. ¿Qué es algunas cosas buenas que ellos han mencionado acerca de sus trabajos?
25. ¿Qué es algunas cosas malas que ellos han mencionado acerca de sus trabajos?

La Organización

26. ¿Qué son algunas cosas que usted aprecia acerca de la maquila en la que usted trabaja?
27. ¿Qué son algunas cosas que usted no aprecia acerca de la maquila en la que usted trabaja?
28. ¿Sí podría hacer usted cambios, qué serían?
29. ¿Con respecto a los amigos o parientes que han dejado esta maquila, qué podrían haber hecho los directores para mantenerlos como empleados?

Futuro

30. ¿Qué probable es que usted permanecerá en esta maquila? (¿Qué es la probabilidad que usted permanecerá con la organización?)
31. ¿Dónde se ve usted en tres años?
32. Que te gustaría aprender?
33. Amigos en esta maquila: que les gustaría aprender?
34. Qual posicion te gustaría tener?
35. Amigos en esta maquila: Qual posicion les gustaría tener?
Appendix C

Definition of Categories of Inducements

**BENEFITS**
Legally required benefits such as aguinaldo, social security, etc. as well as other benefits such as savings plans and reimbursement for transportation.

**BONUSES**
Related to both work performance and other factors, i.e. production, attendance, food coupons, etc.

**CAFETERIA**
Anything having to do with the cafeteria and/or food, including quality and variety of food, how long people have to eat, whether the person is charged, brings food from home, etc.

**COWORKER**
Made friends, working with friends, stay with my own group, etc.

**EDUCATION**
Includes views towards taking additional classes, and other forms of self improvement and skill development, including in and out of the plant.

**FAMILY**
Including parents, children, spouse, siblings.

**FLEXIBILITY**
Views towards job rotation, changing lines, etc.

**INDIVIDUAL**
Comments referring to individual traits or beliefs.

**HEALTH**
Feet hurt, dust in the air, get nauseated, extractors for the fumes don’t work, earplugs.

**HOURS**
Includes hours of work, quantity of hours.

**HRDEPT**
Including HR staff.

**JOB**
Easy, difficult, hard, interesting, boring, any comments related to their particular job they are performing.

**JOB AVAILABILITY**
Specifically in why a person is at a particular plant; fast hiring, etc.
<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LEARN &amp; DEVELOPMENT</td>
<td>Comments about wanting to learn new things, being to learn on the job, etc…</td>
</tr>
<tr>
<td>LOCATION</td>
<td>Comments regarding place of plant in reference to their home, convenience of plant location in relation to their home</td>
</tr>
<tr>
<td>MANAGERS</td>
<td>Exempt employees (office staff, engineers)</td>
</tr>
<tr>
<td>MEDICAL FACILITIES</td>
<td>Including comments about medical staff</td>
</tr>
<tr>
<td>NETWORKS</td>
<td>Includes statements relating to a person getting a job or staying at his or her job due to involvement of friends and family.</td>
</tr>
<tr>
<td>OVERTIME</td>
<td>Includes views towards being forced to work overtime, wanting to work move overtime, etc.</td>
</tr>
<tr>
<td>PAY</td>
<td>Pay is good, bad, more here than elsewhere, etc</td>
</tr>
<tr>
<td>PLANT CONDITIONS</td>
<td>Comments about the plant’s working conditions</td>
</tr>
<tr>
<td>PLANT CULTURE</td>
<td>Comments about plant environment; surroundings, situation</td>
</tr>
<tr>
<td>PLANT POLICIES</td>
<td>including tolerance time, policy towards breaks, special policies for pregnant women, etc</td>
</tr>
<tr>
<td>PLANT SIZE</td>
<td>Comments referring to plant’s size (i.e. too many people)</td>
</tr>
<tr>
<td>PROMOTION</td>
<td>Anything having to do with advancing in their Position; getting a higher position</td>
</tr>
<tr>
<td>RECOGNITION/APPRECIATION</td>
<td>These are events involving individual and/or group recognition involving both performance and other factors: awards for best team, birthday cakes, Mother’s Day, etc</td>
</tr>
<tr>
<td>SECURITY</td>
<td>Includes lack of security, comments about “being laid off, and feeling secure on the job</td>
</tr>
<tr>
<td>SHIFTS</td>
<td>Views/comments about working different shifts</td>
</tr>
<tr>
<td>SOCIAL EVENTS</td>
<td>Generally outside of the workplace, i.e. posada, picnics, soccer games, etc.</td>
</tr>
<tr>
<td>SUPERVISORS</td>
<td>Treat the workers well, yell at workers, take workers ideas into account, etc., includes jefe del grupo.</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>---------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>TRAINING</td>
<td>Includes training of the job task, safety training, training about the company, how the plant is doing.</td>
</tr>
<tr>
<td>TRANSPORTATION</td>
<td>Issues in getting to the plant (excluding transportation bonuses)</td>
</tr>
</tbody>
</table>
Appendix D

<table>
<thead>
<tr>
<th>Frequencies of Positive Statements</th>
<th>Frequencies of Negative Statements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supervisor</td>
<td>Job</td>
</tr>
<tr>
<td>Appreciation/Recognition</td>
<td>Supervisor</td>
</tr>
<tr>
<td>Coworker</td>
<td>Pay</td>
</tr>
<tr>
<td>Bonuses</td>
<td>Plant Policies</td>
</tr>
<tr>
<td>Job</td>
<td>Cafeteria</td>
</tr>
<tr>
<td>Flexibility</td>
<td>Bonuses</td>
</tr>
<tr>
<td>Social Events</td>
<td>Promotion</td>
</tr>
<tr>
<td>Promotion</td>
<td>Shifts</td>
</tr>
<tr>
<td>Job Availability</td>
<td>Overtime</td>
</tr>
<tr>
<td>Benefits</td>
<td>Coworker</td>
</tr>
<tr>
<td>Education</td>
<td>Transportation</td>
</tr>
<tr>
<td>Learning &amp; Development</td>
<td>Plant conditions</td>
</tr>
<tr>
<td>Plant Policies</td>
<td>Health</td>
</tr>
<tr>
<td>Cafeteria</td>
<td>Appreciation/Recognition</td>
</tr>
<tr>
<td>Pay</td>
<td>Social Events</td>
</tr>
<tr>
<td>Social Networks</td>
<td>Managers</td>
</tr>
<tr>
<td>Managers</td>
<td>Flexibility</td>
</tr>
<tr>
<td>Transportation</td>
<td>Security</td>
</tr>
<tr>
<td>Family</td>
<td>Benefits</td>
</tr>
<tr>
<td>Overtime</td>
<td>Job Availability</td>
</tr>
<tr>
<td>Health</td>
<td>Education</td>
</tr>
<tr>
<td>Plant Conditions</td>
<td>Social Networks</td>
</tr>
<tr>
<td>Shifts</td>
<td>Family</td>
</tr>
<tr>
<td>Security</td>
<td>Learning &amp; Development</td>
</tr>
<tr>
<td>Medical Facilities</td>
<td>Medical Facilities</td>
</tr>
</tbody>
</table>

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Appendix E

Comments by workers on “Basic Necessities”

Plant worker 1: It’s not that if we like it, but it is a necessity. The necessities that each one of us has. As for me, I have kids in school and family in other states. (when asked if he likes the job).

Plant worker 2: Every year they raise the pay a little bit more but it’s never enough.

Plant worker 3: Two people need to work because one salary is not enough for necessities. (speaking about her and her husband working).

Plant worker 4: Necessity. We needed more money since we have children and they are growing.

Plant worker 5: I really like the job and the plant, but if a better opportunity comes along, one needs to take it because of necessity.

Plant worker 6: We are not here because we want to be here, we are here because of necessity.

Plant worker 7: As for the operators we work just to live day by day.
Appendix F

Comments by workers on "Patronage"

Interviewer: What do you like about this plant?

Plant worker 1: I like that I can talk to my friends and even the supervisors. My supervisor talks good to me, he is not yelling like others. I can also talk to him about anything. He tells us when we are doing wrong but also when we are doing right. That makes us feel good. He treats us all the same. And I like to work for him. That's why I sometimes don't want to move to other lines.

Interviewer: Another thing you like?

Plant worker 2: I get along well with my supervisors. I have been moved several times and I have had many supervisors and I have had good supervisors. That helps when you are here for the first time. My first supervisor was very helpful and was not rushing me. I felt comfortable with him. Of course, like anything, sometimes he gets our attention when we are doing something wrong but that is expected. We, as workers need to do the things right. We may get distracted so he needs to make us focus on our work.

Interviewer: Is there something else that you would like to mention about working here?

Plant worker 3: For instance the supervisor in the "clean room". I have learned so much from him. He would buy things and would raffle the item off. He would get the names of the people in the line that met production and they would raffle. That would motivate us. It is just a little something, something to show the people that you appreciate them working hard.

Interviewer: What are other differences?

Plant worker 4: Well I used to work at night and over there they pay more for working at night. The night shift is a bit harder over there. Also the supervisor over there would stay sitting in her desk all through the shift. She never had any contact with the workers. On the other hand, here, they talk to you, they get close to you, there is contact with the workers. Even the office personnel also talked to you and greeted you. There is always some type of contact. They don't seem to think they are better than you. The supervisor in the other plant was in her desk and she would be watching us from over there. Very separate from us. Here we are all together...
Appendix G

Comments by workers on “Relationships”

**Interviewer:** If you had to tell me the thing you like most of this job, what would it be?

**Plant worker 1:** My friends at the plant.

**Interviewer:** What do you like about this plant?

**Plant worker 2:** Here, my coworkers do not put pressure on me like they did over there. They influence you a lot over there (in a previous plant). They can really decrease your self-esteem over there. They would tell me that I was not going to make it and that I could not work.

**They would tell you in front of your face?**

No but I would hear them tell the supervisor. That they did not want me there and since I was new, they didn't like me. But here, my coworkers were very friendly and were always asking me how I was doing. Also the majority of the line was new, so that helped too. But even when they would switch me to other areas, they were nice and wanted to help me learn. It was very different. The very first day I came here, I saw the difference in the coworkers. I was very comfortable. I got to be good friends with my coworkers. That's what I like the most about working here.

**Interviewer:** What do you like about working here?

**Plant worker 3:** More than everything is the relationships with my friends. I like to work in a team and to know people and to learn everyday.

**Interviewer:** What do you like about your job?

**Plant worker 4:** I get along with my coworkers and my supervisor. I look forward to coming to work because of my friends.

**Interviewer:** Is this a reason you would quit your job?
Plant worker 5: I used to feel that if things did not get better, I would quit. It's terrible coming to work and not feeling comfortable with the people you work with and we are here all day.

Interviewer: So how about if things start again or get worse?

Plant worker 5: I would quit. I cannot take a type of work environment like that. I like my work, but the relationship I have with my co-workers is very important to the job and if they don't respect me I don't need to be here.

Interviewer: What are other things that you like about working here?

Plant worker 6: They have little celebrations on several holidays like Halloween and "Dia del nino." For Halloween they had a costume contest and they gave prizes. It was so fun and we were laughing. All you could here was the yelling from the workers.

Interviewer: What else do you like about working here?

Plant worker 7: The plant has every year the Posada for the workers and also on Halloween they had a costume contest for the workers. That helps in distracting us from the work that we are doing at least for a short time we enjoy ourselves at work.

Interviewer: What are some things that you appreciate that the plant does?

Plant worker 8: Well we used to have a soccer team. I mean we still have it, but we used to have two, one for the advanced and one for the beginners. It is really exciting and entertaining. We all love being part of the team. Another thing is that even when the person leaves the plant, he is still a member of the team. If you feel comfortable in a team, it's better to stay with the team.

They also have volleyball for girls and beauty contests. Any type of activities that involves the workers outside of work is fun and needed for the worker to feel excited about working here.
Appendix H

Comments by workers on “Stability”

Interviewer: Any other thing about the plant?

Plant worker1: Well, they have meetings to inform us of changes that are going to happen. They also put memos in bulletin boards or on a chalkboard or our supervisor tells. Something important that is to happen, they let us know.

Interviewer: Is that important to you that you are informed?

Plant worker: Yes. I think if it is going to affect us they need to tell us. Even if they think it may not affect us, they need to let us know.

Interviewer: What could the plant do, so they would not leave voluntarily?

Plant worker2: The thing is that sometimes people get anxious and don’t know what is going to happen in this plant so they leave. They see the work going very slow and people being laid off so they leave. I guess the plant needs to be more open with the workers. If they would know more information on the status the plant, perhaps they would be patient and stay.

Interviewer: What changes have you seen and what have your coworkers mentioned?

Plant worker3: Through talks with my coworkers, they were nervous, because there was no work and production was low and there would be no materials. Even though they do give us money if we are laid off, we knew that it would be hard to find another job. But at the same time, there were some that did want to be laid off, because of the uncertainty that comes with a new plant. So when the new plant came in, there was more work.
Appendix I

Comments by workers on “Development”

Interviewer: What else can you tell me about your experience here in this maquila?

Plant worker1: I have learned many things but I would like to learn more things. I have been in different areas and know just about everything here in this maquila. That’s why perhaps things are getting a bit boring. But if there is anything new, yes I would like to learn it.

Interviewer: Tell me what you want to do in the future.

Plant worker2: I really want to study electronics, technology. I would like to work in a maquila using my technological abilities. I want to gain more education to make a better life for my daughter and me. The school that I am interested in going to allow me to study at the same time they take care of my child. That is really helpful. They also allow me to pay in payments. I don't have to pay the whole amount at once.

Interviewer: What would you like to learn here in this maquila?

Plant worker3: I would like to learn the computers here in the maquila. I would like to be supervisor. If I would stay, I would like to move up to a higher position.

Interviewer: What position would you like to have?

Plant worker4: Well, I would like to work at different positions to learn and then perhaps move up. But I want to learn new things first. Since I do not have sufficient studies, I may not qualify for higher position, but perhaps if given an opportunity, I would not mind. I would also like to study and continue my education but right now I am not able to do it...my child is only six and she needs me...but once she is older I will study...then I would like to definitively move up to a higher position. With more education, they respect you more. I would like to learn operations. Really anything...at a maquila there is so much to learn.
Interviewer: Would you like to learn different positions?

Plant worker5: Yes, I have also told them that I want to learn new positions. What happens that when the new people come they put them in these new positions and they leave us here. They should put us in the new positions and put the new people in our old positions. What they want to see if the new people can handle it or not. Since it is during their probation period, they want to leave the good workers. They have placed me in other positions but not for a long time. I would like to go there again.
Appendix J
Attraction Commentaries

Interviewer: So how did you hear about this job?

Plant worker1: One day before I was going to end my job in the restaurant I came over here looking for work in many plants, but nothing came out of it. Many maquilas were not hiring. So I came to this park and a woman told me that they were hiring here. So I came here and I was lucky that they were hiring. The plant had just opened.

Interviewer: In the first maquila, how did you hear about the opening?

Plant worker2: I was looking for a job for several days in various maquilas and then I went to the plant and they were hiring. It took a while, because work was scarce. There were no openings. I decided to come to this park, because people were saying that there was work there.

Interviewer: As far as this job, how did you hear about it?

Plant worker2: The same thing, just coming to the plants looking for work and asking if there were taking applications.

Interviewer: Had you heard anything about this plant, before working here?

Plant worker: No, they just told me that they were hiring here so I came here. I did not know anything about the plant.

Interviewer: When you got here, you began looking for work?

Plant worker3: I started looking for work and a week passed by and no work. I was so impatient, I thought I would find work right away. My cousins told me not to get impatient, that I would find a job. The following week I came to this plant and I got hired.

Interviewer: When you were looking for work, did you look at other plants, or did you want to work in this one?

Plant worker4: I looked for work in other plants and I would have worked anywhere they would give me a job.
VITA

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