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An Investigation of Employee Satisfaction and Employee Empowerment Specific to On-Site Supervisors in the Residential Construction Industry

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AN INVESTIGATION OF EMPLOYEE SATISFACTION AND EMPLOYEE EMPOWERMENT SPECIFIC TO ON-SITE SUPERVISORS IN THE RESIDENTIAL CONSTRUCTION INDUSTRY

by

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ABSTRACT

AN INVESTIGATION OF EMPLOYEE SATISFACTION AND EMPLOYEE EMPOWERMENT SPECIFIC TO ON-SITE SUPERVISORS IN THE RESIDENTIAL CONSTRUCTION INDUSTRY

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Employee satisfaction and empowerment are vital elements to businesses in most industries. The construction industry has various types of employees, ranging from managers and executives to on-site supervisors and laborers. This study was conducted to obtain a greater understanding about the elements and levels of satisfaction and empowerment of on-site supervisors in the residential construction industry. An on-site supervisor in the residential construction industry is responsible for coordinating and managing employees, materials, equipment, budgets, schedules, contracts, and the safety of employees and the general public. They are also the employees most frequently perceived as accountable for the success or failure of any project.

Following a thorough review of the related literature, a questionnaire was developed to determine the levels of satisfaction and empowerment of on-site supervisors. This questionnaire was distributed by e-mail to on-site supervisors of companies on *Professional Builders* top 400 list for 2005. A total of 122 on-site supervisors completed the survey.

Statistical tools, including Pearson's product-moment correlation and coefficient of determination, were utilized to analyze the gathered data that identified the satisfaction and empowerment levels of on-site supervisors. It was discovered that a statistically significant correlation existed between satisfaction and empowerment. In addition, descriptive statistics were used to create lists of major elements leading to employee satisfaction and empowerment.

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CHAPTER I

THE PROBLEM AND ITS SETTINGS

Introduction

According to William J. McEwen, a marketing guru and global practice leader for The Gallop Organization, the most frequently discussed company assets are those that are represented by or have been established through the traditional "four Ps" of marketing: product, place, promotion, and price. Of course, the assets related to these categories are well worth protecting and building, for they are the backbone of the company. However, there are other company assets that are just as important but are excluded because either they are not clearly recognized as "assets" or more effort is required to manage them effectively. "These are the assets that surround the important fifth 'P:' people; human assets; human capital" (McEwen, 2001).

Employees can make or break an organization. "Good employees can produce extraordinary results while marginal employees can drag and keep a business down." Still, many employers underrate the significance of employees (Deal, 2005). According to Ian Davidson (2004), employees are the most valuable assets a corporation has. Employees are the catalyst of any organization. Shelly L. Freeman, the president for a Lathrop & Cage subsidiary specializing in human resource consulting stated,

> The success of any company is directly linked to the satisfaction of the employees who embody that company; that retaining talented people is critical to the success of any organization; and that no matter how temporarily challenged the economy

> may be, ultimately, a company's most talented performers always have other employment options. (Freeman, 2005)

In a study at IBM Rochester, a Malcolm Baldrige National Quality Award recipient, an in-depth look at employee satisfaction was documented and analyzed. The findings showed strong statistically significant correlations between employee satisfaction and various other business categories, including: employee productivity (0.93 correlation with satisfaction), customer satisfaction (0.70 correlation with satisfaction), and market share (0.84 correlation with satisfaction) (Hoisington & Huang, 1999).

In the construction industry, where the quality of products is dependent on the skill of laborers and on-site supervisors, employees play a significant role in the success and outcome of the product and the company. A key employee in the construction industry is the on-site supervisor. On-site supervisors have the overall responsibility for completing projects in accordance with the plans and specifications. They are responsible for coordinating and managing people, materials, equipment, budgets, schedules, contracts, and the safety of employees and the general public. They monitor the construction project, which includes the delivery and use of materials, tools, and equipment; as well as the quality of construction and worker productivity. They track and control construction costs and schedules to avoid cost overruns and time delays. On-site supervisors must be "on call" to deal with delays, bad weather, or emergencies at the site. Most work more than a standard 40-hour week since construction activities extend past normal working hours (U.S. Bureau of Labor Statistics, 2004).

Problem Statement and Hypothesis of the Study

Based on the author's personal experience and observations that on-site supervisors in the residential construction industry often appeared to be dissatisfied and unempowered, this study was conducted to obtain a clearer understanding of the satisfaction and empowerment levels of on-site supervisors in the residential construction industry. Following a careful review of the literature specific to on-site supervisors in the construction industry, information about the satisfaction and empowerment levels of on-site supervisors was unavailable. This study will attempt to answer several questions and test a hypothesis:

1. At what level are on-site supervisors satisfied with their jobs?
2. Do on-site supervisors feel empowered enough to fulfill their job responsibilities?
3. According to on-site supervisors, what are the key elements that lead to job satisfaction?
4. According to on-site supervisors, what are the key elements that lead to job empowerment?

H_1: On-site supervisors in the residential construction industry who are empowered are more satisfied with their jobs than on-site supervisors who are not empowered.

Significance of the Study

Although the literature review revealed no specific information about the satisfaction and empowerment levels of on-site supervisors or even construction workers in general, a large amount of information was available regarding the satisfaction and

empowerment of employees in other industries. As will be shown in the literature review, both satisfaction and empowerment strongly affect other problems companies commonly face. These problems include, but not limited to, such things as turnover, safety, productivity, and product and service quality. By satisfying and empowering employees, companies should be able to solve these and other common problems.

This study seeks to discover the elements that satisfy and empower on-site supervisors in the residential construction industry. When identified, companies should be able to use these elements as tools to satisfy and empower their on-site supervisors, thus obtaining more control over turnover, safety, productivity, and product and service quality. Also, as will be shown in the literature review, improving employee satisfaction and empowerment can positively affect a company's bottom line and market share.

Delimitations

From the literature review, neither satisfaction nor empowerment were precisely defined because of their very nature. In every study, both satisfaction and empowerment were subjective to individual employees. What satisfied and empowered one employee may not have satisfied or empowered another. Nevertheless, all employees ranked their personal level of satisfaction and empowerment using the same scale.

Participants of this study were selected from a list of companies provided by *Professional Builder* containing the top 400 revenue-grossing residential construction companies in the U.S. for 2005. Participation by employees of the companies surveyed was only allowed after permission was received from the company itself.

The main method of distributing the survey instrument was through e-mail, thus limiting respondents to those who had e-mail addresses and were familiar with the e-mailing process. Participating companies forwarded the e-mail containing the survey instrument to on-site supervisors in their companies.

Definitions

Empowerment: For this study, empowerment is subjective on an employee-by-employee basis. What empowers one employee may not empower another. Based on the review of literature, employee empowerment includes trust, authority, information sharing, decision-making, accountability, and responsibility. Also, empowerment could have various other meanings depending on the industry, the company, the division, and the individual.

On-site supervisor: An on-site supervisor could be considered as more of a manager than a laborer, as one who personally oversees the actual construction of residential units. Employees who have the role and responsibilities of an on-site supervisor may have the job title of superintendent, assistant superintendent, project manager, project engineer, field engineer, or construction manager. Titles may vary from company to company, but the responsibilities remain virtually the same.

Residential Companies: Residential companies focus mainly on building residential units.

Residential Unit: A residential unit is a generic term describing most structures built for the purpose of housing occupants for personal use. Types of residential units

include, but are not limited to, single family homes, condominiums, townhouses, and apartments.

Satisfaction: For this study, satisfaction is subjective on an employee-by-employee basis. What satisfies one employee may not satisfy another. Based on the review of literature, employee satisfaction is comprised of three main elements: (a) individual value of the employee as perceived by the employee, (b) employee training, and (c) relationships with management.

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

This chapter will first review factors that affect employee satisfaction and factors that are affected by employee satisfaction. Second, a closer look at empowerment, including numerous definitions, theories, and its modern-day origins will be examined. Third, the benefits of empowering employees, followed by misconceptions and limitations will be noted. Finally, companies that have implemented empowerment principles will be considered.

Satisfaction

Importance of Employee Satisfaction

According to Marc Drizin, an employee loyalty specialist, “Employees are assets with feet. They’re the only resource companies have that make a conscious decision to return the next day” (Modic, 2005). A 2003 J.D. Power and Associates survey concluded that there is another customer builders need to focus on satisfying besides the obvious customers. Builders need to focus on “the rank-and-file managers and employees who work for them” (Kash, 2003).

The effects employee satisfaction has on an organization’s business are numerous. Some of the most relevant and profitable effects are described below.

> Studies show that businesses that excel in employee satisfaction issues reduce turnover by 50% from the norm, increase customer satisfaction to an average of 95%, lower labor cost by 12% and lift pretax margins by an average of 4% (Carpitella, 2003).

Not only are employee turnover, customer satisfaction, labor costs, and pretax margins improved by addressing employee satisfaction, but customers, products, and the company itself are also positively affected.

> Profit and growth are stimulated directly (and primarily) by customer loyalty. Customer loyalty is a direct consequence of customer satisfaction. Customer satisfaction is heavily influenced by customer perceptions of the value of services they receive. Value is created by satisfied, loyal and productive employees. Employees who feel a sense of teamwork and common purpose, a strong commitment to communication, and managerial empowerment are most able, and willing, to deliver the results that customers expect ("Employee Satisfaction", 2005)

Don Wainwright, president of Wainwright Industries, a winner of the Malcolm Baldrige National Quality Award, made the point in 2001 that "Jack Welch uses only three indicators to run giant General Electric. He'll tell you that the most effective and only numbers he needs to know are, in order of importance: employee satisfaction, customer satisfaction and cash flow" ("Employee Satisfaction", 2005).

Studies completed in 1999 by the Hay Group for *Fortune* magazine have shown that even the most admired companies – Intel, Coca-Cola, and GE to name a few – each

embrace the same basic company cultural values: teamwork, customer focus, innovation, and fair treatment of employees (Clark, 2001).

Turnover and Absenteeism

Most contractors feel that employee turnover and employee satisfaction are closely related. The more satisfied an employee is, the less turnover and absenteeism occurs ("The High-Performing Contractor", 2004; Maloney & McFillen, 1986). Studies have found that excessive employee turnover is usually the result of "people that like what they do, but not where they do it" ("Employee Satisfaction", 2005). In regards to turnover and absenteeism, *The Business Roundtable* (1982) reported that the construction industry has been tagged as "the sector of the U.S. economy with the worst productivity performance." *The Business Roundtable* goes on to say:

> Construction industry leaders agree that absenteeism and turnover contribute significantly to the decline [in productivity]. Turnover rates of more than 200% annually, not including reduction in the work force, have been reported. Concurrently, absenteeism has been observed as high as 20% (1982).

According to the same publication, when workers were asked the reasons for their absenteeism and turnover, the four main reasons cited were:

- excessive rework
- poor craft supervision
- poor overall management
- relationship with the boss

The publication goes on to reveal that employees consciously missed days of work and routinely quit jobs because employees were unable to work well with leaders/managers/supervisors. The study continues by disclosing the following:

- Job dissatisfaction tended to influence absenteeism rates more than turnover rates.
- The quality of supervision and understanding of company goals were the most important job-satisfaction factors affecting absenteeism.
- Considering quitting was the most accurate indicator of job dissatisfaction.
- Experienced workers were more quality conscious than less experienced workers.
- As work experience increased, turnover rates decreased.
- As work experience increased, lack of craft supervision and poor overall job management became more important reasons for absenteeism.

The older and more experienced employees exhibited a lower rate in turnover but a higher rate in absenteeism, indicating that "jobs that do not challenge or provide satisfaction for a highly skilled, experienced craftsman will produce absenteeism, and that younger, less experienced workers seem to change jobs rather than cope with an unpleasant situation" ("The Business Roundtable", 1982).

According to Ed Schmitt, "Today's workers have different expectations from the companies they work for and are much less hesitant to leave one job for another if they don't feel those expectations are being met. Job security is less important to today's worker" (Schmitt, 2002).

It is expensive to lose a good employee and perhaps a blessing to lose a bad one. It may be tough to assign an exact cost for employee turnover. According to the American Management Association, the cost of replacing an employee is approximately

30% of the employee's annual salary ("The key to employee retention", 2005). Four basic hidden costs make up the approximated 30% turnover cost: first, the cost of termination; second, the cost of hiring and training a replacement; third, the vacancy cost until the job is filled; and fourth the cost of the loss of productivity with a new hire (Schmitt, 2001).

Valued Employees

An employee satisfaction study conducted by *Big Builder* in 2003 reported that the "responses in the study point to a clear need for giving employees a greater role in business decisions." There needs to be a culture of participation in the organization, which in turn creates higher retention (Leibowitz, 2003). When employees do participate in the organization they feel more valuable, especially when they see the "results stemming from their actions" (Calder & Douglas, 1999). When management creates opportunities for employees to add value to the organization in ways other than those that fit the job description, it is unclear how to measure all the positive results that will occur.

> In the United States, we average one new idea a year per every five employees. Japan, [who uses empowerment principles], averages five new ideas a year per every employee…Wainwright Industries, a Malcolm Baldrige National Quality Award winner, averages 60 ideas per employee per year...What has this done for them? Employees benefit directly from their own good ideas – in the form of increased profit sharing and improved workplace safety. Over a three-year period, the number of recordable accidents decreased 72% and annual workers' compensation costs fell 86%. Wainwright Industries has high rates of attendance

> (greater than 99% for the all-salaried workforce) and turnover rates that are lower than industry and local averages. From an operations' standpoint, these ideas have helped Wainwright to cut its lead time for making one of its principal products…to 15 minutes, as compared with 8.7 days [previously], and to reduce defect rates tenfold. For its customers, the benefits translated into an on-time delivery rate of nearly 100%, as compared with 75% previously, and a 35% reduction in product cost.
>
> Employees see more problems on the job and in the shop and office than managers will be aware of or see. High-performing contractors will implement ways to involve employees in solving and preventing these problems. ("The High-Performing Contractor", 2004)

Enabling employees to freely contribute in an organization can have a substantial positive effect on a company. Keeping employees informed and getting them involved in decisions that affect their work builds trust and feelings of self-worth. Involving employees helps employees feel that they are trusted and needed, which increases their contributions and production. Jack Welch, a retired CEO of GE once stated, "A company can boost productivity by restructuring, removing bureaucracy and downsizing, but it cannot sustain high productivity without cultural change, without totally involving the individual who is closest to the work and therefore knows it better than those who manage it" ("The High-Performing Contractor", 2004).

Training and Education

In a 1999 survey, the Institute of Profit Advisors found that providing training, rather than terminating employees, was a major key to improving profitability. "Companies can either invest in providing mentoring, training and growth opportunities now or pay the costs of turnover later" (Clark, 2001).

Most managers look at training and development as a cost. What they don't see or why they don't weigh training and development heavily enough is unclear. According to Mark Drizin, an employee loyalty specialist, training not only equips employees to perform their jobs in a satisfactory manner, but it also "is critical in terms of employees feeling good about working for their organization" (McClenahen, 2003). Drizin continues by pointing out that one of the most common drivers in establishing employee loyalty is care and concern for employees and opportunities for growth which are often listed as the first or second most significant drivers. Care and concern for employees can be shown through employee training. As employees are trained and become more specialized and educated, opportunities for growth on a personal level as well as within the organization, will surface. In fact, the 1999 Emergent Workforce Study performed by Interim Services, Inc., found that "The new breed of employee, the 'Emergent worker' makes up the top 22% of the workforce today and does not like to follow rules or organization charts, but thrives on gaining new experiences (hence training)" (Clark, 2001).

A survey by the Hay Group reported that 61% of employees committed to their current employers found satisfaction in learning new skills. From those employees who were not committed to their current employers, 4.7% said that better training is a major

factor in convincing employees to continue to stay with their current employer (Clark, 2001).

To emphasize the importance of training, William Lareau, author of *American Samurai*, stated the following:

> Workers in Japan and many European countries are smarter than U.S. workers – in some cases two to three times smarter. But, [Lareau] acknowledges that this has nothing to do with individual intelligence. They are two to three time smarter because they receive two to three times more training! (Hansen, 2004)

Leaders/Supervisors/Management

The Daniels Group, an executive search firm, conducted a national workforce retention survey in 2003. The results included evidence that management played a large roll in employee satisfaction. When employees of building companies were asked if a "manager's leadership abilities impact their interest in remaining with the organization," 86% of the respondents either agreed or strongly agreed. The study also asked employees about their managers' work standards, communication style, and ability to achieve goals in the face of adversity. The responses to these questions were overwhelmingly positive with an average of about 72% in the affirmative, meaning that the style and abilities of management have a direct effect on an employee's interest in remaining with an organization (Joyce, 2003).

The results of a study performed in 1982 reported that three of the top five reasons employees were absent or left an organization were because (a) poor craft supervision, (b) poor overall management, and (c) poor relationships with boss. All of

these were attributable to poor management and supervision. The same study also concluded that as work experience increased, poor craft supervision and overall job management became a more important reason for absenteeism, which is a direct result of employee dissatisfaction. Supervisors and management can play a large role in an organization, more than what the job entails ("The Business Roundtable", 1982).

Studies by NIOSH, Boeing, and the Reliability Group, an organizational performance consulting firm, have all identified the impact of employee satisfaction on the level of safety in a workplace. Data collected by the Reliability Group indicated that the number one predictor of a safe versus an unsafe workplace is employee cheerfulness and satisfaction. And a key factor in determining employee satisfaction? Supervisors! (Hansen, 2004)

To support the finding that supervisors are a determining factor in employee satisfaction, 64% of committed employees surveyed by the Hay Group reported that they found satisfaction with coaching and feedback. Coincidentally, coaching and feedback is one of the top four factors that leads to employee satisfaction (Clark, 2001).

Safety and Quality Study

In 2004, the Center for Quality and Productivity Improvement at the University of Wisconsin-Madison and the Department of Industrial Engineering at the University of Wisconsin-Madison conducted a study measuring safety and quality and the forces that drive them. Both safety and quality were found to be controlled by employees (Hansen, 2004). Some of the top characteristics that were found to create a safe workplace and improve quality included (Loushine, Hoonakker, Carayon, & Smith, 2004):

- employee involvement
- management commitment
- training and education
- communication between managers and employees

The study also found the benefits of having a safer workplace and a higher quality product. Three of the top benefits included (Loushine et al., 2004):

- improved employee job satisfaction
- lower employee turnover
- reduced rework

It is interesting to note that according to the study, the top characteristics that affected quality and safety were employee involvement, management commitment, and training and education. Also, these top characteristics are the same characteristics that affect employee satisfaction the most.

Empowerment

Definitions of Empowerment

Every organization that is involved in the empowering employees defines empowerment according to its usefulness and scope in practice. Even though it is difficult to assign an exact definition to the term empowerment, four general definitions are listed below:

- [Empowerment] means giving people their head, not just relieving them of minor bureaucrat impedimenta…It means top management explaining and delegating more while commanding less (Rock, 1994).

- For management, empowerment is the giving up of some control and the sharing of additional knowledge of company goals and achievements for employees, its acceptance of the risk by taking more responsibility (Loretta & Polsky, 1991).
- Empowerment simply means encouraging people to make decisions and initiate actions with less control and direction from their manager (Handy, 1993).
- Empowerment is the process of enhancing feelings of self-efficiency among organizational members through the identification of conditions that foster powerlessness and through their removal by formal organizational practices and informal techniques of providing effective information (Conger & Kanungo, 1988).

The last definition of empowerment as defined by Conger and Kanungo will be used as the basic definition for purposes of this study. According to Hummuda and Dulaimi (1997), Conger and Kanungo's definition of empowerment is a comprehensive description of empowerment emphasizing various aspects, including:

- empowerment as a quality achiever as well as a motivator
- empowerment as an organizational process, a whole restructuring
- the involvement of every member in the organization; as an individual or self-managed team
- powerlessness in organizations as a barrier to the adoption of empowerment
- formal and informal practices and techniques to implement empowerment

The Theory of Empowerment

The idea of employee empowerment is a concept that is fairly unused when compared with the size of the employee population. Also, empowerment can easily be misconstrued, depending on an organization's use of the principle. Employee empowerment is closely related to employee involvement, a concept that is easily understood and more uniform throughout organizations. Employee involvement has been defined as "a participative process to use the entire capacity of workers, designated to encourage employee commitment to organizational success" (Lawler & Mohram, 1989). The process comes about by giving employees a combination of information, influence, and/or incentives (Hammuda & Dulaimi, 1997).

Models of Employee Involvement

Leana's model primarily deals with decision making. Decision making can either be of a participative nature or of a delegative nature. Employee participation can be defined as "joint decision making between superior and subordinates." Delegation is the "process whereby the manager transfers decision making autonomy to a subordinate." Employees can either have partial control (participation) or complete control (delegation) (Leana, 1987).

Lowin defined participative decision making as "a situation in which decisions as to activities are arrived at by the very persons who are to execute those decisions." His model's effectiveness was dependent upon several factors, including the personalities and attitudes of those involved; the extent, importance, and visibility of the issues; and the value of the participation process (Lowin, 1968).

Locke and Schweiger based their model on the participation process. The result of the model was an increase of productivity resulting from cognitive effects of involvement, which include a better understanding of the job and more direct communication and motivational effects of involvement, which consist of increased trust, peer pressure, and pride in ones work (Locke & Schweiger, 1979).

Saskin's model focused on the psychological target of the employee involvement. There are four general types of involvement, including goal setting, decision making, problem solving, and change. Saskin contended that the various types of involvement can produce "psychological and cognitive" effects such as psychological "ownership," development of shared norms and values, and information flow (Saskin, 1976).

The Beginning of Empowerment

Empowerment is a concept that has been around since the dawn of mankind. However, the role it plays in organizations and its quest for understanding and American business implementation has only been evolving for the past 50 years (R. Ripley & M. Ripley, 1992).

In the early 1950's, Dr. W. Edwards Deming and Dr. Joseph M. Juran of the United States visited Japan to coach and mentor leaders, emphasizing quality and employing the brains of all the workers, not just those of the people at the top of the organization. Effective teamwork empowerment and continuous improvement were enhanced through Quality Circles. Building the quality in, rather than inspecting the products afterwards, was a core value change. The call for Deming and Juran to help the Japanese was initiated because of the power the American economy held. In order for

Japan to be competitive, either the common American business practice of mass production and competition based on pricing could be implemented or some other competitive advantage must be discovered. The Japanese answer was to find another way to compete, compete on quality (Womack, Jones & Roos, 1991).

In the American automotive manufacturing plants, assembly workers pushed themselves to complete as many products as possible. Quality was of no concern, because all of the problems would be remedied when the automobile rolled off of the assembly line. The assembly line only stopped when the supervisor found a sufficient cause, which was very rare. No employee on the assembly line had the authority to stop the line, and many feared that they would lose their job if they did (Womack et al., 1991).

The Japanese automotive manufacturers used similar methods to manufacture cars. One of the significant differences, however, was the ability for any employee on the floor to stop the assembly line at any time with no fear of punishment. The idea was that when a problem was discovered in the product being assembled, the nonconforming piece of the product would be analyzed and fixed at the source so successive automobiles would not have the same problem. This meant that when the car rolled off the assembly line, it was ready to go into the market. No rework would be required. The employees on the floor were empowered to ensure that the finished product met the standards of quality (Womack et al., 1991).

By the 1960's, another distinction separated U.S. and Japanese businesses. Japan encouraged a more careful utilization of human capital and a more aggressive focus on learning at school and on the job. Japanese employees became part of the organization. They were considered fixed assets, and investments in training were expensed on the

employees. The Japanese could not compete with the U.S. in the development of major innovations. Instead, great trust was given to the employees for the exploitation of new ideas. “Rather than expend their limited resources on new inventions, they competed by their ability to quickly develop new applications to others’ inventions” (R. Ripley & M. Ripley, 1992).

By the 1970’s the U.S. was losing market share in many industries and product lines despite superior productivity. By now the Japanese had turned their weaknesses into strengths. By pursuing quality, worker empowerment, variety, customization, convenience, and speed in getting to the market, they not only expanded the terms of competition beyond productivity but also found new routes to products as they were made. Mounting evidence began to suggest that productivity, on the one hand, and quality, worker empowerment, variety, customization, convenience, and rapid change, on the other, were not only compatible but also mutually reinforcing competitive standards (R. Ripley & M. Ripley, 1992).

The 1980’s ushered in a sense of a new awakening and resurgence in American businesses on the topic of quality. Deming and Juran were brought to the forefront to teach some companies in the United States what they had taught Japanese companies decades before. The training consisted of “making all management employees trained and aware of people and processes that made quality happen” (R. Ripley & M. Ripley, 1992).

The 1990’s began to show a marriage of both the old and new economy. Innovative organizations captured the benefits from mass production (United States) and lean production (Japan). Organizations sought for volume and productivity as well as quality, variety, customization, convenience, and timeliness. The most noticeable

difference in these new innovative organizations was that artisans and mass production workers were replaced by "empowered interdependent work teams." This new, more flexible organization allowed the businesses in the United States to take advantage of the inherent potential of innovative combinations of humans and machines. To summarize, "the U.S. set the standards in the old economy. The U.S. now labors on towards the new economy, however, dragging the dead weight of the past industrial command and control successes along behind" (R. Ripley & M. Ripley, 1992).

Benefits of Empowerment

Empowerment is a principle that was implemented along with Total Quality Management. Its purpose was primarily to enable and authorize employees to make products as good as possible. The obvious benefit was an increase in quality along with a reduction in warranty costs. Other benefits of empowerment also evolved into obvious excuses for implementation of the principle.

According to experts R. Ripley and M. Ripley (1992) and Spatz (2000) empowerment will:

- increase motivation to reduce mistakes and have individuals take more responsibility for their own actions
- increase the opportunity for creativity and innovation
- assist the continuous improvement of processes, products, and services
- improve customer satisfaction by having the employee closest to the customer make rapid, relevant decisions

- increase employee loyalty, while at the same time reducing turnover, absenteeism, and illness
- increase productivity by increasing employee pride, self-respect, and self-worth
- use peer pressure and self-managing team methods for employee control and productivity
- relieve middle and upper management from being the “control dogs” and from doing lower level tasks, thereby allowing more time for strategic planning and achieving a greater market share and customer satisfaction
- increase the bottom line by such methods as reducing waste and building quality, while meeting customer requirements
- increase upper management’s time for development of the top line (sales and revenue)
- reduce the excessive need for quality assurance personnel, lawyers, and historian accountants
- maintain and increase competitiveness
- achieve long-term competitiveness with an ever increasing market share
- increase trust and cooperation with management
- increase communication among employees and divisions
- reduce project completion time overruns

Empowerment has numerous benefits that are applicable to almost any aspect of an organization. Some can easily be identified and listed as noted; others are more obscure.

Empowerment Misconceptions

The benefits of employee empowerment can be easily recognized by management, but they can also be easily misconstrued. Two of the most common misconceptions are that management's role will be diminished and that management will be eliminated when employees are given more power (Hammuda et al., 1997).

Diminished role of management

Many managers fear that through the empowerment of employees, the role of managers will diminish until the managerial position will become obsolete. One manager even went so far as to say, "Employee empowerment is really part of a master plot designed by front line employees to take over America's corporations" (Klose, 1993).

Empowering employees requires managers to trust more and to "loosen up the reins." Oftentimes, middle management can play a blocking role. Empowerment, however, allows more opportunities for employees. The managerial role will not be done away with, but rather it will be redefined.

> The managerial role becomes one of coach and leader. Newly empowered employees require guidance and someone in a position to rally around them. In this new role, managers will not be making the decision for their employees, but they will provide the structure and framework within which the employees themselves can make good decisions. (Hammuda et al., 1997)

More power to employee

Some owners believe that by empowering employees, the eventual result will be an organization full of empowered employees with no organizational control (Hammuda et al., 1997). The empowerment of employees can occur in ways that may not require giving the employees more power.

> The feeling of employee empowerment can be improved by listening and being more responsive to employee comments, providing necessary training, encouragement by management and fellow employees, providing employees with the necessary resources to do their jobs, allowing access to relevant information and matching employees to their tasks according to training and experience. (Hammuda et al., 1997)

Empowering employees may simply mean listening and acknowledging employee output on a personal level. If management feels that an empowerment program entails empowering all employees, then that may be what is needed; but note that "each organization should work to set up its own appropriate employee empowerment program." Employee empowerment should be on an employee-by-employee and team-by-team basis (Hammuda et al., 1997). "While some employees may welcome the new opportunities implied by empowerment, many will not want to be empowered." And if empowerment is not managed and harnessed properly, "it will engulf and may bring about the demise of many companies" (Rock, 1994).

Empowerment Limitations

Like most initiatives in organizations, "to be effective, practical, and achievable, empowerment and quality must start at the top" (R. Ripley & M. Ripley, 1992). Believe it or not, empowerment changes an organization's model, whether it be a restructuring or change in job responsibilities. Thus, upper management must be an active factor in implementing empowerment.

Studies Relating to Employee Empowerment

Research done in England by John P. Carlos, a Phoenix-based management and employee-training consultant and co-author of the book *Empowerment Takes More Than a Minute*, revealed the emphasis that English business people put on confidentiality. To share information was seen as unnecessary (Schrecengost, 1996). Empowerment then would probably not be embraced by English companies. In fact, A.T. Kearney, a Chicago-based global management consulting firm, studied 100 British firms and concluded that only one-fifth of the firms thought that positive outcomes were due to an empowerment centered TQM program (Korukonda, Watson, & Rajkumar, 1999).

Research conducted by Lawler, Mohrman, and Ledford, showed that 84% of Fortune 1000 companies studied had employee empowerment programs. The study also showed that these organizations had reached great success almost immediately after the implementation of TQM and employee empowerment (Lawler, Mohrman, & Ledford, 1992). Studies of Malcolm Baldrige National Quality Award winners showed that the winners achieved their position due to the commitment senior management made towards

training, empowering, and involving all employees with the goals to reach quality values (Boone & Kurtz, 1998).

Two studies done in 1998 by Mary Hocutt (College of Business, Samford University) and Thomas Stone (Oklahoma State University), concluded that (a) employees, when supplied with autonomy and adequate training to deal with service recovery problems, are more likely to be satisfied; and (b) customer satisfaction comes quicker when "service recovery problems are resolved by responsive and empathetic employees" (Hocutt & Stone, 1998).

Companies that Have Implemented Empowerment Principles

Several notable companies have integrated employee empowerment as part of their TQM programs. Such companies include General Electric, Intel, Ford, Saturn, Scandinavian Airline Systems, Harley-Davidson, NCR, Goodyear, and Conrail (Robbins, 1996). In the early 1990's, Sears, Roebuck and Co. started to provide increased value of service to customers when authority was delegated to employees and individual stores (Boone & Kurtz, 1998). Enterprise Rent-A-Car is also empowering its employees to help business grow. One of the items employees have begun since their empowerment is to offer their customers fresh donuts from a customized Enterprise Rent-A-Car donut box. Some revenue growth resulted (Hadden, 1999).

Delta Airport Inn in Richmond, British Columbia empowers its employees. Front desk clerks are entitled to give away free hotel nights if anything goes wrong with a guest regarding their guaranteed housekeeping. They have an employee empowerment policy called "License to Please," and it is strictly enforced (Ralston, 1999).

Great Plains, a Fargo, North Dakota–based developer of enterprise–wide business management software, was recently recognized with two awards: “Exceeding Customer Expectations” and “Motivating and Retaining Employees”. The company commented that the base for its superior customer service is “smart, happy and empowered employees” (“Best of the best”, March 1999).

United Airlines, Inc., has several ways to empower employees. Front liners and customer relations agents must, whenever possible, resolve customers’ complaints on the first contact. Travel credits, expense refunds, meal, hotel, and ground transportation vouchers may be given to customers who have experienced irregular flight operations (UAL, 1997).

The highly competitive restaurant industry could also benefit from empowerment. Those that are pushing authority down the line to their employees are offering more superior customer service. For example, upset customers that find strange objects in their food can be immediately pampered by their waiters with free meals or desserts without the need of further authorizations (Potochny, 1998).

Empowerment is a principle that is common among many industries. It is a tool used to accomplish various business goals and almost always leads to satisfied employees and satisfied customers.

CHAPTER III

METHODOLOGY

Introduction

This chapter presents the population of interest, the research design, the methodology utilized to execute the study, the creation of the survey instrument, and the pilot study. The descriptive and inferential statistical procedures used to analyze the data are also presented.

Population of Interest

The population of interest for this study consisted of on-site supervisors for U.S. residential home building companies on the 2005 *Professional Builder's* top 400 list. The 400 largest revenue-grossing companies were selected by *Professional Builder* based on revenue reported in 2004. As a result, 122 on-site supervisors completed the survey instrument.

Research Design – Written Questionnaire Survey

In order to collect data from on-site supervisors about employee satisfaction and empowerment, a written questionnaire (see Appendix A) was created and sent by e-mail to the sample population noted in the Population of Interest section of this chapter. A survey instrument was used for data collection for several reasons, including: (a) it can be sent to a large number of participants living in a large geographic region; (b)

disbursement costs are considerably less expensive than researcher travel expenses or long-distance phone calls; and (c) if the survey is created correctly, participants can respond truthfully with an assurance that responses will remain anonymous (Leedy & Ormrod, 2005).

Survey Development

According to the review of literature, employee satisfaction consists of three elements: (a) Value, defined as an employee's sense of value to the company as perceived by the employee; (b) Management/Leadership, defined as an employee's attitude toward the management and leadership of the company; and (c) Training, defined as the amount or quality of on-the-job training an employee receives. The literature review also disclosed three elements that contribute most to employee empowerment: (a) Participation, defined as the amount or quality of participation employees feel they have in regards to what, when, or how their job responsibilities are to be completed; (b) Authority, defined as the amount of authority an employee has to fulfill assigned job responsibilities; and (c) Responsibility, defined as the magnitude of responsibility and accountability an employee has.

Based on the six main elements mentioned above, questions were selected from eleven previously-conducted employee satisfaction and empowerment questionnaires. Eighty questions addressing employee satisfaction were collected and arranged into one of the three elements of satisfaction previously identified: Value, Management/Leadership, or Training. In addition, 55 questions addressing employee empowerment were also collected and organized into one of the three elements of

empowerment previously identified: Participation, Authority, or Responsibility. After all of the questions were categorized into groups, the list was narrowed by combining questions with similar wording, removing questions not related to the construction industry, and rewording questions. Following this process, the original list of 135 questions was narrowed to 22 questions.

Based on the complexity and number of questions asked, a questionnaire may sometimes appear overwhelming. Because some questionnaires can be complex and overwhelming, it was necessary to assure that this survey instrument was simple to complete and not time-consuming. In order to accomplish this, the questionnaire was carefully reviewed by four university faculty members teaching in a construction management program who had personal experience as supervisors of residential construction projects, by several university construction management students who had experience in on-site construction supervision, and by a number of experienced home builders and full-time on-site supervisors to test for understanding and readability. Also, a group of 41 university construction management students completed a hard copy of the written questionnaire and recorded the time it took to complete the questionnaire. The average time for completing the questionnaire was about four-and-one-half minutes. It was determined that completing the questionnaire in an electronic format would take even less time, because the responses could be answered more quickly with a click of a mouse button.

Composition of the Questionnaire

Based on suggestions received throughout the development process, appropriate changes were made to the questionnaire in order to increase clarity, readability, and understanding of the questions. The final survey included 32 questions, including 10 demographic questions, 11 questions addressing satisfaction, and 11 questions addressing empowerment (see Appendix A).

Questions 1 through 10 were designed to obtain demographic data about the on-site supervisors. Demographic questions that were included in the survey targeted the on-site supervisor's age, gender, marital status, education, industry experience, experience with past and present employers, job title, current state of occupation, and number of residential units the participant's company built annually. Questions 11, 14, 20, and 28 identify whether the employees feel valued by the company. Questions 17, 19, and 26 identify if the employees received enough training to perform the assigned responsibilities. Questions 22 and 25 identify the employees' level of trust and confidence in supervisors and managers. Questions 12, 21, and 24 identify if the employees have the authority to perform required responsibilities. Questions 13, 15, 18, and 23 identify whether the employees have any input or participation into deciding how their job requirements will be fulfilled. Questions 16 and 27 identify if the employees are held accountable and responsible for their actions by upper management. The 18 questions above indirectly gauge the on-site supervisors' level of satisfaction and empowerment. Questions 29 and 30 are direct questions allowing the employees to record their level of satisfaction or empowerment. These two questions directly gauge the on-site supervisors' level of satisfaction and empowerment. Finally, Questions 31 and 32

are used to identify the top five elements on-site supervisors think lead to employee satisfaction and empowerment.

The core questions, questions 11-30, evaluate behavior and attitude. A five-point Likert scale was used for simplicity and effectiveness (Leedy & Ormrod, 2005). The selections in the Likert scale were: (a) disagree strongly, (b) disagree somewhat, (c) neutral, (d) agree somewhat, and (e) agree strongly.

Questions 31 and 32 were open-ended questions designed to allow participants to provide their personal thoughts and opinions regarding what elements are most important for determining employee satisfaction and empowerment. Table 3.1 below lists each question in numeric order, describes what each question is designed to identify, and summarizes the intent of each question.

Table 3.1 *Elements of satisfaction and empowerment addressed in questionnaire*

Question Number	**Demographic/ Satisfaction/ Empowerment**	**Satisfaction/ Empowerment Element**	**Summary of Question**
1	Demographic		Age
2	Demographic		Gender
3	Demographic		Marital status
4	Demographic		Education
5	Demographic		Length of tenure in the industry
6	Demographic		Length of tenure with previous employer
7	Demographic		Length of tenure with present employer

Question Number	Demographic/ Satisfaction/ Empowerment	Satisfaction/ Empowerment Element	Summary of Question
8	Demographic		Number of units built annually by present employer
9	Demographic		Job title
10	Demographic		Location of job residence
11	Satisfaction	Value	Recognition for work
12	Empowerment	Authority	Authority to complete tasks
13	Empowerment	Participation	Participation in pre-work decisions
14	Satisfaction	Value	Value to the company
15	Empowerment	Participation	Encouraged to innovate new ways of completing assignments
16	Empowerment	Responsibility	Control over job aspects for which employee is accountable
17	Satisfaction	Training	Learning and growth opportunities
18	Empowerment	Participation	Involvement in work decisions
19	Satisfaction	Training	Sufficient job training
20	Satisfaction	Value	Value as a team member
21	Empowerment	Authority	Receive necessary information to perform job duties sufficiently
22	Satisfaction	Management/ Leadership	Confidence in leadership of company
23	Empowerment	Participation	Allowed to develop creative and innovative ideas
24	Empowerment	Authority	Are proper materials and equipment furnished to allow performance of job functions

Question Number	Demographic/ Satisfaction/ Empowerment	Satisfaction/ Empowerment Element	Summary of Question
25	Satisfaction	Management/ Leadership	Supervisor management rating of participant's boss
26	Satisfaction	Training	Continuous training provided by company
27	Empowerment	Responsibility	Accountable for results
28	Satisfaction	Value	Personal accomplishment with job responsibilities
29	Satisfaction	Satisfaction	Overall satisfaction rating with job
30	Empowerment	Empowerment	Overall empowerment rating
31	Satisfaction	Satisfaction	List main elements of satisfaction
32	Empowerment	Empowerment	List main elements of empowerment

Institutional Review Board

Prior to administering the survey instrument, Brigham Young University's Institutional Review Board was contacted, and permission was granted to conduct this study. The Institutional Review Board's main purpose is to safeguard the rights and welfare of human research subjects. According to university guidelines, any study designed to solicit information from human subjects must be pre-approved by a review committee. As part of the disclosure information provided in the cover letter, the Institutional Review Board required that each participant be informed of the reason for the study. Respondents were also assured that individual responses would remain anonymous (Appendix B).

Pilot Study

Using what was considered a final draft of the questionnaire that had been developed, a pilot study was conducted. The survey instrument was e-mailed to the on-site supervisors who subscribe to *Professional Builder's* magazine. Based on a response rate of less than 1% from the first e-mailing, key decisions were made. One of the reasons why there was such a low response rate may have been because *Professional Builder*, instead of the author, e-mailed the survey instrument to the on-site supervisors who subscribe to *Professional Builder's* magazine. Instead of e-mails being sent to each subscriber one-at-a-time, the e-mails were sent in bulk. Some e-mail spam services block such bulk e-mailings and the e-mail containing the survey instrument would never be delivered to the intended recipients e-mail box. Another reason why there was such a low response rate may have been because the on-site supervisors received the survey from an anonymous source (the author) with no prior introduction or warning. A decision stemming from the low response rate of the pilot was to use *Professional Builder's* top 400 list as a source for contacting on-site supervisors. Also, the e-mails would be dispersed one-at-a-time to avoid being blocked by e-mail spam filters. It was predicted that by distributing the survey through each company, the on-site supervisors would perceive that the survey was coming from a viable source, the employer. This preliminary introduction from the employer was expected to boost the response rate.

Method of Distribution

Outside funding for this survey was not available; therefore, it was necessary that the distribution method be affordable and efficient. Because the data collection

instrument for this study was a written questionnaire, three possible means of distribution were considered. The first option was collecting data through telephone interviews with on-site supervisors. This option was quickly rejected because a comprehensive list of on-site supervisors was not available through *Professional Builder*. The second option was to distribute the written questionnaire through a mail service. This option was also rejected because of the costs associated with the printing, packaging, and mailing of the surveys. The third option was the most practical and affordable. The questionnaire was to be distributed through e-mail to participants.

The e-mailed questionnaire contained introductory information informing the potential participants about the nature of the study, anonymity, contact information if any questions should arise, and a hyperlink to the survey. Because 107 of the top 400 builders did not have e-mail addresses listed, e-mails were sent to 293 of the top 400 U.S. residential builders identified by *Professional Builder* for 2005 requesting the contact information for the individual who would be most helpful in distributing the survey to the on-site supervisors of the company. While most companies did not respond – some respectfully declined to participate in the study – others accepted the invitation and requested more information. While most participating companies used e-mails to distribute the questionnaire, some companies preferred handing out and collecting hard copies of the survey. In each of these cases, a hard copy of the survey was provided along with a fax number and mailing address where the completed surveys could be returned to the author.

Data Collection

The survey was posted on a secure web server. An easy-to-find link to the survey was provided with every e-mail distributed. Participants clicked the hyperlink to the survey, completed the survey, and then submitted the survey by simply clicking on a submit button located at the end of the survey. The survey program used to create the survey collected and organized all of the surveys for easy statistical analysis.

As mentioned earlier, several of the participants did not complete the survey on-line but rather completed a hard copy of the survey. The hard copy of the survey was either faxed or mailed to the author. Once received, the data was entered into the on-line survey program so the software could tabulate the data with all of the surveys at one time. These surveys were marked so they would not be accidentally entered more than once. The collection process took several months beginning at the end of June 2005 and continuing to the beginning of October 2005.

Response Rate

The population consisted of on-site supervisors from 293 of *Professional Builder's* top 400 U.S. residential builders for 2005. Because every e-mail that was sent to the companies surveyed contained a link to the survey instrument, and because all responses remained anonymous, it is unknown exactly how many companies encouraged their on-site supervisors to participate in the study. The final number of responses received totaled 153. Of these, 122 were used in the study. The responses that were not used in the study were discarded because it was obvious that they were not completed by on-site supervisors.

Statistical Tools

With statistical analysis, it is the nature of the data that determines which techniques and tools will be used (Leedy & Ormrod, 2005). The following tests and statistical tools were used in the organization and analysis of the data.

Pearson's Correlation Coefficient

Pearson's correlation coefficient, also known as the Pearson product-moment correlation coefficient, is defined as "a statistic, usually symbolized as *r*, showing the degree of linear relationship between two variables that have been measured on interval or ratio scales, such as the relationship between height in inches and weight in pounds." Correlation and regression are often discussed together because correlation is a special case of regression. The link between the two, correlation and regression, can most easily be discussed with reference to a scatter plot. The regression line is the line that fits the data best (in a least squares sense). Correlation is the degree to which all the points come close to the line. If the correlation were perfect, all points would be on a single, straight line (Vogt, 2005).

Through correlation analysis, the relationship between variables can be seen. It can be observed whether variables tend to shift in the same or opposite directions when one of the variables changes (Salkind, 2000).

If variables change in the same direction, then a positive correlation exists (0.0 to +1.0). If variables change in the opposite direction, then a negative correlation exists (-1.0 to 0.0). The degree to which the data points move in the same direction is referred to as the strength (Salkind, 2000).

The computational formula for finding the Pearson product-moment correlation coefficient between variables *X* and *Y* is shown below (Salkind, 2000).

$$r_{xy} = \frac{n\sum XY - \sum X \sum Y}{\sqrt{\left(\left(N\sum X\right)^2 - \left(\sum X\right)^2\right)\left(N\sum Y^2 - \left(\sum Y\right)^2\right)}}$$

Where:

r_{xy} is the correlation coefficient between *X* and *Y*

N is the size of the sample

X is the *X* variable

Y is the *Y* variable

Coefficient of Determination

One problem that arises in interpreting correlation coefficients is that the coefficients' relative magnitudes are not proportional. For example, a correlation coefficient of 0.80 does not count for twice as much variance as a coefficient of 0.40. The coefficient of determination makes interpreting correlation coefficients easier. The resulting coefficient of determination provides an estimate of the proportion of variance between two sets of numbers (i.e., the degree to which the two sets of numbers share the same variance). The equation for computing the coefficient of determination is $r_{xy}^{\ 2}$.

Where:

r_{xy} is the correlation coefficient between *X* and *Y*

CHAPTER IV

DATA ANALYSIS AND RESULTS

Introduction

This chapter consists of an analysis of the data collected and includes two main sections. The first section contains descriptive statistics of the data collected. First, the demographic data describing the participants were organized. Next, the on-site supervisors' perceptions of the main elements that embody employee satisfaction and empowerment were summarized. The second section of this chapter describes the findings from the inferential statistical tests discussed in Chapter III. These tests include the Pearson's product-moment correlation and the correlation of determination. The statistical findings from these tests provide information regarding relationships between employee empowerment and satisfaction.

Descriptive Statistics

Participants' Job Title

Of the 153 participants who completed the survey, 122 of them were on-site supervisors. The other 31 participants were employees who were not full-time on-site supervisors. These included purchasing agents (4), owners/executives/general managers (19), and analysts/controllers/estimators/customers service reps/sales reps (9).

Perhaps the reason why so many owners, executives, and general managers participated in the study may be because many of the individuals initially contacted were

in these positions. This initial contact was necessary in order to get the written questionnaire distributed to the on-site supervisors in their companies.

Age

The ages of on-site supervisors varied. Only 1.7% of the on-site supervisors were younger than 20; about one-third (33.9%) were between the ages of 20 and 29; 28.9% were between the ages of 30 and 39; almost one-fourth (24.8%) were between the ages of 40 and 49; about one-tenth (10.7%) were between the ages of 50 and 59. None of the participants were older than 59 (Figure 4.1).

Almost two-thirds (64.5%) of the on-site supervisors were under the age of 40. This could possibly be explained by turnover or promotion to other positions after field experience has been obtained. Physical burnout may also be a possibility.

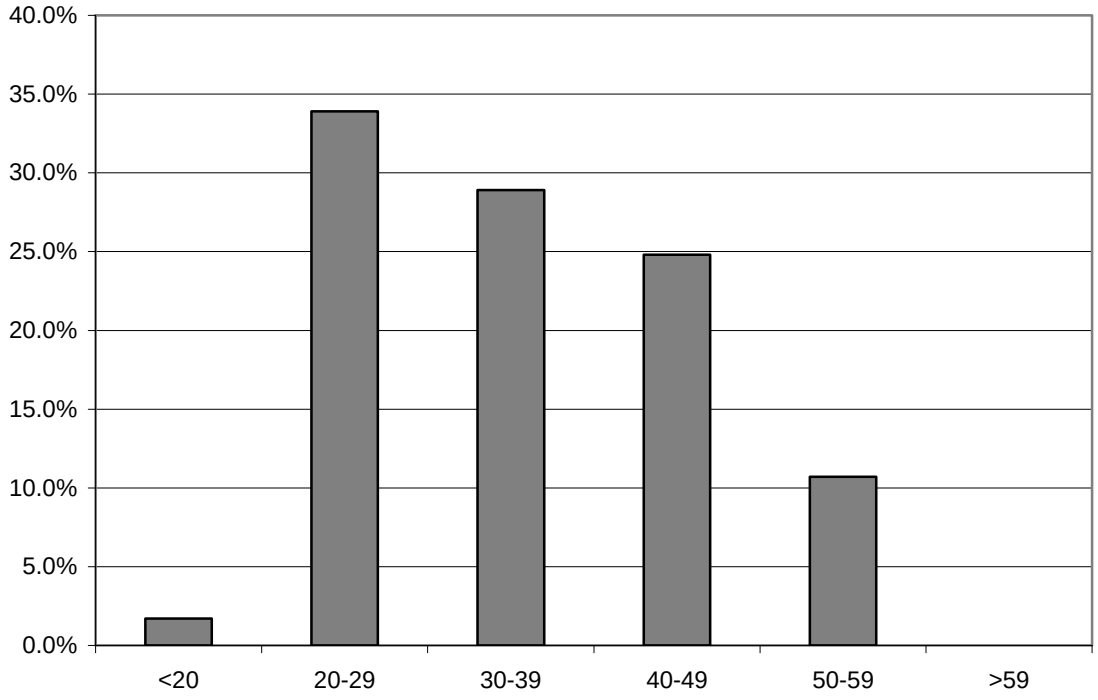

Figure 4.1 *Age of on-site supervisors*

Gender and Formal Education

One out of every twenty on-site supervisor who participated in the study was female. Figure 4.2 displays the amount of formal education received by the on-site supervisors who participated in the study. Almost all (96.6 %) on-site supervisors graduated from high school and over half (51.2%) earned a degree from an institute of higher learning.

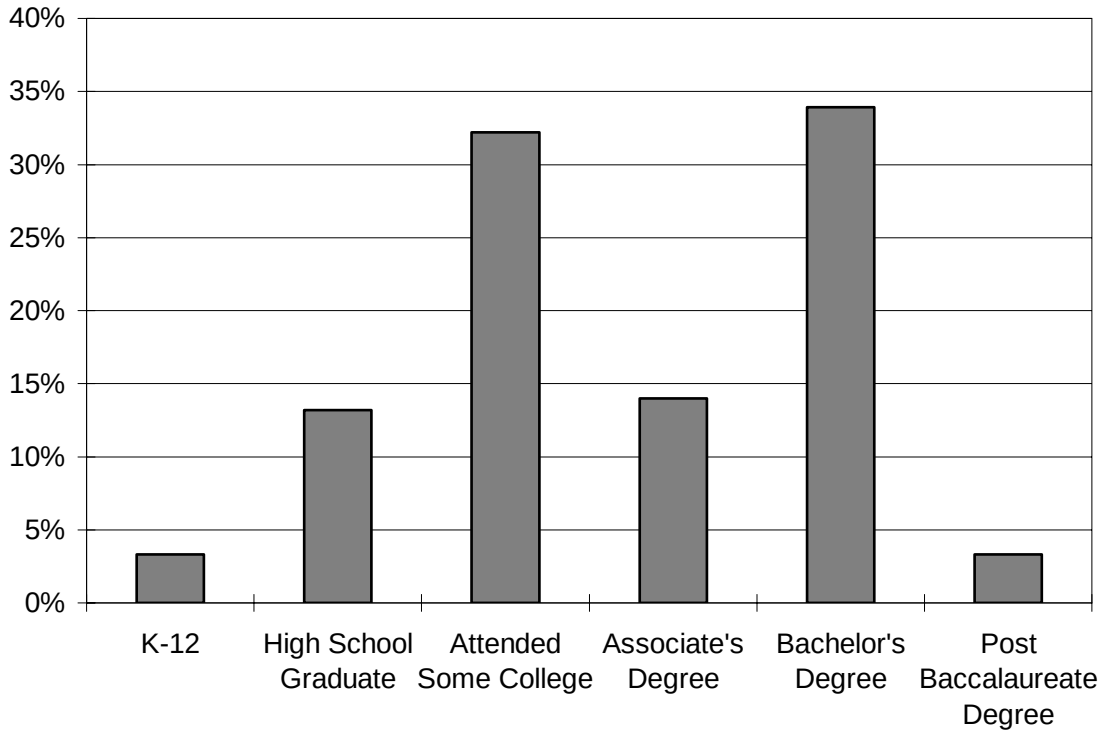

Figure 4.2 *Education level of on-site supervisors*

Construction Industry Experience

Only 5.8% of the on-site supervisors surveyed had less than one year of experience in the construction industry. One-third (33.1%) had between one and five years of experience; 16.5% had six to ten years of experience; almost one-fourth (23.1%)

had eleven to twenty years of experience; and about one-fifth (21.5%) had more than twenty years of construction industry experience (Figure 4.3).

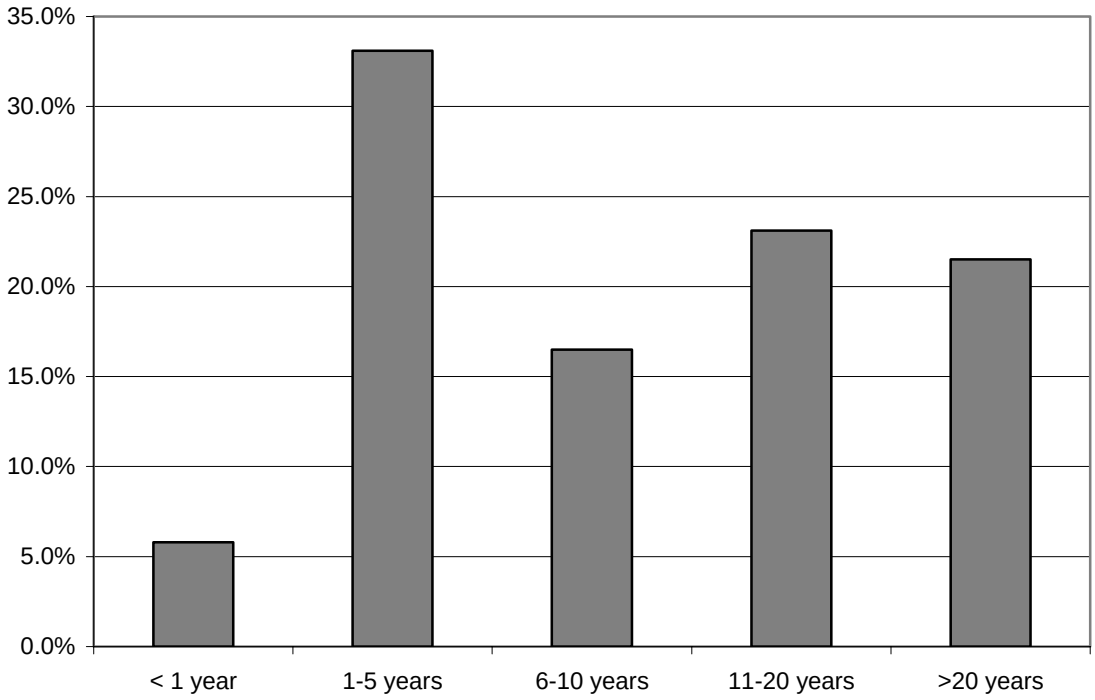

Figure 4.3 *Construction industry experience of on-site supervisors*

Distribution of On-Site Supervisors by State

Respondents from 22 states participated in this study. Table 4.1 describes the employment locations of the respondents by state. Notice that almost half of the on-site supervisors that returned the questionnaire were employed in either Nevada or Florida.

Table 4.1 *Distribution of on-site supervisors by state*

State	No. of On-Site Supervisors	State	No. of On-Site Supervisors	State	No. of On-Site Supervisors
AZ	5	MA	1	OK	1
CA	13	MO	2	OR	1
CO	3	MN	1	TN	6
DE	1	NC	1	TX	5
FL	36	NV	24	UT	2
GA	6	NM	1	VA	3
HI	1	NY	1	WA	5
IN	1				

Elements Leading to Employee Satisfaction

Question 31 requests all respondents to list in priority order the five most significant elements that lead to employee satisfaction. Rather than compiling a predetermined list of elements that might lead to satisfaction and then requesting on-site supervisors to choose which of those were the most significant in leading to employee satisfaction, respondents were allowed to volunteer the five elements they thought contributed most to employee satisfaction.

Of the 122 questionnaires considered in this study, 23 did not contain any written response to this question. Two-thirds of the 99 that responded to the question listed five elements that contributed to employee satisfaction. The other one-third of those who answered gave fewer than five responses. There were a total of 429 responses.

Because the answers were given in priority order, listed one through five, a weighted scoring system was used to compile the results. For purposes of this study, the first answer given by each respondent was assigned five points, the second was assigned four points and so forth, with the fifth answer receiving a single point. In the case of those who gave fewer than five answers, the same point system was followed for the responses given, with the first response receiving five points, the second receiving four points, and so forth.

The author classified each written response. There seemed to be no instances when a classification was not clear. A spreadsheet was then developed in order to categorize and score each answer. Along one axis of the grid, 17 unique responses were identified. The other axis contained a list of the 122 valid questionnaires. All responses were entered into the spreadsheet, and individual scores for each of the 17 responses were recorded. The scores were then totaled and ranked from highest to lowest (Table 4.2). There were a total of 1389 adjusted points.

Table 4.2 *On-site supervisor's list of elements that lead to employee satisfaction*

Individual Rank	Element	Adjusted Points	Percentage
1	Recognition/Appreciation	283	20.37%
2	Financial Compensation	239	17.21%
3	Work Environment	183	13.39%
4	Advancement Opportunities	92	6.62%
5	Benefits/Perks	92	6.62%
6	Support/Encouragement	84	6.05%

Individual Rank	Element	Adjusted Points	Percentage
7	Management/Leadership	82	5.90%
8	Training	51	3.67%
9	Participation	48	3.46%
10	Job Responsibility	47	3.38%
11	Decision Making	44	3.17%
12	Challenging/ Personal Accomplishment	40	2.88%
13	Freedom/Autonomy	36	2.59%
14	Information Sharing	23	1.66%
15	Trust	20	1.44%
16	Necessary Resources	16	1.15%
17	Communication	6	0.43%

Seven elements each received more than five percent of the total adjusted points and merit further discussion. The element that received the most adjusted points was Recognition and Appreciation. This corresponds with an employee being acknowledged by management in one form or another for completing tasks and responsibilities. Oftentimes, employees just want to hear that their work is appreciated and it is making a difference in the company. According to the review of literature, this agrees with being valued by an employer. The second of the top seven elements was Financial Compensation, which refers to the compensation an employee receives through an annual salary and year-end bonuses. The third of the top seven elements was Work Environment,

which consists mostly of the working relationship the employee has with co-workers. The fourth of the top seven elements was Advancement Opportunities, which includes not only moving up in the company but taking on more responsibility within a given job description. The fifth of the top seven elements was Benefits and Perks, which includes everything from health packages and retirement plans to truck allowances and company picnics. The sixth of the top seven elements was Support and Encouragement, which consists of support by management for decisions the employees make, as well as encouragement to think outside the box and be innovative and creative. The last of the top seven elements was Management/Leadership, which includes the on-site supervisor's attitude toward the management and leadership of the company.

Elements Leading to Employee Empowerment

Question 32 requests all respondents to list in priority order the five most significant elements that lead to employee empowerment. Rather than compiling a predetermined list of elements that might lead to employee empowerment and then requesting on-site supervisors to choose which of those were the most significant, respondents were asked to list the five elements they thought contributed most to employee empowerment.

Of the 122 questionnaires considered in this study, 30 did not contain any written response to this question. A little more than two-thirds of the 92 that responded to the question listed five elements that contributed to employee empowerment. The other participants who answered the question gave fewer than five responses. There were a total of 404 responses.

Because the answers were given in priority order, listed one through five, a weighted scoring system was used to compile the results. For purposes of this study, the first answer given by each respondent was assigned five points, the second was assigned four points and so forth, with the fifth answer receiving a single point. In the case of those who gave fewer than five answers, the same point system was followed for the responses given, with the first response receiving five points, the second receiving four points, etc.

The author classified each written response. There seemed to be no instances when a classification was not clear. A spreadsheet was then developed in order to categorize and score each answer. Fifteen unique responses were identified along one axis of the grid. The other axis contained a list of the 122 valid questionnaires. All responses were entered into the spreadsheet, and individual scores for each of the 15 responses were recorded. The scores were then totaled and ranked from highest to lowest (Table 4.3). There was a total of 1290 adjusted points.

Table 4.3 *On-site supervisor's list of elements that lead to employee empowerment*

Individual Rank	**Element**	**Adjusted Points**	**Percentage**
1	Freedom/Autonomy	209	16.20%
2	Information Sharing	202	15.66%
3	Training	193	14.96%
4	Authority/Power	155	12.02%
5	Management Support	111	8.60%
6	Decision Making	106	8.22%

Individual Rank	Element	Adjusted Points	Percentage
7	Resources	76	5.89%
8	Accountability	50	3.88%
9	Responsibility	50	3.88%
10	Recognition	47	3.64%
11	Work Environment	40	3.10%
12	Growth Opportunity	19	1.47%
13	Benefits/Perks	13	1.01%
14	Communication	12	0.93%
15	Job Satisfaction	7	0.54%

Seven elements each received more than five percent of the total adjusted points and warrant further discussion. The element that received most of the adjusted points was Freedom/Autonomy. With Freedom and Autonomy, on-site supervisors are allowed to make decisions without fear of reprimand. Trust has been earned and on-site supervisors are held accountable for their choices. When assignments were given, the on-site supervisors accept responsibility. The second of the top seven elements was Information Sharing. This means that on-site supervisors are given all the necessary information in a timely manner to make the best decision. The third of the top seven elements was Training, which refers to the quality and amount of on-going training an employee receives by the company. This training increases the on-site supervisors' potential to perform and carry out their job responsibilities more fully. The fourth of the top seven elements was Authority/Power, which corresponds with having the ability to do whatever

it takes to complete a job, whether that means dealing with a subcontractor or buying the necessary supplies to get the job done in time. Although ultimate power may be reserved by those in higher managerial roles, limited power enables the on-site supervisor to be heard and to make a difference. The fifth of the top seven elements was Management Support. This means that on-site supervisors receive support from higher management when it comes to fulfilling job responsibilities. The sixth of the top seven elements was Decision Making, which refers to the magnitude and quantity of decisions on-site supervisors make in relation to their job responsibilities. The last of the top seven elements was Resources, which means on-site supervisors are given the necessary supplies and equipment to complete job responsibilities. For an on-site supervisor, resources may include such things as wood for framing, contact with the architect in order to receive RFI's, or access to the project schedule.

Overall Level of Employee Satisfaction Based on Elements of Satisfaction

From the lack of literature specific to on-site supervisors in the construction industry, it was not known at what level on-site supervisors were satisfied with their jobs. By examining the data generated from the responses given by the on-site supervisors, a level of satisfaction for on-site supervisors was determined.

On-site supervisors were asked to respond to nine questions relating to employee satisfaction on the survey instrument using a Likert scale. The selections in the Likert scale were: (a) disagree strongly, (b) disagree somewhat, (c) neutral, (d) agree somewhat, and (e) agree strongly. Because the answers were on a scale ranging from "disagree strongly" to "agree strongly," a weighted scoring system was used to compile the results.

For purposes of this study the first answer, “disagree strongly,” was assigned one point; the second, “disagree,” was assigned two points and so forth, with the fifth answer, “agree strongly,” receiving five points.

A satisfaction score for each on-site supervisor was generated from the responses collected from the nine questions relating to employee satisfaction in the written questionnaire (Questions 11, 14, 17, 18, 20, 22, 25, 26, and 28). If an on-site supervisor responded “agreed strongly” to every one of the nine questions relating to employee satisfaction, the score would be 45 (five points for each question times nine questions). If an on-site supervisor responded “disagree strongly” to every one of the nine questions relating to employee satisfaction, the score would be nine (one point for each question times nine questions). Based on the total points on-site supervisors received from their responses to the preceding questions, Table 4.6 was created to describe five levels of satisfaction. For example, if the adjusted points to an on-site supervisor’s responses totaled 39, based on Table 4.6, the on-site supervisor would be considered “satisfied.”

Table 4.4 *Level of satisfaction based on an employee’s total score*

Strongly Unsatisfied	9-13
Unsatisfied	14-22
Neutral	23-31
Satisfied	32-40
Strongly Satisfied	41-45

Figure 4.4 displays the percentage of all the on-site supervisors who were "strongly unsatisfied," "unsatisfied," "neutral," "satisfied," or "strongly satisfied," based on a total point score of the individual responses. Based on the ranges of score in Table 4.6, the analysis concludes that 6.56% of the on-site supervisors were unsatisfied (5.74%) or strongly unsatisfied (0.82%), while 59.02% of the on-site supervisors were satisfied (34.44%) or strongly satisfied (25.42%). One-third (33.62%) of the on-site supervisors were neither satisfied nor unsatisfied.

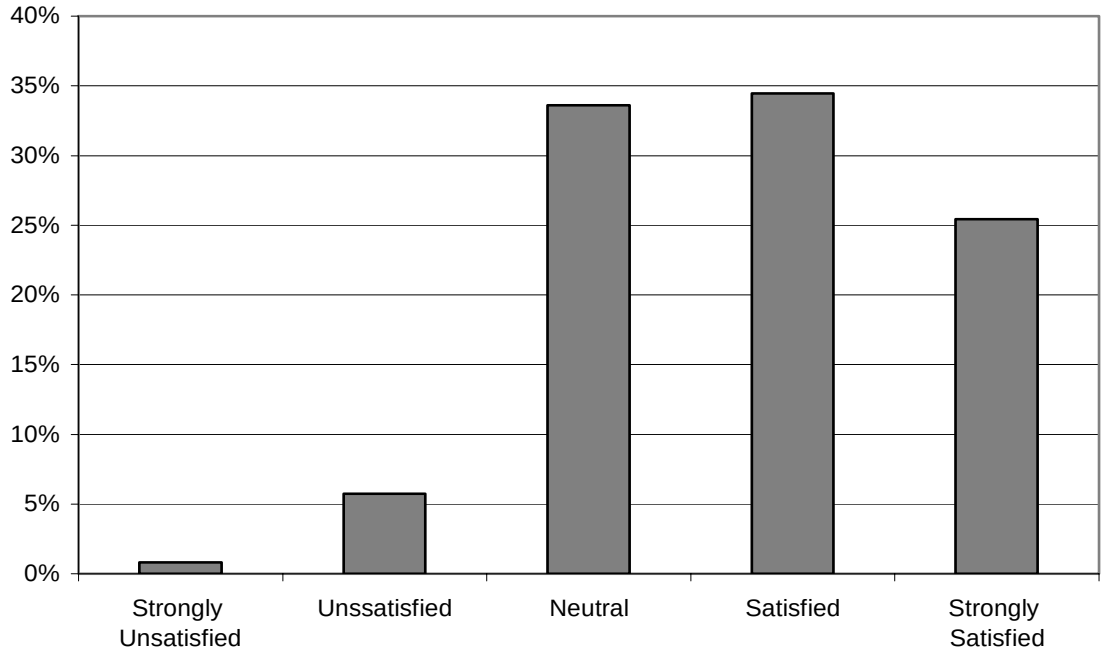

Figure 4.4 *Percentage of satisfied or unsatisfied on-site supervisors-element questions*

Age Analysis

Using the same responses and rating scale in the previous analysis, Table 4.5 shows what percentage of on-site supervisors fall into each level of satisfaction based on

age group. There appears to be no significant correlation between the level of satisfaction and the ages of the on-site supervisors.

Table 4.5 *Age and satisfaction analysis*

	<20	**20-29**	**30-39**	**40-49**	**50-59**	**>60**
Strongly Unsatisfied	0%	0%	0.82%	0%	0%	0%
Unsatisfied	0%	2.46%	0%	2.46%	0.82%	0%
Neutral	0%	12.30%	7.38%	8.20%	5.74%	0%
Satisfied	0.82%	11.48%	13.11%	7.38%	1.64%	0%
Strongly Satisfied	0.82%	8.20%	7.38%	6.56%	2.46%	0%
Number of Responses	2	42	35	30	13	0

Gender Analysis

Using the same responses and rating scale in the previous analysis, Table 4.6 shows what percentage of on-site supervisors fall into each level of satisfaction based on gender. While almost two-thirds (61.21%) of the male on-site supervisors were satisfied, half (50.00%) of the female on-site supervisors were neither satisfied nor unsatisfied. It is important to note that only six female on-site supervisors participated in the study.

Table 4.6 *Gender and satisfaction analysis*

	Male	**Female**
Strongly Unsatisfied	0.86%	0.00%
Unsatisfied	5.17%	16.67%
Neutral	32.76%	50.00%
Satisfied	36.21%	0.00%
Strongly Satisfied	25.00%	33.33%
Number of Responses	116	6

Overall Level of Employee Satisfaction Based on a Single Question

From the lack of literature specific to on-site supervisors in the construction industry, it was not known at what level on-site supervisors were satisfied with their jobs. By examining the data generated from the responses given by the on-site supervisors to question 29, "I am a satisfied employee," an average level of satisfaction for on-site supervisors was determined.

On-site supervisors were asked to rate their level of satisfaction on the survey instrument using a Likert scale. The selections in the Likert scale were: (a) disagree strongly, (b) disagree somewhat, (c) neutral, (d) agree somewhat, and (e) agree strongly. Because the answers were on a scale ranging from "disagree strongly" to "agree strongly," a weighted scoring system was used to compile the results. For purposes of this study the first answer, "disagree strongly," was assigned one point; the second, "disagree," was assigned two points and so forth, with the fifth answer, "agree strongly," receiving five points.

Figure 4.5 indicates the percentage of all the on-site supervisors who were "strongly unsatisfied," "unsatisfied," "neutral," "satisfied," or "strongly satisfied," based on individual responses. The analysis concludes that 13.12% of the on-site supervisor's were unsatisfied (7.38%) or strongly unsatisfied (5.74%), while 68.86% of the on-site supervisors were satisfied (35.25%) or strongly satisfied (33.61%); about one-fifth (18.03%) of the on-site supervisors were neither satisfied nor unsatisfied.

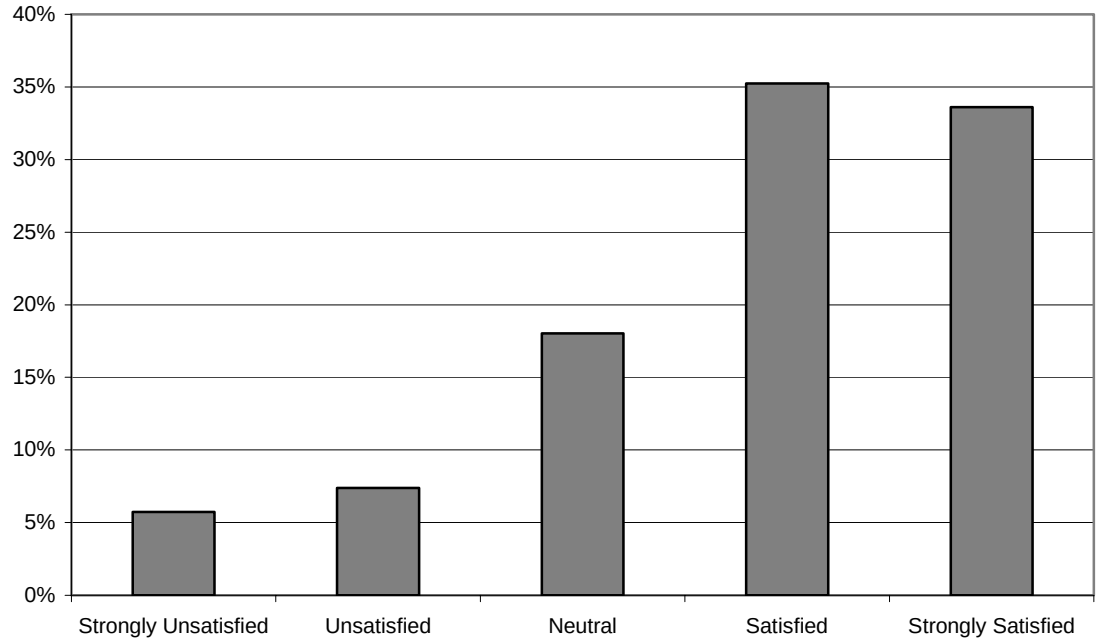

Figure 4.5 Percentage of satisfied or unsatisfied on-site supervisors-single question

Overall Level of Employee Empowerment Based on Elements of Empowerment

From the lack of literature specific to on-site supervisors in the construction industry, it was not known if on-site supervisors were empowered enough to fulfill their job responsibilities. By examining the data generated from the responses given by the on-site supervisors, a level of empowerment for on-site supervisors was determined.

On-site supervisors were asked to respond to nine questions relating to empowerment on the survey instrument using a Likert scale. The selections in the Likert scale were: (a) disagree strongly, (b) disagree somewhat, (c) neutral, (d) agree somewhat, and (e) agree strongly. Because the answers were on a scale ranging from "disagree strongly" to "agree strongly," a weighted scoring system was used to compile the results. For purposes of this study the first answer, "disagree strongly," was assigned one point; the second, "disagree," was assigned two points and so forth, with the fifth answer, "agree strongly," receiving five points.

An empowerment score for each on-site supervisor was generated from the responses collected from the nine questions relating to employee empowerment in the written questionnaire (Questions 12, 13, 15, 16, 18, 21, 23, 24, and 27). If an on-site supervisor responded "agree strongly" to every one of the nine questions relating to employee empowerment, the score would be 45 (five points for each question times nine questions). If an on-site supervisor responded "disagree strongly" to every one of the nine questions relating to employee empowerment, the score would be nine (one point for each question times nine questions). Based on the total points on-site supervisors received from their responses to the preceding questions, the following Table 4.7 was created to describe five levels of empowerment. For example, if the adjusted points to an on-site supervisor's responses totaled 39, based on Table 4.7, the on-site supervisor would be considered "empowered."

Table 4.7 *Level of empowerment based on an employee's total score*

Strongly Unempowered	9-13
Unempowered	14-22
Neutral	23-31
Empowered	32-40
Strongly Empowered	41-45

Figure 4.6 displays the percentage of all the on-site supervisors who were "strongly unempowered," "unempowered," "neutral," "empowered," or "strongly empowered" based on individual responses. The analysis concludes that 4.10% of the on-site supervisor's were unempowered (4.10%) or strongly unempowered (0.00%), while 67.24% of the on-site supervisors were empowered (43.46%) or strongly empowered (23.78%). About one-fourth (27.88%) of the on-site supervisors felt neither empowered nor unempowered.

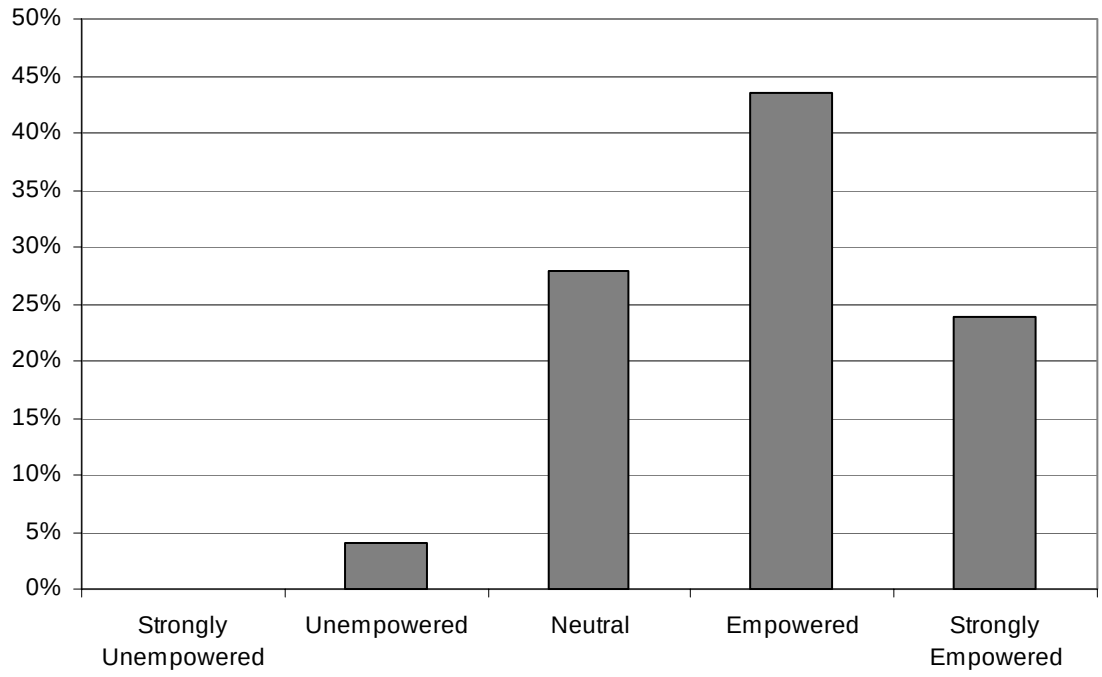

Figure 4.6 *Percentage of empowered or unempowered on-site supervisors-element questions*

Overall Level of Employee Empowerment Based on a Single Question

From the lack of literature specific to on-site supervisors in the construction industry, it was not known at what level on-site supervisors were empowered enough to fulfill their job responsibilities. By examining the data generated from the responses given by the on-site supervisors for question 30, "I am an empowered employee," an average level of empowerment for on-site supervisors was determined.

On-site supervisors were asked to rate their level of empowerment on the survey instrument using a Likert scale. The selections in the Likert scale were: (a) disagree strongly, (b) disagree somewhat, (c) neutral, (d) agree somewhat, and (e) agree strongly. Because the answers were on a scale ranging from "disagree strongly" to "agree

strongly," a weighted scoring system was used to compile the results. For purposes of this study the first answer, "disagree strongly," was assigned one point; the second, "disagree," was assigned two points and so forth, with the fifth answer, "agree strongly," receiving five points.

Figure 4.7 exhibits the percentage of all the on-site supervisors who were "strongly unempowered," "unempowered," "neutral," "empowered," and "strongly empowered" based on individual responses. The analysis concludes that 15.58% of the on-site supervisors were unempowered (11.48%) or strongly unempowered (4.10%), while 62.30% of the on-site supervisors were empowered (36.07%) or strongly empowered (26.23%). A little more than one-fifth (22.13%) of the on-site supervisors were neither empowered nor unempowered.

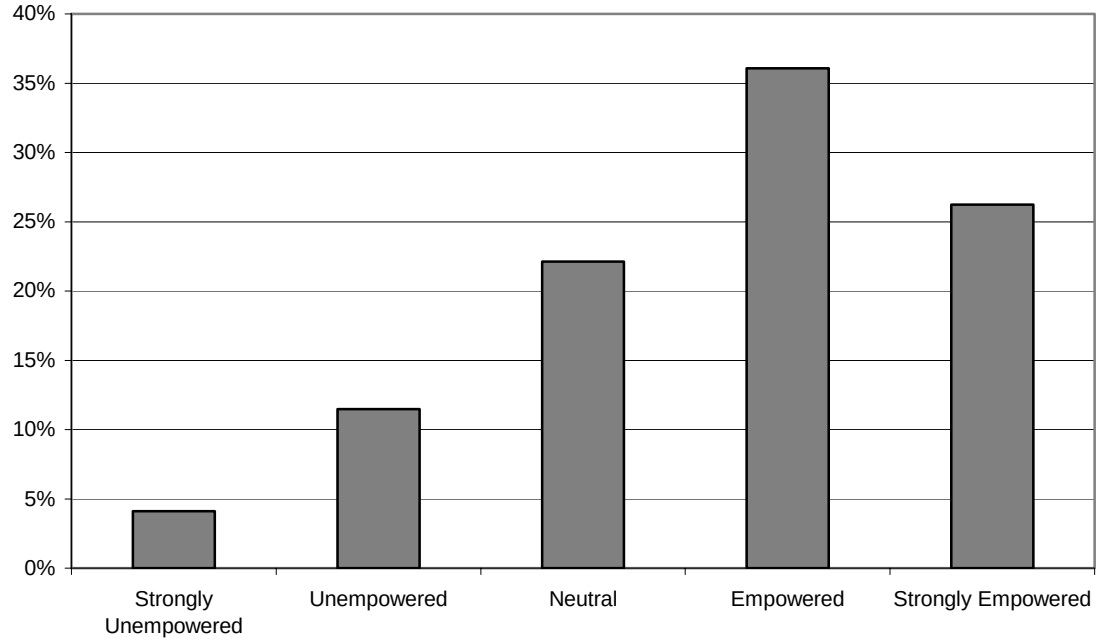

Figure 4.7 *Percentage of empowered or unempowered on-site supervisors-single question*

Inferential Statistics

Elements of Satisfaction and Satisfaction Question Analysis

Through correlation analysis, the strength of a relationship between two variables can be determined. It can be observed whether variables tend to shift in the same or opposite directions when one of the variables changes (Salkind, 2000). From the literature review, three main elements were identified that contribute most to employee satisfaction: an employee's sense of value to the company as perceived by the employee, an employee's attitude toward the management and leadership of the company, and the amount or quality of on-the-job training an employee receives. Nine total questions in the survey instrument correspond with these three elements. Using the same weighting system as used in the previous analyses, the adjusted points from the responses of these

nine questions were totaled and then divided by the number of responses (9) to find a mean score. A tenth question requested on-site supervisors to simply rate their level of satisfaction. The analysis of the data found a correlation between the nine questions that comprise the elements of employee satisfaction and the tenth question which requested on-site supervisors to rate their level of satisfaction. If a strong correlation was found, then only asking the tenth question would have been just as valid as an indicator to identifying the overall satisfaction level of on-site supervisors as asking the additional nine questions. If a strong correlation was not found, then all ten questions were necessary in order to find the overall satisfaction level of on-site supervisors.

The data used to conduct the Pearson's product-moment correlation coefficient in this analysis included the responses to the questions that relate to the elements that contribute most to employee satisfaction as identified in the literature review (Questions 11, 14, 17, 18, 20, 22, 25, 26, and 28) and the question in which on-site supervisors were requested to rate their level of satisfaction (Question 29). Using the statistical analysis software (SAS), the correlation coefficient was found to be 0.817. Using all 122 survey responses, a scatter plot showing the correlation between the elements that contribute most to employee satisfaction and the direct satisfaction question was generated (Figure 4.8). Each data point on the scatter plot represents an on-site supervisor's score based on the nine indirect questions that address the elements that contribute most to employee satisfaction (y-axis) and the one question that directly addresses the on-site supervisor's level of satisfaction (x-axis).

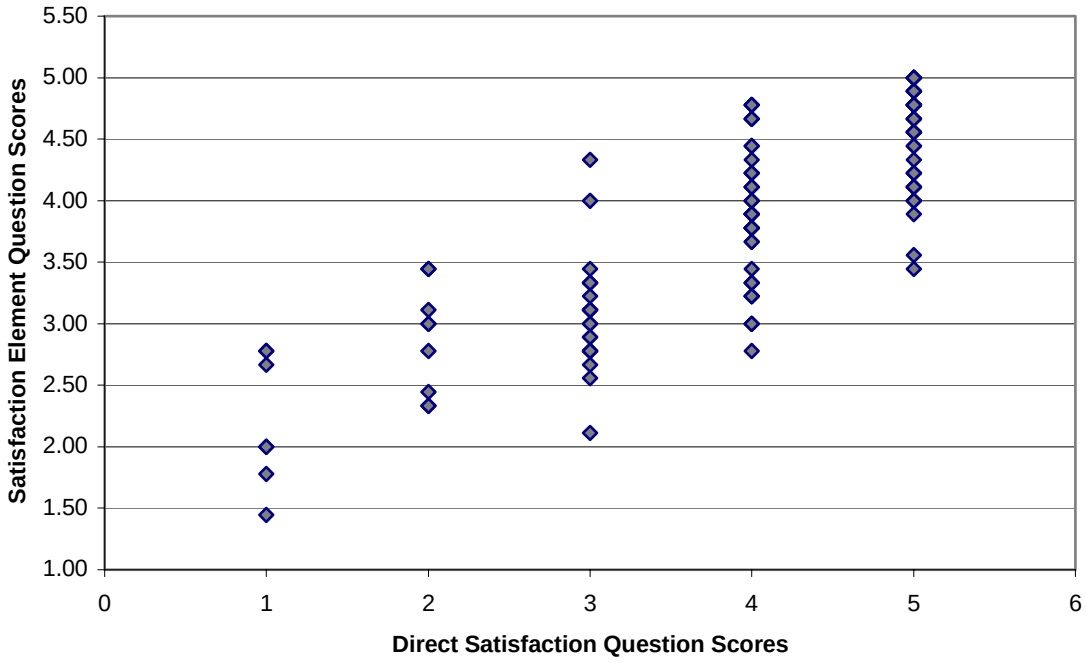

Figure 4.8 *Pearson's product-moment correlation for satisfaction questions*

Elements of Empowerment and Empowerment Question Analysis

Through correlation analysis, the strength of a relationship between two variables can be determined. It can be observed whether variables tend to shift in the same or opposite directions when one of the variables changes (Salkind, 2000). From the literature review, three main elements were disclosed as elements that contribute most to employee empowerment: the amount or quality of participation employees feel they have in regards to what, when, or how their job responsibilities are to be completed; the amount of authority an employee has to fulfill assigned job responsibilities; and the magnitude of responsibility and accountability an employee has. Nine total questions in the survey instrument correspond with these three elements. Using the same weighting system as used in the previous analyses, the adjusted points from the responses of these

nine questions were totaled and then divided by the number of responses (9) to find a mean score. A tenth question requested on-site supervisors to simply rate their level of empowerment. The analysis of the data found a correlation between the nine questions that comprise the elements of employee empowerment and the tenth question which requested on-site supervisors to rate their level of empowerment. If a strong correlation was found, then only asking the tenth question would have been just as good of an indicator to find the overall empowerment level of on-site supervisors as asking the additional nine questions. If a strong correlation was not found, then all ten questions were necessary in order to find the overall empowerment level of on-site supervisors.

The data used to conduct the Pearson's product-moment correlation coefficient in this analysis included the responses to the questions that relate to the elements that contribute most to employee empowerment as identified in the literature review (Questions 12, 13, 15, 16, 18, 21, 23, 24, and 27) and the question in which on-site supervisors were requested to rate their level of empowerment (Question 30). Using the statistical analysis software (SAS), the correlation coefficient was found to be 0.833. Using all 122 survey responses, a scatter plot showing the correlation between the elements that contribute most to employee empowerment and the direct empowerment question was generated (Figure 4.9). Each data point on the scatter plot represents an on-site supervisor's score based on the nine indirect questions that address the elements that contribute most to employee empowerment (y-axis) and the one question that directly addresses the on-site supervisor's perceived level of empowerment (x-axis).

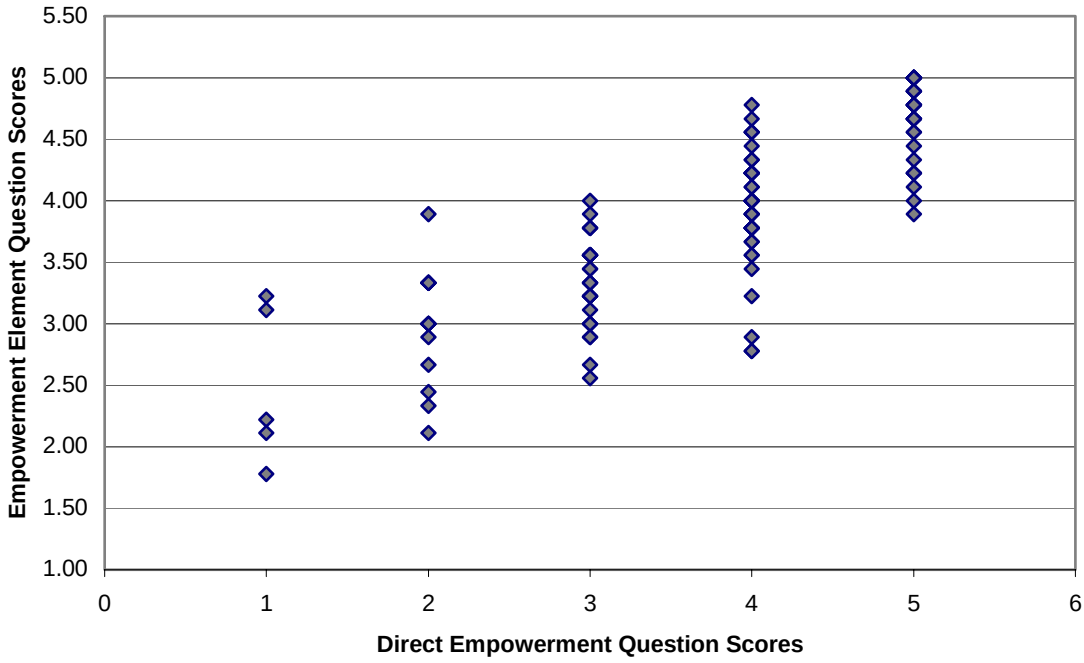

Figure 4.9 *Pearson's product-moment correlation for empowerment questions*

Satisfaction and Empowerment Correlation Analysis

Through correlation analysis, the strength of a relationship between two variables can be determined. It can be observed whether variables tend to shift in the same or opposite directions when one of the variables changes (Salkind, 2000). In the case of this analysis, the relationship between satisfaction and empowerment was analyzed.

The data used to conduct the Pearson's product-moment correlation coefficient in this analysis included all of the responses to questions 11 through 28. Questions 11, 14, 17, 18, 20, 22, 25, 26, and 28 supplied the data for the satisfaction variable; while questions 12, 13, 15, 16, 18, 21, 23, 24, and 27 supplied the data for the empowerment variable. Using statistical analysis software (SAS), a correlation coefficient of 0.885 was identified. Using all 122 survey responses, a scatter plot showing the correlation between

employee satisfaction and empowerment was generated (Figure 4.10). As can be seen from Figure 4.10, the correlation between the two variables, employee satisfaction and employee empowerment, has a strong, positive relationship.

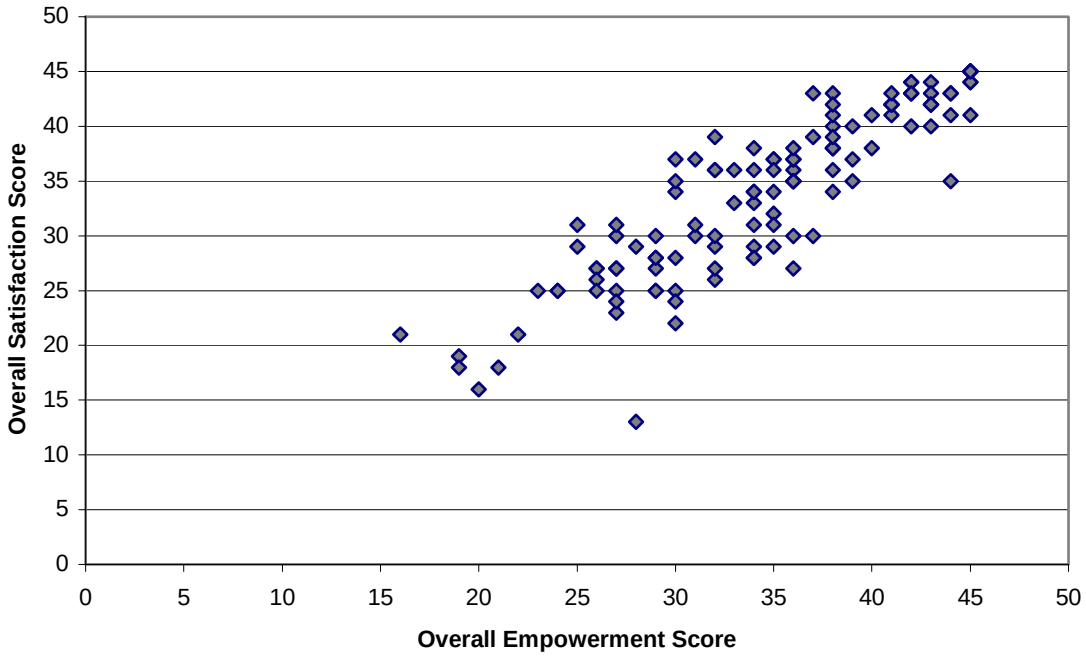

Figure 4.10 *Pearson's product-moment correlation for satisfaction and empowerment*

Even though variables that share something in common tend to be correlated with one another, it is important to remember that correlation does not necessarily imply causation. Even though two variables may be closely correlated, as in this case of satisfaction and empowerment, it does not necessarily indicate that movement in one variable affects the movement of the other variable.

Satisfaction and Empowerment Coefficient of Determination Analysis

One problem that arises in interpreting correlation coefficients is that the coefficients' relative magnitudes are not proportional. That is to say, a correlation coefficient of .80 does not necessarily account for twice as much variance as a coefficient of .40. Because the relative magnitudes of correlation coefficients are not proportional, the coefficient of determination is used to help interpret correlation coefficients. Because the correlation coefficient is known, the coefficient of determination can be easily calculated.

The coefficient of determination determines exactly how much of the variance in one variable can be accounted for by the variance in the other variable. For this analysis, the coefficient of determination between empowerment and satisfaction is 0.7835. This means that 78.35% of the variance in empowerment can be explained by the variance in satisfaction; or in other words, 78.35% of the empowerment variance is also the satisfaction variance. By extension, 21.65% of the variance between empowerment and satisfaction is related to some unknown factor.

Inferential Statistics Conclusion

Based on the findings from the inferential statistical tests, several conclusions can be made. Through the use of nine questions, the survey instrument indirectly inquired about the satisfaction level of on-site supervisors. In addition, the survey instrument directly inquired about the satisfaction level of on-site supervisors using one question. The correlation between the answers about employee satisfaction from these two methods was so strong that it can be reasonably concluded that it would have been easier and just

as effective to ask the one direct question as compared to asking the nine indirect questions.

In the same way, through the use of nine different questions, the survey instrument indirectly inquired about the empowerment level of on-site supervisors. The survey instrument also made a direct inquiry about the empowerment level of on-site supervisors using one question. The correlation between these two methods of inquiring about employee empowerment was so strong that it can be reasonably concluded that it would have been easier and just as effective to ask the one direct question as opposed to asking the nine indirect questions.

The correlation between the empowerment and satisfaction levels of on-site supervisors was very strong. On-site supervisors who were empowered were more satisfied than on-site supervisors who were not empowered. A large part of the variance (78.35%) between empowerment and satisfaction is shared. The other 21.65% of the variance can be attributed to some unknown factor.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Purpose of the Study

The purpose of this study included the following four questions and hypothesis:

1. At what level are on-site supervisors satisfied with their jobs?
2. Do on-site supervisors feel empowered enough to fulfill their job responsibilities?
3. According to on-site supervisors, what are the key elements that lead to job satisfaction?
4. According to on-site supervisors, what are the key elements that lead to job empowerment?

H_1: On-site supervisors in the residential construction industry who are empowered are more satisfied with their jobs than on-site supervisors who are not empowered.

A thorough review of related literature revealed that no information had been published about the level of satisfaction and empowerment of on-site supervisors in the residential construction industry.

Research Design and Methodology

Using criteria from studies addressing employee satisfaction and empowerment in other businesses, a survey instrument was designed to measure the level of satisfaction and empowerment for on-site supervisors in the residential construction industry. The

study involved the participation of on-site supervisors who worked for residential construction companies on the 2005 *Professional Builder's* top 400 list. Participation from these on-site supervisors was first made possible by the agreement of their employers. The total number of responses received was 153. Of these, 122 were used in the study. The responses that were not used in the study were discarded because they were not completed by on-site supervisors.

Findings and Conclusions

Question One: On-Site Supervisor's Level of Satisfaction

One of the purposes of this study was to discover if on-site supervisors in the residential construction industry were satisfied with their jobs. The study showed that when on-site supervisors were asked to rate their level of satisfaction based on one direct question, "I am a satisfied employee," a majority (68.86%) of the on-site supervisors responded that they were satisfied, while 13.12% of the on-site supervisors responded that they were unsatisfied. The remainder (18.03%) of the on-site supervisors reported that they were neither satisfied nor unsatisfied.

The data revealed that when on-site supervisors were asked to rate their level of satisfaction based on nine indirect questions relating to employee satisfaction, a majority (59.02%) of the on-site supervisors responded that they were satisfied, while 6.56% of the on-site supervisors responded that they were unsatisfied. About one-third (33.62%) of the on-site supervisors reported that they were neither satisfied nor unsatisfied.

Question Two: On-Site Supervisor's Level of Empowerment

Another purpose of this study was to discover if on-site supervisors in the residential construction industry were empowered enough to fulfill job responsibilities. The data revealed that when on-site supervisors were asked to rate their level of empowerment based on one direct question, "I am an empowered employee," a majority (62.30%) of the on-site supervisors responded that they were empowered, while 15.58% of the on-site supervisors responded that they were not empowered. A little less than one-fourth (22.13%) of the on-site supervisors reported that they were neither empowered nor unempowered.

The study showed that when on-site supervisors were asked to rate their level of empowerment based on nine indirect questions relating to employee empowerment, about two-thirds (67.24%) of the on-site supervisors responded that they were empowered, while 4.10% of the on-site supervisors responded that they were unempowered. A little more than one-fourth (27.88%) of the on-site supervisors reported that they were neither empowered nor unempowered.

Question Three: Elements of Satisfaction

From the literature review, three main elements that contribute most to employee satisfaction were identified. These three elements, in no particular order, were:

- Value, meaning an employee's perception of his value to the company
- Training, meaning the amount and quality of training an employee receives from the company

- Management, meaning the confidence an employee has in the leaders and managers of the company as well as the support the managers and leaders give the employee

These elements of satisfaction were not construction-industry specific.

This study also revealed the top elements on-site supervisors feel contribute most to employee satisfaction. The top five elements are listed below in order of significance.

1. *Recognition and Appreciation*. This corresponds with an on-site supervisor's being acknowledged by management in one form or another for completing tasks and responsibilities. Oftentimes, on-site supervisors just want to hear that their work is appreciated and that it is making a difference in the company.
2. *Financial Compensation.* This refers to the compensation an on-site supervisor receives through an annual salary and year-end bonuses.
3. *Work Environment*. This consists mostly of the working relationship an on-site supervisor has with co-workers.
4. *Advancement Opportunities*. This includes not only moving up in the company but taking on more responsibility within a given job description.
5. *Benefits and Perks*, which include everything from health packages and 401k plans to truck allowances and company picnics.

Question Four: Elements of Empowerment

From the literature review, the three main elements that contribute most to employee empowerment were identified. These three elements, in no particular order, were:

- Authority, meaning the amount of authority given to an on-site supervisor in order to fulfill job responsibilities
- Participation, meaning the amount of participation and input on-site supervisors have regarding their job responsibilities
- Responsibility, meaning the responsibility and accountability an on-site supervisor has been given in regards to projects and tasks related to the job.

These elements of empowerment were not construction-industry specific.

This study also revealed the top elements on-site supervisors feel contribute most to employee empowerment. The top five elements are listed below in order of significance.

1. *Freedom and Autonomy*. This consists of an on-site supervisor not being micro-managed. Trust has been earned and on-site supervisors are held accountable for their choices. When an assignment is given, the on-site supervisor accepts responsibility.
2. *Information Sharing*. This includes having all the necessary information in a timely manner to make the best decision.
3. *Training*. This refers to the quality and amount of on-going training an on-site supervisor receives. This training increases the on-site supervisors' ability to perform and carry out their job responsibilities more fully. The training also keeps the on-site supervisors up-to-date with building trends.
4. *Authority and Power*. This corresponds with having the ability to do whatever it takes to complete a job, whether that means dealing with a subcontractor or buying the necessary supplies to get the job done in time. Although ultimate

power may be reserved by those in higher managerial positions, limited power enables the on-site supervisor to be heard and to make a difference.

5. *Management Support*. This includes the support from management that on-site supervisors receive when it comes to fulfilling job responsibilities.

Hypothesis One: Satisfaction and Empowerment Correlation

Hypothesis one states that on-site supervisors in the residential construction industry who are empowered are more satisfied with their jobs than on-site supervisors who are not empowered. This study revealed a Pearson's product-moment correlation of 0.885, which denotes a strong, positive correlation between the level of empowerment of on-site supervisors and their level of satisfaction. Put simply, as the empowerment level of on-site supervisors' increases, the level of satisfaction also increases.

Based on the review of literature and the results of this study, when an employer empowers the on-site supervisors, a positive reaction should occur. Because an on-site supervisor should now be empowered, the quality of the product or services provided should increase because of the increase in responsibility, motivation, and pride empowerment entails. Creative and innovative ideas should drive the continuous improvement of processes, products, and services. Employees should be able to rapidly satisfy customer demands, thus improving customer satisfaction and increasing sales and the bottom line. Middle and upper management could devote the time saved from being "control dogs" to more profitable business ventures and activities. In addition, as the level of empowerment increases, the level of satisfaction should also increase. This increase in satisfaction should reduce employee turnover and absenteeism, keeping

projects on schedule and at a high level of quality. Job-site safety should also increase and employees should be productive. Based on the review of literature and the results of this study, all of this should occur if employees are empowered and satisfied.

Benefits of the Study

This study has generated tools or key elements employers can focus on to improve the level of satisfaction and empowerment of its employees. It was also discovered that a correlation exists between empowerment and satisfaction, and the increase of one of the variables has a direct effect on the other. Therefore, by improving satisfaction, empowerment will be positively affected; and similarly, when on-site supervisors are empowered, their job satisfaction improves.

Recommendations for Further Research

Various recommendations for future research are suggested by the results of this study. The first recommendation would be to get more specific with the study. For example, this study could be directed towards on-site supervisors who only work for small-volume residential construction companies.

Another recommendation would be to conduct the study with construction employees whose job responsibilities differ from those of an on-site supervisor. These studies may include construction laborers, estimators, middle management, or executives.

Finally, another related topic for future study suggested by this report would be to obtain a clearer understanding of management's attitude toward satisfied and empowered employees. Are the perceived benefits of satisfaction and empowerment outweighed by

the costs? Perhaps by identifying and observing a company in the construction industry that understands and implements the factors that lead to employee satisfaction and empowerment, new understanding about employee satisfaction and empowerment and their implementation process would be discovered.

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SURVEY QUESTIONNAIRE

Instructions: Please thoughtfully circle the best answer to the following questions.

1. What is your age?.....	< 20	20-29	30-39	40-49	50-59	>60	
2. What is your gender?.....	Male	Female					
3. What is your marital status?.....	Married	Not married					
4. What is the highest level of education you have earned?.....	K-12	High School Graduate	Attended Some College	Associates Degree	Bachelors Degree	Post Baccalaureate Degree	
5. How long have you worked in the construction industry?.....	< 1 year	1-5 years	6-10 years	11-20 years	>20 years		
6. How long did you work for your previous construction related employer?...	< 6 months	6-12 months	1-5 years	6-10 years	>10 years	N/A	
7. How long have you worked for your present company?.....	< 6 months	6-12 months	1-5 years	6-10 years	>10 years		
8. In 2004, how many houses/units did your present company build?.....	1-50	51-100	101-250	251-500	>501		
9. Which title most closely fits your job responsibilities?.....	On-Site Supervisor/ Foreman/ Superintendent/ Project Manager	Architect/ Engineer	Owner/ Executive/ General Manager	Other: (Please List)			
10. What state are you currently working in?.....							

Instructions: Please rate the following questions by circling your response.

	Disagree Strongly	Disagree Somewhat	Neutral	Agree Somewhat	Agree Strongly
11. I am regularly recognized for my work……....	1	2	3	4	5
12. I have the authority to make necessary decisions in order to complete assigned tasks...	1	2	3	4	5
13. My participation is encouraged regarding when and how my work will be done……..	1	2	3	4	5
14. I am made to feel like I am an important part of my company……...	1	2	3	4	5
15. I receive encouragement to come up with new and better ways of doing things…….....	1	2	3	4	5
16. I have control over those aspects of my job for which I am accountable……	1	2	3	4	5
17. I have opportunities to learn and grow…….	1	2	3	4	5
18. I am involved in decisions that affect my work……	1	2	3	4	5
19. I get the training I need to do my job well……	1	2	3	4	5
20. My supervisor makes me feel like I am an important team member……	1	2	3	4	5
21. I have access to the information I need to do my job well……..……	1	2	3	4	5
22. I have confidence in the leadership of my company……	1	2	3	4	5
23. I am encouraged to develop creative and innovative ideas……..	1	2	3	4	5
24. I have the materials and equipment I need to do my job well…….	1	2	3	4	5
25. My supervisor is an effective manager……	1	2	3	4	5
26. I get regular training that helps me achieve my duties and perform my job well…….....	1	2	3	4	5
27. I am accountable for the results I achieve……	1	2	3	4	5
28. My work gives me a feeling of personal accomplishment. ……	1	2	3	4	5
29. I am a satisfied employee…….	1	2	3	4	5
30. I am an empowered employee (i.e. the power, information, freedom, etc., given to an employee to help him/her improve processes, quality, productivity, etc.)……...	1	2	3	4	5

31. In order of priority, what are the top five elements that lead to employee satisfaction?

32. In order of priority, what are the top five elements of employee empowerment (i.e. the power, information, freedom, etc., given to an employee to help him/her improve processes, quality, productivity, etc.)?

Appendix B

INTRODUCTION E-MAILED TO PARTICIPANTS

I am a graduate student researching employee satisfaction and empowerment in the construction industry. Little is known about employee satisfaction and empowerment among construction workers so I would appreciate your help by completing the linked survey to help the construction industry learn more about employee satisfaction and empowerment.

The survey is completely anonymous and will only take 4-5 minutes to complete. Thank you in advance for your participation.

Link to the survey:

http://www.et.byu.edu/cm/apps/surveybyucm/survey/public/survey.php?name=lars

Informed Consent Statement

This survey is being conducted by a graduate student to learn more about employee satisfaction and empowerment. The survey will be distributed to on-site supervisors of residential construction companies. The survey consists of 32 questions and will take four to five minutes to complete. There are no risks in participating in this study. Involvement in this research project is voluntary. You may discontinue at any time without penalty. There will be no reference to your identification at any point in the research and all responses will be held in confidentiality. If you have questions regarding this study you may contact David Halvorsen at (801) 885-4470. If you have questions regarding your rights as a participant in research projects, you may contact Dr. Renea Beckstrand at (801) 422-3873, 422 SWKT, Provo, UT 84602, renea_beckstrand@byu.edu.