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IDENTIFICATION OF INFLUENTIAL PROMOTION DECISION DETERMINANTS
FOR ADVANCEMENT TO FIRST-LEVEL MANUFACTURING SUPERVISOR

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ABSTRACT

Promotion is an important element in today’s work environment from the perspective of employees, managers, and human resource development professionals. This study advanced the understanding of promotion by identifying and describing the critical determinants, as perceived by the decision-makers, leading to the advancement of employees to first-level manufacturing supervisor positions.

The study utilized two data acquisition phases. Phase one of the study’s data acquisition component utilized semi-structured interviews with highly experienced managers in the manufacturing supervisor promotion process. Phase two employed an online survey. The purpose of the latter was to acquire expert testimony that would accurately delineate determinants critical to the decision-making process. The survey required these managers to (a) rate the list of determinants using a Likert scale and (b) compare each determinant to its complements in each Likert scale category and rate on a scale of 0 to 100% its influence on the promotion decision. Utilizing the median ranking for each determinant, the most influential determinants were found to be (1) demonstrates character, integrity, and trustworthiness; (2) accomplishes tasks, productive, energetic; (3) appropriate attitude toward peers, subordinates, and superiors - team player, works well with others; (4) good people management skills, uses authority wisely, builds relationships and cares about individuals; and (5) seeks assistance when needed - recognizes issues that must be handled, especially those that should include other
management personnel. A Bayesian analysis revealed these determinants accounted for approximately 82% of the positive promotion decision-making.
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CHAPTER 1

INTRODUCTION

A decision-maker’s perception of critical factors leading to the advancement of workers to first-level manufacturing supervisor positions influences the performance of the individual seeking promotion and his or her career development, and, ultimately, the organization as a whole. In some cultures, workers’ morale, affective commitment, job satisfaction, and emotional and physical health may suffer when inappropriate determinants are utilized in promoting individuals. The findings in the literature indicate that careers are often advanced without the promoted persons or the decision-makers having an understanding of the underlying dynamics among influential variables (Beeson, 2009; Lockamy & Service, 2011), such as critical decision determinants.

The lack of overall understanding about promotion decisions suggests that career development practices vary among organizations and are likely to be related to the organization’s culture, “an organization’s values, beliefs, practices, rituals, and customs” (Marquardt, 2002, p. 27) or what is commonly referred to as the way things are done in an organization. Thus, concerns about promotion decisions are warranted when considering that current decision factors and practices may have evolved without identifying each one and its level of importance in the promotion process in the culture.
Just as decision-makers may be influenced by an organization’s culture, employees are also influenced by the culture as well as their personal career models (Forrier, Sels, & Stynen, 2009). For example, individuals may consider career success from an extrinsic or objective viewpoint, an intrinsic or subjective viewpoint, or a combination of viewpoints. Salary attainment and number of promotions are the leading objective indicators of success, while job and career satisfaction are subjective indicators (Ng, Eby, Sorensen, & Feldman, 2005). The importance an individual places on each of these indicators influences the motivational techniques that an organization may utilize to enhance positive performance. Given the significance that many persons place on promotion, it is vital that the determinants influencing promotion decisions and processes be communicated to employees in order to promote career development initiatives, contribute to a sense of promotional justice, and support a sense of earned promotion (Tzafrir & Hareli, 2009).

A promotion is typically thought of as meaning increased responsibilities (Dessler, 2011). While this is the commonly accepted definition in most American organizations, Pergamit and Veum (1999) also noted that in many organizations, some so-called promotions did not include additional duties or changes in position, but were simply an upgrade of the current position. The possible inconsistency in what constitutes a promotion is a valid concern when identifying, describing and implementing the promotion process in an organization.

Since “human resource development [HRD] is a process of developing and unleashing expertise for the purpose of improving individual, team, work process, and organizational system performance” (Swanson & Holton, 2009, p. 4), promotion decision-making should be an important area of concern for HRD professionals. Accordingly, and due to the impact of promotion decisions on financial and personnel policies as well as the overall success of an
organization, it is essential that organizations identify and describe the influential promotion factors so each may be embedded into the organizational culture and communication process.

**Statement of the Purpose**

The purpose of this study was to identify and describe the critical determinants, as perceived by the decision-makers, leading to the advancement of employees to first-level manufacturing supervisor positions. Findings from this study could be utilized to propose career development initiatives for persons interested in pursuing a management career path, create succession planning strategies, and inform learning, training, and development interventions intended to educate and improve individual, team, and organizational performance.

**Research Need**

Longenecker and Fink (2008) stated “research on promotion decisions in any business environment has been described as the most under explored area of organizational effectiveness” (p. 242). Lockamy and Service (2011) indicated a lack of empirical evidence on promotion factors that could be analyzed by persons seeking advancement into higher levels of management. A further review of the literature revealed that the existing studies relative to promotion determinants are for higher-level managerial promotions and not directed toward entrance into management (Lockamy & Service, 2011; Longenecker & Fink, 2008; Service & Lockamy, 2008).

Previous research revealed a significant correlation existed between business location and growth, specifically businesses in rural areas and a diminished likelihood of growth (Renski, 2009). The context of this study was similar. Also, the movement of persons to urban areas from rural areas has resulted in barriers to income, growth, access to labor, and a scarcity of support and consulting services for rural businesses (Miller, Besser, & Malshe, 2007). Because
of these limitations, the ability for rural managers and supervisors to acquire the training and
development they need to become proficient in their positions may be lacking, especially in
some factors such as career advancement knowledge. Additionally, the limitation of training and
development opportunities impacts the likelihood that persons interested in promotion to a
supervisor position will develop essential skills needed for the position. Identifying and
describing the promotion factors for an employment position, especially within specific
geographical areas, may allow for networking, training, and development partnerships. Further,
an elevated awareness of essential promotion factors may prompt individuals to pursue
opportunities that support personal development and career enhancement.

The geographical area of interest for this research project was the Tennessee Workforce
Investment Act (WIA) Region 10, comprised of Hickman, Giles, Lawrence, Lewis, Marshall,
Maury, Perry, and Wayne counties. WIA Region 10 qualified as rural because all but one of the
counties, Hickman, lies outside of a metropolitan economic area (Cromartie & Bucholtz, 2008;
Lippard & Green, 2008). Even though Hickman County is included in the Nashville
metropolitan area, demographic and economic indicators are similar to the other counties in WIA
Region 10.

Rural location, with its drawbacks of limited population and scarce access to training and
development, together with an incomplete understanding of the factors involved in promotion,
particularly to first level supervisory management positions, are potential limitations to business
success. Geographic location and limited populations are factors that cannot be controlled, but
utilizing knowledge to improve economic opportunities for persons and businesses in these areas
was worth pursuing. A clearer understanding of decision-makers’ perceptions of promotion
factors can positively impact organizational and personal training and development initiatives, organizational culture, and employee morale.

**Research Question**

In today’s operating environment for manufacturing organizations, which promotion decision determinants do advancement decision-makers consider most influential when filling first-line production supervisor positions?

In addition to answering the research question, a statistical analysis was conducted to determine if there was a statistical significant difference between managerial demographic groups and their responses to the research question.

**Hypothesis**

H₀: $Mdn_1 = Mdn_2$. There is no statistically significant difference in determinant median *a priori* probabilities for each determinant between very experienced managers, 14 or more promotion decisions, and experienced managers, between 2 and 13 promotion decisions.

Hₐ: $Mdn_1 \neq Mdn_2$. There is a statistically significant difference in determinant median *a priori* probabilities for each determinant between very experienced and experienced managers.

**Methodology**

For this study, the researcher used a sequential exploratory mixed methods design. The qualitative phase was a semi-structured interview process using an interview guide. The semi-structured interviews for this study offered the researcher the opportunity to make personal connections with the interviewees, gather stories, examples, and qualitative descriptions of essential data about phenomena that would not be discovered by other means (Russ & Preskill, 2009). Further, the primary focus was directed at understanding common themes in workers’ experiences (Barritt, 1986). In the second stage of the study, the researcher utilized a survey and
quantitative data collection methods to obtain additional information concerning the results of the interview process. Electronic mail, telephone conversations, and an in-person meeting were used to facilitate communication between the researcher and participants in the interview process. An online survey was employed during the survey process.

For the interview process, individuals with the appropriate credentials and employed by businesses in the study were sought to become interview participants or respondents. After the researcher selected and invited managers to become respondents and they agreed to participate, the interviews were conducted. Respondents met individually with the researcher and discussed their experiences as decision-makers, managers, and manufacturing employees. The meetings were audiotaped in addition to notes being taken by the researcher. The same questions were asked of each respondent, with follow-up or probing questions asked as needed for clarification. Subsequent to the final interview, respondents’ perceptions of determinants were recorded in a master list and carefully analyzed to develop the survey items for the quantitative portion of this study. The interview respondents were provided a copy of the final results of this study.

As previously mentioned, the survey was developed using the results of the interviews. This instrument targeted the cohort of supervisor promotion decision-making personnel in the businesses that met the study criteria. The survey required each participant to assign an importance rating to each determinant and quantify the determinant’s importance by allocating a percentage of importance within the rating. By including the assignment of magnitude of importance, not only was rank established, but the relative differences between the determinants could be analyzed. Descriptive statistics were utilized to evaluate the results of the magnitudes of importance. In addition, comparisons of the rankings between sub-groups within a demographic characteristic were made to determine if there was a statistically significant
difference in the managers’ ratings. The determinants’ rankings were also evaluated using Bayesian analysis to better understand a determinant’s impact upon a promotion decision. Demographic information in both the interview and the survey stages for each participant was collected. If requested, each of the participants was provided the final results of the study.

**Assumptions**

This study involved collecting information to provide descriptive data about the perceived influence of promotion decision-making determinants. Accordingly, several assumptions were applicable and noted as follows:

- The participant was knowledgeable of the field, able to understand the questions and research process, and has the integrity to provide truthful and honest responses.
- The participant provided unbiased responses and answered without intent to compromise the study.
- The study participant was able to communicate effectively utilizing written methods.
- The participants were representative of the decision-makers in similar positions and businesses.
- Each participant was experienced in the promotion decision-making process for the advancement of employees to the supervisory levels.
- Environmental conditions such as changes in sales volume, recent workplace grievances, worker fatigue, or other unplanned people and business-related issues and events did not unduly influence the data collection process within the study.

**Delimitations and Limitations**

Limitations are weaknesses or handicaps beyond the control of the researcher that potentially limit the validity of the results.
• The study was limited to participants within the organizations who voluntarily agreed to participate. Because of the voluntary nature of participation, the potential response rate for the study may have been less than optimal.

• The study limited participants to current managers who have been involved in at least two supervisory promotion decisions. Because there was no designated time limitation for when a participant made the promotion decisions, some of the responses may not be contemporary. A time limitation was not utilized because of concern about lessening the participant pool.

Delimitations are a boundary to which the study was deliberately confined and result from limits established by the researcher. The population for this study was limited to managers of manufacturing organizations classified by primary NAICS codes 31-33 listed by Infogroup as located in Tennessee WIA Region 10 and employing more than 50 persons (Infogroup, 2011).

• An employee limit of more than 50 persons was chosen because smaller companies may not have sufficient managerial levels to encompass the position of supervisor.

• The geographic limitation was utilized to define a selection boundary. The limitation established a convenience sample chosen for accessibility and limited resources.

• Since the study was limited geographically, generalizability may be impacted. There was no reason to suspect that geographic locale would influence the results, but until additional research in other locales can be conducted, it is unknown.
Terminology

For the purpose of this study, the following section provides a basic understanding of the terminology used.

Supervisor - a person who oversees operative employees and who does not manage other management employees (Robbins & DeCenzo, 2013). The position may also be referred to as foreman, first-line manager, first-level supervisor or manager, lead, or supervisor. The specific duties and responsibilities may vary among organizations, but it is the first level of a manager in an organization.

Manager - “person responsible for accomplishing the organization’s goals, and who does so by managing the efforts of the organization’s people” (Dessler, 2011, p. 727). In this study, a manager is the second level of management or higher. A manager may oversee other managers or supervisors.

Promotion to supervisor - the entrance into the first level of management from a non-supervisory position
CHAPTER 2

REVIEW OF LITERATURE

The researcher, in this study, sought to augment the literature, with a focus on the gap that currently exists about promotion decisions, and particularly in the area of advancement to the supervisor level. The researcher’s review of the literature encompassed five topical areas important to the foundation of this study: (a) promotion models; (b) the influence of promotion policies and decisions on individuals and organizations; (c) the determinants used in promotion decisions; (d) the influence of manufacturing in the United States and local economies; and (e) the role of the supervisor in manufacturing organizations. The myriad factors responsible for organizations awarding or individuals seeking promotions are related to societal and organizational culture and economics. Understanding of the promotion process and its direct and indirect impact on businesses and employees coupled with identifying and describing the factors involved in promotion decisions can lead to positive improvements for organizational and employee efficacy.

Promotion

Promotions in organizations traditionally represent the predominant measure of career success and in American organizations characteristically denote an increase in pay and responsibilities (Dessler, 2011). Pergamit and Veum (1999) noted, however, that for some employees and organizations, a promotion was simply a modification of the current position and
did not include additional duties. As one ascends in the managerial hierarchy, often by promotion, the skills requisite to be successful at each level are dissimilar. In order to refine the obligatory skills, time must be spent at each hierarchical level, with the largest skill transition occurring in the early stages of a career (Dai, Tang, & De Meuse, 2011). Supervisor positions are frequently the entry-level managerial jobs; therefore, knowledge about promotion determinants and the preparation needed to gain entry to managerial positions could positively impact the potential effectiveness of organizations (Lockamy & Service, 2011; Longenecker & Fink, 2008). To further explain the promotion process in an organization, varying promotion or career mobility models have been proposed.

Turner’s (1960) seminal research outlined contest and sponsored mobility models. Other models include tournament model and up-or-out contracts.

**Contest mobility model**

According to Turner (1960),

Contest mobility is like a sporting event in which many compete for a few recognized prizes. The contest is judged to be fair only if all the players compete on an equal footing. Victory must be won solely by one's own efforts. The most satisfactory outcome is not necessarily a victory of the most able, but of the most deserving. (p. 857)

Continuing with the sports analogy, Turner (1960) stated that the race is not over until the course is completed, and no judgments should be made until the end. A runner who was lagging prior to the end of the competition and then finishes strong and wins is often admired. It is the end that matters, not one’s placement during the contest at any point in time. Another day is another contest. Prior achievements may enable one to be better prepared to win, but they are not directly factored into determining the outcome.
Sponsored mobility model

Sponsored mobility rejects the perceived equal opportunities of the contest model. The system is “a process of sponsored induction” by those who are “deemed to be best qualified to judge merit” of the individuals “who have the appropriate qualities” (Turner, 1960, p. 857). While contest mobility depends upon one earning status, which happens as late in the process as possible, the sponsored mobility model is dependent upon those with status to recruit “as early in life as practicable to insure control over selection and training” (Turner, 1960, p. 858). The sponsored mobility model results in increased effectiveness and economic savings for an organization because development activities are likely limited to those who have been chosen. The danger of limiting development opportunities arises from the difficulty in differentiating the managerial and leadership potential of employees at an early stage (Skipper & Bell, 2008).

Tournament model

Another popular career mobility model is the tournament model (Lazear & Rosen, 1981; Rosen, 1986; Rosenbaum, 1979). It is very similar to the contest model during the initial stages because all employees have the opportunity to compete. It is likened to a tournament because only the winners are allowed to continue to pursue higher level opportunities. Losers are only allowed to compete at their current level. No one in the competition at any level is assured a victory. This is akin to the sponsored model in that early decisions have an irreversible effect of eliminating future promotions within the organization for the losers. Promotion is often the prize for winning the tournament.

Up-or-out contract

An up-or-out contract is different from other career mobility models. For most models the end results are that employees are promoted, left in the same job, or fired. For many
employees and employment contracts, there is no specific end-date by which a promotion must be received. The career mobility model remains active, and an employee either continues to compete or remains in his or her current position for one’s tenure with the business. An up-or-out contract stipulates that tenure with a business is contingent upon receiving a promotion within a designated time period. These contracts are often used when there is little firm specific capital, and high and low level jobs are very similar (Ghosh & Waldman, 2010).

Regardless of the mobility model or combination of models used, promotion plays an integral role in career and business success. In addition to serving as a reward or punishment in a mobility model, promotions also influence individual actions, perceptions, and attitudes. Organizations utilize promotions to improve employee efficiency, make staffing decisions, and advance overall business success.

**Promotion Influences on Individuals and Organizations**

A promotion may serve multiple purposes in a business. For individuals, it acts as an incentive for low absenteeism and tardiness, stimulates better job performance, or increases willingness to work overtime (Carmeli, Shalom, & Weisberg, 2007). Promotion may also serve as a method to reward those who exhibit excellent performance (Kostas, 2011). For organizations, promotions may provide pathways for staffing positions with higher levels of responsibility because past performance is viewed as an indicator of future capability and may create a method for efficient allocation of employees (Pfeifer, 2010).

**Individuals**

Individuals benefit or suffer from the consequences of promotion decisions. Promotions often mean increased wages, enlarged job responsibilities, and greater job attachment (Pergamit & Veum, 1999). They can also serve as an acknowledgement of a job well done, an ego boost,
and result in supervisory responsibilities (Kosteas, 2011) or any combination of these factors. Promotion may also be linked to training opportunities. Employers invest in training for persons deemed capable of learning. A promotion after training allows the business to take advantage of the trainees’ capabilities and productivity while encouraging the employee to remain with the company (Melero, 2010).

Promotion has been found to be more closely linked to job satisfaction than monetary rewards. Kosteas (2011) found that receiving a promotion within the last two years or the expectation that a promotion is possible within the next two years resulted in a satisfaction rating equivalent to a 69% increase in an hourly wage. Similarly, Van Herpen, Cools, and Van Praag (2006) found that an expected promotion within the next one to three years can provide both intrinsic and extrinsic motivation for positive performance for an employee, and a realized promotion can positively influence intrinsic motivation for years two and three following the decision.

**Organizations**

Promotion is frequently used as a system to staff positions, particularly supervisory, higher-level management or increased responsibility jobs. The staffing process is differentiated in the literature into internal and external recruiting. Internal recruitment is the selection of a person for a job or position from current employees. External recruitment is the hiring of a new employee for the business. Most businesses combine both practices and seek to find the best candidate from all sources (Bayo-Moriones & Ortin-Angel, 2006).

**Internal recruitment.** Internal recruitment is often selected as an employment option when high specific human capital is required, employers have less information on outside candidates compared to internal candidates, or internal placement is being used as a reward for
high performance (Ghosh & Waldman, 2010). Specific human capital is defined as knowledge and abilities that are specific to the workplace (Becker, 1962). There is a positive relationship between the presence of investments, such as training or mentoring, and the likelihood of a business favoring internal promotion. Whether the internal promotion culture encourages training and development to meet future needs or whether current needs force training and development, and, therefore, make internal candidates more attractive, has yet to be determined (Bayo-Moriones & Ortin-Angel, 2006). In addition to benefits seen from the company perspective for internal promotion, employees often perceive more job security, opportunity for training and development, limited competition for jobs because the external market is ignored, clearer criteria for promotion, and an increase in job satisfaction and job quality (Gorjup, Valverde, & Ryan, 2008).

A negative aspect to internal recruitment is the result of sabotage. Competition for promotion may bring out the best effort in many, but for some it encourages activities to disrupt others’ performances. Since promotion is generally based on relative rather than absolute performance, the downfall of one contestant can increase the opportunity for another. The best performers are often the targets for sabotage; therefore, making it more difficult for the best candidate to succeed (Kong-Pin, 2003).

**External recruitment.** External recruitment is often used when internal candidates are lacking the desired skills and abilities. Additionally, if low specific capital is required in a position, the external candidate could just as easily fill the position as an internal candidate. The benefits and disadvantages of external hiring are a dilemma that management must weigh, as the consequences have the potential to lessen employee inducement for hard work. A potential advantage of hiring an external candidate is the candidate is perceived as overcoming the internal
hiring bias, and, therefore, possessing superior skills and a higher likelihood of promotion potential in the future (Chan, 2006).

Promotion may also play a role in external recruitment because it acts as a signal to competing businesses that a person is performing well. A business has limited access to information about a potential employee; therefore, a promotion signals that the current employer is satisfied with the employee’s job performance (Waldman, 1990).

In summary, for any position, whether the employee is placed through external or internal recruitment, promotion factors influenced the staffing decision, and that decision will impact the employee and the business in the future in both predictable and unpredictable ways. For an employee, due to the personal and professional impact a promotion or denied promotion may have, knowledge of the factors involved in the decisions can provide guidance when seeking further advancement, contribute to a sense of promotional justice, and support a sense of an earned promotion (Tzafrir & Hareli, 2009). For a business, clear communication of promotion factors enhances employee motivation and dedication; therefore, improving employee productivity and business success.

**Promotion Determinants**

Many factors are reflected upon in the literature as influencing career success and promotions. Ng et al. (2005) categorized the factors as human capital, organizational sponsorship, socio-demographic status, and stable individual differences. Human capital is defined as education and experiences, both professional and personal. Organizational sponsorship encompasses training and development. Socio-demographic determinants include gender, ethnicity, age, and marital status. Stable individual differences are personality, cognitive abilities, and communication skills. Most promotion studies in the literature are based on data
collection and observations related to who was promoted and who was passed over, with very little emphasis on the decision-making process (Service & Lockamy, 2008). Breaugh (2011) outlined the prevalent promotion study types as (a) investigation of factors associated with employees being rated promotable, (b) examination of decisions for a given position, (c) description of fictitious employees to determine one to promote, and (d) examination of the number of promotions an individual has received to determine the predictors of success. Each of these study types provides essential information needed for the understanding of the promotion process and its impact upon employees and employers. This study focused upon the factors associated with employees considered ready for advancement and, therefore, contribute to the overall promotion process knowledge.

**Socio-demographic**

The promotion factors in the literature that seem to be of maximum interest are the socio-demographic issues, particularly gender, race, ethnicity, and the interaction of these factors with each other and other non-demographic factors. The terms *glass ceiling* and *sticky floor* are part of the business lexicon and reflect the fact that these socio-demographic factors are likely directly or indirectly influential in the decision-making process.

Studies exploring the relationship between gender and promotions have shown that females are generally not promoted as often as males, but the reasons for the inequality are almost as varied as the number of research studies completed. Denker (2008) found that Fortune 500 firms had tried to ease equity issues by promoting women when possible, but the opportunities for promotion were often lessened during a restructuring. Because of overall fewer promotion occurrences, the fact that women were often moving up from lower levels than men and the promotion advantages lasted a shorter time for women, the end result still had more men
at higher levels than women. Castilla and Benard (2010) found that organizations, which promoted a culture of meritocracy, regularly provided men with greater rewards such as money and promotions than equally qualified women. Bjerk (2008) and Zeng (2011) stated women and minorities are likely to be underrepresented among managers, especially top-level executives, because the bottom- to mid-level transitions are the most difficult for them to make. Females, in addition to having gender as a possible deterrent to promotion, were biased against if they had chosen motherhood (Heilman & Okimoto, 2008). In contrast to these studies, it is interesting to note that Lebeauf, Maples, D’Andrea, Watson, and Packman (2007), when studying mid-level managers in varied industries in the United States, found women were promoted at a higher rate than men.

Findings of no significant difference of rates of promotion based on the race of the candidates or the interaction of race and gender of the candidates were reported by Lebeuf et al. (2007). The decision factor they established as having a statistically significant impact upon a positive promotion was the socio-demographic status of the supervisors. Younger supervisors were more likely to grant promotions than older supervisors. Of these, black males were the least likely to grant promotions to any candidate. Another confounding factor in promotion decisions is the differences in perceptions of importance of personal qualities such as “attractiveness, deference to superiors, likeability, personality, popularity and powerful allies” (Wood, 2003, p. 1) between men and women managers.

In a promotion study that reflected a manufacturing viewpoint, Pfeifer (2010) conducted a post-hoc review of the promotions of white- and blue-collar workers within a manufacturing business in Germany. Promotion was defined as moving up a rank or level and may or may not have necessarily meant a move into management. For example, the blue-collar levels ranged
from unskilled work up through very skilled labor equivalent to a three-year apprenticeship. The white-collar levels were simple tasks up through upper management tasks. Pfeifer’s determinants for a positive promotion decision were a) contractual working time or working beyond the required amount of time for white-collar workers, b) educational attainment, (c) entry age – a proxy for accumulated general human capital, (d) potential remaining tenure, (e) less absenteeism, and (f) more overtime. It is interesting to note that overtime and absenteeism seemed to only have the expected significant impact in the last quarter before promotion took place. Pfeifer (2010) also noted that women were less likely to be promoted than men. The socio-demographic factor of gender thus appeared once again in a study’s results. Age also joined the enumerated determinates as a negative factor when considering the potential remaining tenure or time before retirement. Post-hoc studies often demonstrate a bias along socio-demographic factors. These biases cannot be ignored and need to be addressed.

Additional clarification of a promotion process and the determinants influencing the decision, along with care taken to be cognizant of socio-demographic prejudices, should enhance the process and results for all.

While socio-demographic factors may influence a person’s perception of career success and seem to play a role in promotion outcomes, the use of many of the socio-demographic factors in employment decisions in the United States is illegal for many organizations under federal discrimination laws and regulations. The U.S. Equal Employment Opportunity Commission is charged with enforcement and is responsible for investigating employment discrimination due to a “person's race, color, religion, sex (including pregnancy), national origin, age (40 or older), disability or genetic information” (U.S. Equal Employment Opportunity Commission, n.d., p. 1). Additionally, under federal statutes and regulations, it is illegal to
retaliate against a person because he or she complained about discrimination, filed a charge of discrimination, or participated in an employment discrimination investigation or lawsuit. Moreover, many states and local jurisdictions have employment regulations addressing discrimination.

Because the organizations in this study are likely under the jurisdiction of federal statutes and regulations, in addition to state and local employment rules, it was expected that socio-demographic factors would not be stated determinants in this study. Meritocracy is also an ethos in the United States (Castilla & Benard, 2010) and, therefore, would lessen the chance that factors other than job- or performance-related activities would be publicized. The question remained: what promotion decision determinants are identified and described as the most influential by the advancement decision-makers when filling the positions of first-line production supervisors? Current literature provided some insight into this question.

Other

Longenecker and Fink (2008) and Lockamy and Service (2011) conducted studies of promotion determinants for managers and reported ten and six determinants, respectively. Longenecker and Fink (2008) surveyed a group of current managers and asked the open-ended question of “based on your experience as a manager, what factors are most important to being promoted in your organization?” (p. 243). Each respondent was to list no more than five criteria, and the results presented were the top 10 most numerous responses (see Table 1). Lockamy and Service (2011) presented a university MBA class composed of working managers a survey of 13 determinants and asked each to rate the importance of each determinant in the decision-making process. The determinants that accounted for 68% of the influences in the decision were presented in the findings (see Table 1). There is overlap between the determinants, as expected,
and there are also several areas where one set of determinants seems to be imbedded within the other list. It is interesting that Longenecker’s and Fink’s (2008) list contains integrity, but this item was not in the top 68% of influence on decision-making in Lockamy and Service’s (2011) study. It was, however, in the original list that was presented to the participants.

Table 1

Comparison of Promotion Determinant Findings from Current Literature

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Hygiene factors – literacy related to:</td>
<td>communication, quantitative applications, teamwork, information location and use, understanding perspective of others</td>
<td>Excellent interpersonal/communication skills</td>
</tr>
<tr>
<td>Fit – ability to work within department, organization, team</td>
<td></td>
<td>Ability to build and work with teams</td>
</tr>
<tr>
<td>Image or substance from decision maker’s viewpoint – personality, fitness, communication skills, relationships, external worth, emotional intelligence</td>
<td></td>
<td>Personality, attitude, and ego factors</td>
</tr>
<tr>
<td>Cost benefit analysis for alternative – cost if person is not promoted</td>
<td></td>
<td>Possessing strong business networks and connections</td>
</tr>
<tr>
<td>Tenure – time in the job</td>
<td></td>
<td>Strong industry/organizational/functional knowledge-experience base</td>
</tr>
</tbody>
</table>
- Difficulty of change if promotion fails

- Strong performance track record/getting desired results

- Being motivated and demonstrating a strong work ethic

- Solving a major problem

- Demonstrating character, integrity, and trustworthiness

- Preparation and being in the right place at the right time

Lockamy and Service (2011) and Longenecker and Fink (2008) did not report any socio-demographic determinants in their studies. The lack of socio-demographic factors is predictable since current United States managers were the determinant source, not a post-hoc study of promotion results. Their studies do not negate socio-demographic factors as being influential, either directly or indirectly, but they do provide determinants that can be developed by persons seeking advancement. Without defined criteria for advancement, particularly as one advances up the managerial hierarchy, confusion reigns when evaluating what is necessary for career advancement (Beeson, 2009). Researchers must continue to monitor post-hoc promotion decisions; thereby, increasing awareness of the influence of unknown or contradictory factors that are continuing to have an impact in the decision process. Meanwhile, additional studies to define the work-related factors and influences that could be developed are needed in order to provide a pathway for promotion for those who are interested in advancing their career.
Manufacturing and the U.S. and Local Economies

Manufacturing plays a significant role in the U.S. economy, the economy of Tennessee, and particularly the economy of the Tennessee Workforce Investment Act (WIA) Region 10. The Tennessee WIA Region 10 is comprised of the counties of Hickman, Giles, Lawrence, Lewis, Marshall, Maury, Perry, and Wayne. Manufacturing’s impact can be partially assessed by current employment numbers, contribution to the gross domestic product, and projections of future scenarios. In addition to the direct economic impact, manufacturing organizations indirectly impact the economy through goods and services provided to manufacturing employees and their families and also through suppliers of raw materials to the manufacturing sector.

The U.S. Census Bureau (2011) defines sectors of the economy in order to facilitate the collecting, analyzing, and publishing of statistical data related to the U.S. business economy, and, therefore, encouraging the monitoring and interpreting of developments within a business sector. The North American Industry Classification System (NAICS) allows for the categorization of business establishments based upon an organization’s primary activity or activity that generates the most revenue for the organization. The classification by the U.S. Census Bureau is derived from information provided by the business on surveys, forms, or administrative records. Organizations outside of the U.S. Census Bureau may use differing methodologies and definitions when assigning a NAICS code to a business. The NAICS sector codes 31-33 have been reserved for manufacturing businesses. Manufacturing includes food preparation and production; textiles and textile products, including apparel; wood products; paper; printing; petroleum and coal; chemicals; plastics; rubber; nonmetallic minerals; metals; fabricated metals; machinery; computers and electronics; electrical appliances and components; transportation equipment; and furniture. The NAICS sector codes allow for broad classifications as well as
sub-categories so that general comparisons in addition to detailed analyses can be accomplished. NAICS sector codes were utilized in this study to identify manufacturing organizations in the geographic study area.

Manufacturing supports the national, state, and local economies in several noteworthy measures. An increase in manufacturing production provides a boost to the economy both within and outside of the sector that is larger than a similar increase in any other major sector. Also, manufacturing businesses perform almost two-thirds of private sector research and development. Traditionally, manufacturing has raised its productivity faster than other large economic sectors (Popkin & Kobe, 2010). While productivity gains, use of automation, and the efficient use of labor may decrease production costs, increase profits, and increase the marketability of products, there is also the negative result of triggering the decline in overall number of employees in the manufacturing sector (Woods, 2009). While the largest manufacturing employment declines are being experienced in the textile, apparel, footwear and leather, and allied subsections, many of the other sectors are forecasted to experience declines due to increased productivity and efficiency. The adage of doing more with less is becoming a reality in the manufacturing sector. With the decrease in the overall numbers of employees and the increase in the skill level required of the remaining employees in the manufacturing sector (Kalafsky, 2008), employment decisions become even more critical. Providing training and development to existing staff is the most often cited method for overcoming skill deficits (ManpowerGroup, 2011).

The recent economic downturn coupled with the increasing productivity gains that many businesses are experiencing has manufacturing projections showing decreases in employment. Recent projections show the employment levels of the manufacturing sector of the economy contracting by 8.98% during the period of 2008 to 2018 nationwide and contracting by 14.7%
during the 2008 to 2018 period in Tennessee (Tennessee Department of Labor and Workforce Development, July 2010; U.S. Department of Labor, 2009). In contrast, the Tennessee Workforce Investment Act (WIA) Region 10, the study area, projections show manufacturing employment is predicted to grow by 27% during the 2006 to 2016 period (Tennessee Department of Labor and Workforce Development, 2009). Manufacturing in Tennessee WIA Region 10 utilizes 23% of the area’s workforce, and the next closest sector of education and health services utilizes 20% of the workforce (Tennessee Department of Labor and Workforce Development, 2009). Even with the predicted shrinkage of manufacturing employment nationally, manufacturing remains a very important part of the economy, particularly for the study area with it has predicted employment growth.

Table 2

<table>
<thead>
<tr>
<th>Economy</th>
<th>Percent of manufacturing GDP</th>
<th>Percent of employees in manufacturing sector</th>
</tr>
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<tbody>
<tr>
<td>United States</td>
<td>11.7% - 2010</td>
<td>9.0% - 2009</td>
</tr>
<tr>
<td>Tennessee</td>
<td>15.6% - 2010</td>
<td>11.4% - 2010</td>
</tr>
<tr>
<td>Tennessee WIA Region 10</td>
<td>--</td>
<td>23.0% - 2006</td>
</tr>
</tbody>
</table>

Another factor strongly impacting the manufacturing sector is the rate of retirement. Tauber and Graham (2008) reported 20.7% of the Tennessee workforce 55 years of age and older was employed in manufacturing; the highest proportion of any sector for this age group. In
Tennessee WIA Region 10, the 55 years of age and older employee percentage ranged by county from 11.3% to 20.6% for all business sectors, and in nonmetropolitan work areas in Tennessee, the percentage for manufacturing sector employees was 34.7% (Taeuber & Graham, 2008). The high concentration of older workers in manufacturing suggests that upcoming retirements will create an employee gap and spur the necessity for new, and often more highly skilled, employees. The days of manufacturing being the employer of low-skilled workers are gone, and the skill level of all manufacturing employees must rise to meet the new demands (Deloitte Development LLC, The Manufacturing Institute, Oracle Corporation, 2009).

Manufacturing, while experiencing a decrease in overall employee numbers, remains a viable and significant sector in the economy. Recruiting and retaining employees with the requisite skills or providing training and development is a challenge. ManpowerGroup (2011) lists skilled trades’ workers as the number one hardest job to fill in the U.S., and the manufacturing sector is the largest employer of skilled trades’ workers. The shortage of employees with hard skills and technical ability is creating hardships for employers. Competition for knowledgeable and capable employees is increasing across all business sectors, so the implementation and communication of personnel decisions and policies becomes a significant factor in employee retention and recruitment.

The Role of Supervisor

In addition to traditionally being the first step on the managerial ladder, the first-line supervisor position is one of the most numerous management positions in a manufacturing facility. The position may also be known as lead, foreman, first-line manager, first-level supervisor or manager, or supervisor and is defined as a person who oversees operative employees and who does not manage other management employees (Robbins & DeCenzo,
For the purposes of this study, the term supervisor will be used for persons in the first-level managerial position. Moreover being the most numerous management positions, supervisors are often the most influential representatives of management to their subordinates (Arnold & Pulich, 2008), so rendering excellent promotional decisions is critical to the current and future viability of an organization. Furthermore, identifying and describing the determinants that are influencing the decisions for this critical role could positively impact the organizational culture by providing interested applicants with career development initiatives, contribute to a sense of promotional justice, and support the sense of an earned promotion (Tzafrir & Hareli, 2009).

Historically, the production of goods has always been an important part of the United States’ economy. In the country’s early history, while manufacturing did not occur in large, singular locations due to the limitations of a power source, artisans and other itinerant workers produced goods for the use of others by traveling to the various job locations (Clark, 1929). As towns commenced to expand, workers began to travel less to the jobs and instead had buyers come to them. The production of goods evolved from single-person shops to artisans beginning to employ journeymen to help meet the demand for their goods as towns grew to cities. The next development stage was the owner becoming primarily the merchant and not participating in the manual labor, but the labor was still skilled. By 1791, water power became more widely used, and the first recorded manufacturing facility was a cotton-spinning mill in Rhode Island (Raybeck, 1966). Due to the ability to harness power, the textile industry began a period of rapid expansion and other types of industry soon followed. Soon after the Civil War, factory work was the American industry standard. The Census of 1890 reported that, for the first time, Tennessee manufacturing led agriculture as a producer of wealth (The University of Tennessee Press,
In addition, by the mid-1920s, the composition and location of Tennessee's industrial mix changed as many plants located in rural areas and small towns rather than the major cities.

**Early manufacturing**

As factories evolved and became more prevalent, the role of the first-line supervisor also underwent change. In the early 1900s, the supervisor, also known as a foreman, was probably at his or her height of power in management in American industry. The supervisor acted as an entrepreneur. A supervisor would bid on a production job, hire the personnel, organize the work, and made a living from the difference in the bid and the costs (Patten, 1968). While the development of factories may have removed the need to bid for a production job, a supervisor’s control over personnel and work organization did not change until the advent of scientific management. By 1920, supervisors were losing control over their work and were administering plans created by others. As part of his concept of scientific management, Frederick Taylor (1911) had the planning of activities being separate from the act of carrying them out, and workers could report to several different supervisors depending upon the tasks being required at the time. Scientific management, further refined by other classical management theorists, limited the scope of responsibility and discretion of the supervisor’s role by transferring many of his or her duties to upper management. In addition, upper management started assuming the responsibility for selection and training of workers, and the supervisor’s role became more of conduit between management and labor. Even as scientific management waned in popularity and was replaced by other management methodologies, organizational staff continued to grow. Each of these groups gained control over decisions that once belonged to the supervisor, thereby increasing the role conflict that a supervisor often felt.
Mid-20th century

An emphasis on human relations replaced scientific management as the management style of choice during the mid-20th century. Supervisors were expected to focus on labor relations and human relations instead of technical expertise as in the past (Parker & Kleemeier, 1951; Patten, 1968). Another encroachment upon the supervisor’s authority was the rise of labor unions. As workers united, union representatives began working with upper management to improve wages and working conditions. The supervisor was no longer a key player in many workplace decisions but was expected to carry out the joint management and labor decisions.

These changes led Wray (1949) to call supervisors *marginal men* because of the disparity between expectations and experience due to the concentration of decision making in upper management and the unions. The supervisors felt they had little say in the workplace because they were neither management nor labor. Even years later, there remained considerable disagreement between first-line supervisors and upper managers regarding authority at the first level. One study conclusion was that the manager did not effectively communicate the level of authority nor did the supervisor seek clarification of this authority (Boyd & Jensen, 1972). Supervisors were being pressured from every direction and often did not feel in control of their work situations.

Late 20th century to present

In 1983, Peter Drucker (2010) stated this about supervisors: “No job is going to change more in the next decade than that of the first-line supervisor in both factory and office. And few people in the work force are less prepared for the changes and less likely to welcome them” (p. 116). The 1980s and 1990s saw the beginning of widespread organizational work transformation that is still ongoing. Managers began using self-managed work teams, job rotation, quality
circles or off-line problem solving groups, and total quality management as a means to more efficiently use labor (Osterman, 2000). Self-managed teams changed supervisors’ roles and made them less satisfied with work and feeling less secure in their position (Mahoney, 2007). For many supervisors, their role became more of a coach when leading teams instead of a manager. The supervisors’ span of control also expanded (Batt, 2004). Working in teams and other technological advances often moves the supervisor away from traditional shop-floor day-to-day management and more into a strategic role (Mason, 2000). The workplace changes require supervisors with supportive skills and attributes that emphasize active listening, constructive criticism, and open communication because supportive supervisor-employee relationships, managerial people skills, emotional maturity, and managerial trust have a positive impact on production (Cho & Ringquist, 2011; Dai et al., 2011; Landry, Panaccio, & Vandenberghe, 2010; Michael, Leschinsky, & Gragnon, 2006; Risher, 2010; Zampetakis & Moustakis, 2011). Another study of supervisor roles has shown that the roles have not changed that much from traditional direct supervision, but with the decrease in the middle management ranks, supervisors have gained additional responsibilities such as team management, limited budget control, and human resource management duties, but without the decision-making authority traditionally held by managers (Hales, 2005).

The requirements of an effective manufacturing supervisor have evolved over the years, and there is no indication that the job description has stabilized. In addition, there are still variations in the manufacturing environment of the role a supervisor is expected to play. Manufacturing operations, in addition to other business ventures, continue to feel the impact of economic globalization, climate concerns, and technology advances. Closely related is the need for efficient, unbiased, and well-communicated promotion policies in order to fill the supervisor
position with persons equipped to handle the challenges. Identifying and describing the promotion decision-making factors will cultivate an atmosphere that encourages persons to develop the needed skills and apply for this critical position.

**Summary**

Promotions represent career success to many persons. Due to a promotion’s positive connotation in American organizations, managers use promotions to recognize, reward, and motivate current employees, while also regarding promotions of individuals in other organizations as a signal that a person is a capable candidate for a position in his or her own organization. Employees view promotions as confirmation of exemplary performance, opportunity to assume added responsibility, and reward with increased earnings or benefits. Despite its critical role in organizational culture and career success, research on promotion decisions has been described as the most under-explored area of organizational effectiveness (Lockamy & Service, 2011; Longenecker & Fink, 2008).

Promotions tend to be based on evaluations and judgments of employees by their supervisors or managers (Jawahar & Ferris, 2011). Many studies have evaluated the influence of socio-demographic factors and promotion decisions, but there have been few research studies conducted that identify and describe non-demographic determinants used in these decision-making events. The goal of this study was to augment the knowledge of non-demographic determinants used in promotion decisions, in particular, the factors influencing the placement of one in a manufacturing production supervisor position. Lockamy and Service (2011) and Longenecker and Fink (2008) asked current managers what promotion factors they considered influential in their decision-making process. Their studies were focused upon levels of management higher than supervisor, whereas, this study was asking the same question about
supervisors, the first level of management. The discovery will lie in what was reported that is similar across management levels and what was more directed at the beginning level.

Manufacturing organizations are facing many challenges in today’s global environment. One way to foster their success is to focus on supervisors and their role in the operation. Successful manufacturing systems depend more than ever on first-level supervisors, and with an increase in quality demands and the diversity of products in many manufacturing facilities, the supervisors’ jobs have become more complex and demanding than in the past (Hotek, 2000; Mason, 2000). “Historically, supervisors have obtained their positions through their technical expertise and experiences” (MacNeil, 2004, p. 98); therefore, many do not possess the needed management qualifications of interpersonal and leadership skills (Dreyfus, 2008; Rappe & Zwick, 2007). Today’s training is inadequate for the new roles of team leaders, developers, and coaches that supervisors need to perform (Seppala, 2004). Promotion studies provide a resource to utilize in the conversation of what is needed to be a successful manufacturing supervisor and how to best prepare and select persons for this role. While each organization may have some very specific skills and abilities that are required, the ability to generalize the selection expectations for a manufacturing supervisor and prepare persons to be effective in these positions can have positive implications. Supervisor roles are changing, and experts are not going to be easily found but must be developed. Manufacturing organizations play a vital role in the United States’ economy and effective supervisors are important to the organization’s success. Since promotion is often the method for filling supervisor positions, knowledge about the process and determinants can provide beneficial information and help this economic sector be more successful and meet the arising challenges.
CHAPTER 3

RESEARCH METHODOLOGY

The purpose of this study was to improve the knowledge of promotion decision-making and to identify and describe the critical determinants, as perceived by the decision-makers, leading to the advancement of employees to first-level manufacturing supervisor positions. This chapter describes the research methodology undertaken during the study and is arranged sequentially to reflect the order that the study was conducted. A description of the overall study methodology is presented first, followed by the qualitative data collection and analysis methods, and then by the quantitative data collection and analysis methods.

A sequential exploratory mixed methods design was selected for implementation of this study because the research problem contained the need to delineate the determinants that were influential in the decision-making promotion process before gathering additional information and quantifying the relationship among the variables. A mixed methods approach involves collecting and analyzing both qualitative and quantitative data in a single study (Creswell, 2005). “A major advantage of mixed methods research is that it enables the researcher to simultaneously answer confirmatory and exploratory questions” (Tashakkori & Teddlie, 2003, p. 15).

Many factors affecting promotion decisions have been investigated in the literature. However, causal relationships have not been demonstrated in a rigorous manner and confirmed in successive empirical research contexts. This study’s results will elevate the current knowledge
base and provide a foundation for further research, which might also include causal analysis of the key determinants for promotions to supervisory positions as utilized by decision makers. The study’s key objectives may be described in two parts. The first objective utilized qualitative methods for the identification and description of the determinants that influenced the decision-making process. Correspondingly, there was a need to delineate the determinants that were considered to be the most influential by the decision-makers. Persons involved in the decision-making process individually recounted their personal experiences, and the researcher compared their recollections and developed a comprehensive determinant list from the factors mentioned in the interviews. The second research objective utilized a quantitative approach via acquired survey data and sought to measure the influence of the determinants on promotion decisions. Knowing which determinants were considered influential was important, but knowing the degree of influence allowed one to prioritize and promote more effective utilization of the findings.

**Restatement of the Research Question**

In today’s operating environment for manufacturing organizations, which promotion decision determinants do advancement decision-makers consider most influential when filling first-line production supervisor positions?

**Research Design**

The purpose of a sequential exploratory mixed methods design is to use quantitative data and results to aid in the interpretation of the qualitative findings (Creswell, 2005). A basic model of this process is shown in Figure 1.
Figure 1. Model of the sequential exploratory mixed methods design. QUAL means qualitative research methods, and QUAN represents quantitative research methods (Creswell, 2005).

Qualitative (QUAL) data was collected using a semi-structured interview process and interview guide. The primary charge of qualitative research is to “capture, understand, and represent participants’ perceptions and meaning through and in their own words” (Ruona, 2005, p. 234). Determining the importance of characteristics or traits is often a value judgment, and persons involved in the organizations of interest are the best source for those conclusions.

The quantitative (QUAN) data collection and analysis employed a survey constructed from the results of the interview process. The purpose of the survey was to investigate the relative influence of each determinant in the promotion decision by polling the cohort of decision-makers in the study. The analysis of the data provided benchmarks for future studies so that inferences about the attitudes and behavior of the general population can be made.

**Population and Sampling**

Prior to this study, limited research has focused on manufacturing and manufacturing supervisors, especially in the current literature. This study was designed to learn more about manufacturing supervisors, particularly the factors surrounding promotion decision-making of one into a supervisor role. Managers of company facilities that are located within the Tennessee Workforce Investment Act (WIA) Region 10, comprised of Hickman, Giles, Lawrence, Lewis, Marshall, Maury, Perry, and Wayne counties; are employers of a minimum of 50 persons; and are classified by primary NAICS codes 31-33 were eligible to participate. There were approximately 60 manufacturing facilities that met all designated criteria (Infogroup, 2011). The
organizations varied in ownership; for example, family-owned businesses and facilities of multi-national corporations.

Organization managers were contacted and asked to participate and/or furnish names and contact information of other persons in their facility who met the study criteria. Study criteria included the following minimum qualifications: (a) employed by an organization of interest, (b) participated in the promotion process for supervisors a minimum of two times, and (c) skilled in the use of electronic mail, web, and other electronic documents as a communication tool. All qualified persons were invited to participate in at least one stage of the study. The census selection design was chosen because the total number of qualified participants numbered fewer than 150 persons. Since this was a two-part study, some employees were invited to participate in the interview study, while all others were requested to complete the study survey.

**Interview study participants**

Potential participants who met the study criteria were selected from nominations by managers or self-nomination. This was a deliberate sampling strategy. The deliberate strategy, known as snowball, reputational, or chain sampling, relies on “informants or participants to identify additional cases [participants] for inclusion in the study” (Teddlie & Tashakkori, 2009, p. 345). Participants invited to serve as experts met the minimum study criteria in addition to participating in eight or more promotion decisions, having the capacity and willingness to contribute to the promotion determinant investigation, and the readiness to dedicate sufficient time to the process (Ziglio, 1996).

Invited participants were personally contacted by the researcher in order to explain the study and the expectations for the participants. The researcher attempted to recruit a gender diverse group for the interviews, but due to personal engagements of potential participants, only
males were available during the interview period, April 16-23, 2012. Gender diversity was a possibility for the survey portion, since men and women were invited to have input into that portion of the study. Racial diversity was not a captured demographic for any part of the study.

Four persons participated in the interview portion of the study. Each interview respondent was employed by a different manufacturing company within the study group. Interviewed managers also represented facilities that were organized as local companies, multinational companies, and privately- and publically-owned companies. The experience level of the persons interviewed ranged from 13 years in management to more than 40 years in leadership positions. Included in the group were persons holding the titles of operations manager, human resource manager, vice-president, and manufacturing manager. Three of the four persons described manufacturing as their primary work history, while one person formerly served in the military and the public service sector before entering manufacturing. All were currently responsible for the promotion of persons to the supervisor position, but each one was mentoring others to assume a larger role and more responsibility for these decisions.

A follow-up electronic message detailing the study and its compliance with the requirements of the Institutional Review Board of Indiana State University was distributed (Appendix A). After receipt of the informational electronic message, informed consent by the participant was communicated by a return electronic mail stating he had the opportunity to read the notice detailing the study and its compliance, and that he agreed to participate. At that time, an appointment was made for the interview session. Confidentiality was maintained by means of (1) removing all personally identifiable information from any notes and communication before using the data in the final analysis, (2) keeping all participant information in a password protected file, (3) reporting only demographic data that could not be personally identifiable, and
(4) using a password protected electronic mail. The researcher will not disclose whether an individual was invited to participate in the interview or whether he or she accepted or declined the opportunity to participate.

**Survey study participants**

Persons who met the minimum study criteria and did not participate in the interview study were eligible to complete the survey. A deliberate sampling strategy was also utilized to locate potential participants.

At the time of the survey, June 2012, 48 manufacturing facilities of the original 60 from the database (Infogroup, 2011) were still in operation. Multiple attempts were made to contact persons at each of the manufacturing facilities, and communication was successful with 40 persons, or 83% of the facilities. From these conversations, 29 persons, or 72.5%, agreed to review the survey and/or distribute it among other managers at the facility. Because of privacy concerns by the managers, the researcher was not able to know exactly how many invitations were distributed, only the number of companies agreeing to accept the invitation. Several managers refused to participate in the study citing company policy, time constraints, or no interest.

The online survey link was distributed via electronic mail (Appendix B). Ten persons, an assumed response rate of 34%, completed the study and provided usable results. Five persons started but did not fully complete the survey, and eight reviewed at least the first page, but did not submit any data. Informed consent by the participant was communicated by clicking a next button on the survey after he or she had the opportunity to read a notice detailing the study and its compliance with the Institutional Review Board of Indiana State University (Appendix C). After signifying informed consent, the first questions on the survey were used to verify study
eligibility. Participation in the survey was voluntary and confidential. No data was collected linking a potential participant to a completed survey, all potential participant contact information was kept in a password protected file, no demographic data that could be personally identifiable was reported, and a password protected electronic mail and survey accounts were used for the study. The researcher will not disclose whether an individual was invited to participate in the survey.

**Qualitative Methodology**

**Interviews**

For this study, the issue was the identification of the promotion decision factors that are the most influential in the advancement decision to first-level manufacturing supervisor. A semi-structured interview process with an interview guide was used for data collection because it increased the comprehensiveness of the data and made the data collection somewhat systematic while maintaining a fairly conversational and situational interview setting (Best & Kahn, 2003). The semi-structured interview process and interview guide used pre-written questions for the interview with follow-up or probing questions also utilized during the interview if needed for clarification (Harrell & Bradley, 2009). Communication with the participants was by electronic mail, telephone, and personal interview.

The interview questions were open-ended and designed to encourage the respondent to explore his expectations of supervisors and his perceptions of the role of supervisors in his employment facility. A copy of the interview guide may be found in Appendix D.

Four managers were interviewed. Each interview lasted between 45 and 90 minutes. Two of the interviews were during the work day, while the other two were immediately following work. All but one was held in the respondent’s office. The interviews were audio
taped in addition to the researcher taking notes during the conversation. A follow-up thank you electronic message was sent to each respondent. The follow-up message included a list of the determinants from the conversation. The respondent was encouraged to contact the researcher if he perceived any discrepancy in what he meant and what had been noted. All respondents agreed with the interpretation of their comments.

**Qualitative data analysis techniques**

A four-step process for data analysis was followed. The steps were (1) data preparation, (2) familiarization (3) coding or content analysis, and (4) generating meaning (Ruona, 2005). The data was prepared by once again listening to the recorded interviews and transcribing the conversations in order to facilitate the process of identifying patterns and themes. Familiarization with the data continued as the researcher thought about what was said, what was implied, and the terminology used to express ideas and concepts. Content analysis ensued as the researcher compared the conversations in order to seek relationships and differences. Themes were identified and determinants were arranged according to the themes. The development of themes and the cataloging of stated determinants continued until all mentioned factors were categorized and no new themes emerged. Step 4, generating meaning, was the final step and was completed once the researcher had generated a list of all the themes which were comprised of the determinants or referenced factors/characteristics that were mentioned during the interview process by one or more respondents.

**Qualitative data utilization**

The finalized list of determinants from the interview process was used to construct the survey instrument for the quantitative portion of study. The list was comprised of 22 items, and while several of the items on the developed list paralleled the findings of Longenecker & Fink
(2008) and Lockamy & Service (2011), others were unique to this study. Since this study focused on supervisor promotion and the other two studies reflected higher managerial level promotions, a difference in the findings was anticipated. A second objective of the quantitative study was to pare the finalized determinant list of 22 items down to the most influential in a promotion decision. A range of five to ten determinants was expected based upon the results of previous promotion studies.

**Quantitative Methodology**

**Survey**

The purpose of the survey was to acquire additional data concerning the promotion determinants that interviewed participants identified. The survey results provided a relative rating of the importance of each determinant in the promotion process. Also, the number of participants in the study was expanded from the interview stage in order to capture more insights, and the data collected was in a form that could be analyzed using descriptive statistics.

The survey was pretested prior to administration. Persons who were not employed by the study group manufacturers or who were not involved in supervisor promotion decisions but were knowledgeable about business and promotion practices were asked to participate in the pretest. The pretest participants were asked to evaluate the web-based administration process, the instructions, the clarity of the questions, and the difficulty in understanding or answering the questions (Fowler, 2009). During the testing, the data collection process was also evaluated.

The survey was administered online. The survey consisted of five parts, labeled A through E. Part A explained the study and provided the opportunity for signifying informed consent. A participant could decline to contribute at this time and no data would be collected. Part B consisted of a question to verify that the participant met the survey eligibility criteria. The
question was a multiple choice asking for the range of the number of supervisor promotion
decisions in which the participant had been involved. If the participant had been involved in
fewer than two promotion decisions, the survey thanked the participant for his or her interest and
then closed without collecting any additional data. If the participant was eligible to contribute,
the data was stored as part of the demographic information and the participant continued on to
Part C. Part C asked each participant to reflect upon the supervisor promotion decision-making
processes in which he or she had been involved. Using that experience, and as shown in Table 3,
each participant was asked to rate the level of effect each determinant had in the decision-making
process using a five-point Likert scale from 1 (unimportant) to 5 (very important). Part D
requested the participants to assign a percentage or weighting factor to each determinant within a
rating category. This provided an importance ranking for all of the determinants. As noted in
Table 3, the rating values from Part C and the percentage effect values from Part D were
transposed to a 0% to 100% effect scale by giving each rating a 20 point percentage effect range.
The transposed value served as the a priori probability of the determinant influencing the
promotion decisions. Part E requested demographic information from the participant. A copy of
the survey is available in Appendix E.
Table 3

Survey Importance Rating and Percentage Effect Scales

<table>
<thead>
<tr>
<th>Rating Scale</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unimportant</td>
<td>Of little</td>
<td>Moderately</td>
<td>Important</td>
<td>Very important</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Percentage importance rating</th>
<th>0% to 100% for each importance rating category.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total percentage values within a rating category must equal 100%.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transposed</th>
<th>0-19%</th>
<th>20-39%</th>
<th>40-59%</th>
<th>60-79%</th>
<th>80-100%</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>a priori</em> probability scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Quantitative data analysis techniques

The survey data was transposed to *a priori* probabilities so the statistical techniques of descriptive statistics, hypothesis testing, and Bayesian analysis could be utilized. Using the ranges from the data shown in Table 3, the responses for each survey determinant were transposed by multiplying the survey percentage effect by 20 and adding the product to the lowest range value in the appropriate transposed *a priori* probability category. The transposition converted the values to a 100% scale and maintained the relative importance magnitude. The transposed values were carried forth in the analysis and referred to as *a priori* probabilities.

**Descriptive statistical analysis.** A descriptive statistical analysis of the participants’ responses for each determinant was conducted. The maximum rating *a priori* probabilities, minimum rating *a priori* probabilities, median *a priori* probabilities, and standard deviation of the
a priori probabilities were calculated. Furthermore, in order to provide additional information about the promotion determinants and possible avenues for further exploration, a hypothesis was developed and tested.

**Hypothesis.**

H₀: \( Mdn_1 = Mdn_2 \). There is no statistically significant difference in determinant median *a priori* probabilities for each determinant between very experienced managers, 14 or more promotion decisions, and experienced managers, between 2 and 13 promotion decisions.

Hₐ: \( Mdn_1 \neq Mdn_2 \). There is a statistically significant difference in determinant median *a priori* probabilities for each determinant between very experienced and experienced managers.

The results of the statistical analysis delineated the most influential factors, the focus of this research project, in addition to providing a comparison between and among various sub-groups of the demographic clusters. The hypothesis testing provided additional information about the difference of opinion of determinant importance ratings between the two sub-groups of the number of promotions demographic.

**Bayesian analysis.** A Bayesian network, also known as a belief network, is an acyclic graphical model that can be used to represent human judgmental knowledge. Nodes, symbolized graphically by circles, represent variables, arrowed lines signify the edges between the nodes and represent the direct causal dependencies between the linked variables, and the strengths of the relationships are quantified by conditional probabilities (Ben-Gal, 2007; Pearl, 1985). Bayesian networks are based on the posthumously published work of Thomas Bayes ("Thomas Bayes," 2011). Bayes was a theologian and mathematician whose work during the mid-1700s made him the first to use probability inductively, and the one who established a mathematical basis for probability inference ("Thomas Bayes," 2011).
An example, given by Ben-Gal (2007), of a Bayesian network graph is that an edge from node $X_i$ to node $X_j$ represents a statistical dependence between the nodes, and the arrow pointing from $X_i$ to $X_j$ signifies that $X_i$ influences $X_j$ or the value of $X_j$ is dependent upon the value of $X_i$. Node $X_i$ is referenced as the parent and $X_j$ is the child of $X_i$. The graph may continue through subsequent generations, but no node may be its own ancestor or descendant. In addition to describing the hierarchal relationships using qualitative methods, the conditional probabilities for each node must also be defined, and therefore a quantitative probabilistic model is created. It must be noted that each node’s probability is only dependent upon parental node(s), and the probabilities may be based upon subjective or observed evidence.

Bayes’ theorem states that:

$$P(S|E) = \frac{P(E|S) * P(S)}{P(E|S) * P(S) + P(E|\sim S) * P(\sim S)}$$

The posterior probability is given by the left hand term of the equation. It represents the probability of the subjective belief, $S$, that is being investigated, and $E$ is the new evidences that seems to confirm or disconfirm the belief. Using conditional probability to express what we want Bayes’ Theorem to discover, the probability of $S$ is true, given that $E$ is true, and $P(S|E)$ represents the probability assigned to $S$ after taking into account the new evidence, $E$. The calculation needs $P(S)$ as the *a priori* probability and the conditional probabilities of how probable the evidence is depending upon whether the belief is or is not true. These conditions are represented by $P(E|S)$ and $P(E|\sim S)$, where $\sim S$ is the negation of $S$ or the proposition that $S$ is false (Brown, 2002). Bayesian networks provide a methodology to allow researchers to combine subjective beliefs with available evidence (Lockamy & Service, 2011).
The *a priori* probabilities for the Bayesian analysis were the transposed percentage effect medians for each determinant. A Bayesian network chart was designed and presented in addition to a table providing the probabilities.

**Demographic Data**

Descriptive statistics were used to report the demographic data of the survey study participants. Demographic data was collected in the following categories: gender, age, completed educational level, and number of supervisor promotion decisions in which one had participated. Generic job titles were the only demographic information recorded for the interview participants.

**Summary**

A sequential exploratory mixed methods design was selected in order to take advantage of both qualitative and quantitative research methods. A deliberate sample of managers who had participated in a minimum of eight supervisor promotion decision-making processes and were employed by a business in the study group were queried using interview methods. The qualitative design using interviews was selected because this research was exploratory, and creating an original list of determinants for the study group was needed prior to measuring the determinants’ potential influence. The list of influential promotion determinants was then used in a survey and distributed to the cohort of managers involved in at least two supervisor promotions and employed by the study group. The goal of the survey was to quantitatively compare the levels of perceived influence of the determinants within the decision-making process. Care was taken to select both qualitative and quantitative methods so the data would encompass the greatest variation of input and provide a valid process for the collection and reporting of the data.
CHAPTER 4

FINDINGS AND DATA ANALYSIS

The purpose of this study was to contribute to the body of knowledge on promotion, especially at the supervisor level. Specifically, it identified and described the most influential determinants, as perceived by the decision-makers, leading to the advancement of employees to first-level manufacturing supervisor positions. The study group was comprised of managers of company facilities that were located within the Tennessee Workforce Investment Act (WIA) Region 10, comprised of Hickman, Giles, Lawrence, Lewis, Marshall, Maury, Perry, and Wayne counties; were employers of a minimum of 50 persons; and were classified by primary NAICS codes 31-33.

This chapter presents the data collected both in the qualitative personal interviews and the quantitative data obtained through the use of a web-based survey instrument. The qualitative data findings will be presented first, followed by the quantitative findings and analysis. The presentation order was selected because it mimics the sequence in which the data was collected and utilized, and, therefore, should guide the reader in the understanding of the results.

Qualitative Data Analysis

Demographic information of interviewed managers

The researcher attempted to recruit a gender diverse group for the interviews, but due to personal and professional conflicts of potential participants, only males were available during the
interview period. Each interview respondent was employed by a different manufacturing company within the study group, representing local companies, multi-national companies, and privately- and publically-owned companies. The experience level of the persons interviewed ranged from 13 years in management to more than 40 years in leadership positions. Included in the group were persons holding the titles of operations manager, human resource manager, vice-president, and manufacturing manager. Three of the four persons described manufacturing as their primary work history, while one person formerly served in the military and the public service sector prior to entering the manufacturing sector. All were currently responsible for the promotion of persons to the supervisor position.

**Interview determinants**

The study question was noted as follows: “What promotion decision determinants are identified as the most influential by persons making advancement decisions for filling the positions of first-line production supervisors in manufacturing businesses in today’s operating environment?” An interview protocol utilizing a variety of questions (Appendix A) was used to encourage each interview respondent to vocalize his or her thought processes when making the promotion decision. Respondents were encouraged to state any thoughts that came to mind as they considered the questions, and some respondents had to be reminded that there were no correct or incorrect answers to the questions; each of their ideas was valid.

Since this was an exploratory study, the transcripts of the interviews were evaluated using inductive content analysis (Elo & Kyngas, 2007). Themes or groups were created from the reading of the conversations and determinants were placed within the appropriate categories (Zhang & Wildemuth, 2009). The creation of groups continued until the researcher was satisfied that all relevant categories or themes had been created and all mentioned determinants had been
The researcher decided to include all 22 generated categories/determinants in the final list. The decision to include all was made because even though some determinants were only mentioned by one or two interview participants, Table 4, they were considered influential enough to mention. In this exploratory study, a determinant should not be quickly discounted. For example, interviewed manager 1 mentioned that while current supervisors spoke only English, the current workforce at the facility was approximately 20% Hispanic. Because of this, being bilingual, English and Spanish, would be a determinant in his future supervisor promotion decisions (personal communication, April 2012). The final list of determinants that was created from the interview analysis is shown in Table 4 in alphabetical, frequency order.

   Review of the table data shows that approximately half of the determinants were listed by all or most of the interviewees, while the other half of the determinants were listed by only one or two of the respondents. The purpose of the qualitative study was to generate a list of possibly influential determinants, so all determinants mentioned were incorporated into the survey portion of the study. The survey data provided a numerical rating of influence and allowed for a differentiation to be calculated.

Table 4

Determinants Derived from Qualitative Interviews and the Frequency Mentioned, n=4

<table>
<thead>
<tr>
<th>Determinant</th>
<th>Frequency Mentioned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accomplishes tasks, productive, energetic</td>
<td>4</td>
</tr>
<tr>
<td>Appropriate attitude toward peers, subordinates and superiors - team player, works well with others</td>
<td>4</td>
</tr>
<tr>
<td>Demonstrates character, integrity and trustworthiness</td>
<td>4</td>
</tr>
<tr>
<td>Excellent interpersonal/ communication skills</td>
<td>4</td>
</tr>
<tr>
<td>Requirement</td>
<td>Rating</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>Good people management skills, uses authority wisely, builds relationships and cares about individuals</td>
<td>4</td>
</tr>
<tr>
<td>Respected by others</td>
<td>4</td>
</tr>
<tr>
<td>Loyal to company and employees</td>
<td>3</td>
</tr>
<tr>
<td>Punctual and good attendance record</td>
<td>3</td>
</tr>
<tr>
<td>Seeks assistance when needed - recognizes issues that must be handled, especially those that should include other management personnel</td>
<td>3</td>
</tr>
<tr>
<td>Strong understanding of equipment/ processes/ business - experienced</td>
<td>3</td>
</tr>
<tr>
<td>Aptitude to serve as mentor, teacher or trainer</td>
<td>2</td>
</tr>
<tr>
<td>Difficulty of change if promotion fails</td>
<td>2</td>
</tr>
<tr>
<td>Maintains proper balance between possible conflicting needs – company, employee, safety, customer</td>
<td>2</td>
</tr>
<tr>
<td>Possesses a professional manner and appearance</td>
<td>2</td>
</tr>
<tr>
<td>Works overtime or goes beyond minimum expectations to meet deadlines</td>
<td>2</td>
</tr>
<tr>
<td>Bilingual – Spanish and English</td>
<td>1</td>
</tr>
<tr>
<td>Can evaluate employees for job placement or task assignments</td>
<td>1</td>
</tr>
<tr>
<td>College degree in related or relevant field</td>
<td>1</td>
</tr>
<tr>
<td>Current employee</td>
<td>1</td>
</tr>
<tr>
<td>No personal conflicts or responsibilities that could interfere with job requirements</td>
<td>1</td>
</tr>
</tbody>
</table>
Demographics of Survey Respondents

Using the data obtained from the interviews, a survey was created and distributed to other managers within the study group. At the time of the survey, 48 manufacturing facilities from the original list were still in operation. Multiple attempts were made to contact persons at each of the manufacturing facilities, and communication was successful with persons at 40 facilities or 83% of the facilities. From these conversations, 29 persons, or 72.5%, agreed to review the survey and/or distribute it among other managers at the facility. Because of privacy concerns by the managers, the researcher was not able to know exactly how many invitations were distributed, only the number of companies agreeing to accept the invitation. Several managers refused to participate in the study citing company policy, time constraints, or no interest.

The survey was completed by 10 persons. Five persons started but did not fully complete the survey, and eight reviewed at least the first page, but did not submit any data. Only the data from the completed surveys was used in the analysis. Predominately, the managers completing the survey were male, between 45 and 64 years of age, had completed a bachelor’s or master’s level degree, and were evenly split between participating in 2 to 13 promotions or 14 or more promotions. Table 5 through Table 8 provide details about each demographic group completing the survey.
Table 5

*Age Demographic of Survey Participants*

<table>
<thead>
<tr>
<th>Age in years</th>
<th>Number of participants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>25-34</td>
<td>1</td>
<td>10%</td>
</tr>
<tr>
<td>35-44</td>
<td>2</td>
<td>20%</td>
</tr>
<tr>
<td>45-54</td>
<td>4</td>
<td>40%</td>
</tr>
<tr>
<td>55-64</td>
<td>3</td>
<td>30%</td>
</tr>
</tbody>
</table>

Table 6

*Gender Demographic of Survey Participants*

<table>
<thead>
<tr>
<th>Gender</th>
<th>Number of participants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>9</td>
<td>90%</td>
</tr>
<tr>
<td>Female</td>
<td>1</td>
<td>10%</td>
</tr>
</tbody>
</table>

Table 7

*Educational Level Demographic of Survey Participants*

<table>
<thead>
<tr>
<th>Educational level</th>
<th>Number of participants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some college credit, no degree</td>
<td>1</td>
<td>10%</td>
</tr>
<tr>
<td>Associate degree (for example: AA, AS, AAS)</td>
<td>1</td>
<td>10%</td>
</tr>
<tr>
<td>Bachelor's degree (for example: BA, BS)</td>
<td>5</td>
<td>50%</td>
</tr>
<tr>
<td>Master's or Professional degree (for example: MA, MS, MBA, MD, DDS, DVM, LLB, JD)</td>
<td>3</td>
<td>30%</td>
</tr>
</tbody>
</table>
Table 8

*Number of Promotion Decision-Making Participation of Survey Participants*

<table>
<thead>
<tr>
<th>Number of promotion decisions</th>
<th>Number of participants</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-7</td>
<td>2</td>
<td>20%</td>
</tr>
<tr>
<td>8-13</td>
<td>3</td>
<td>30%</td>
</tr>
<tr>
<td>14 or more</td>
<td>5</td>
<td>50%</td>
</tr>
</tbody>
</table>

**Quantitative Data Analysis**

A review of the survey rating results, Table 9, confirmed that the determinants provided by the interviewed managers were important in the other managers’ decision-making process. The results were skewed toward very important for all but a few of the determinants presented in the survey. The analysis of the determinant ratings used the median for the comparison of the results instead of the mean because the mean can be extremely volatile when calculated with small sample sizes (Field, 2005).

The survey data was not normally distributed per the results of the Kolmogorov-Smirnov and Shapiro-Wilk tests. Only one determinant, college degree in related or relevant field, was found to be normally distributed, $D(10) = 0.22$, $p > .05$. The Shapiro-Wilk test results confirmed the findings. For the few other determinants found to be normally distributed by Kolmogorov-Smirnov test, the Shapiro-Wilk test and a review of the Q-Q plots led the researcher to assume non-normal distributions. Due to the non-normality of the data, a non-parametric analysis technique was used to compare the sub-groups in the number of promotion decisions demographic. In addition, the determinant rating comparisons and reporting between and among
the various demographic sub-groups were limited to the determinants that rated *a priori* probability ratings of 80% or higher. The focus of the research was the most influential determinants, and the other factors were not considered influential enough to further evaluate.

The survey participants were encouraged to add additional determinants that were influential in their decision making that were not included in the original list. Determinants that were added include:

1. Long term attendance record. If hiring from external applicants, the number of jobs held over a short period of time would be substituted.
2. Employee’s attitude
3. An employee’s ability to learn and his or her ability to transition from an hourly employee position to a salaried supervisor position and assume all of the responsibilities.

Each of these determinants was included in the original list, but due to the terminology and phrasing, the participant may not have easily recognized that they were already represented. Since it can be concluded that no additional determinants were added to the list, the researcher was confident that the most influential promotion determinants had been included in the research survey.

Table 9 presents the survey data results. The determinants are listed alphabetically and in order of most influential to least influential as determined by the median *a priori* probability of promotion values. There were five determinants that could be considered most important since they each garnered support of 80% or higher *a priori* median ratings.

Of the top five rated determinants, all but one was mentioned by each of interviewed managers. The exception was *seeks assistance*, and it was mentioned by three of the managers.
The determinants of *excellent interpersonal/communication skills* and *respected by others* were mentioned by all of the managers, but they did not garner an 80% or higher rating.

Table 9

*Overall Survey Results of Importance Ratings for Determinants in Promotion Decisions*

<table>
<thead>
<tr>
<th>Determinant</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Median</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrates character, integrity, and trustworthiness</td>
<td>60.00</td>
<td>92.00</td>
<td>83.50</td>
<td>8.25</td>
</tr>
<tr>
<td>Accomplishes tasks, productive, energetic</td>
<td>60.00</td>
<td>86.00</td>
<td>82.40</td>
<td>11.33</td>
</tr>
<tr>
<td>Appropriate attitude toward peers, subordinates, and superiors - team player, works well with others</td>
<td>60.00</td>
<td>87.00</td>
<td>82.00</td>
<td>10.10</td>
</tr>
<tr>
<td>Good people management skills, uses authority wisely, builds relationships and cares about individuals</td>
<td>60.00</td>
<td>83.00</td>
<td>81.50</td>
<td>11.49</td>
</tr>
<tr>
<td>Seeks assistance when needed - recognizes issues that must be handled, especially those that should include other management personnel</td>
<td>60.00</td>
<td>84.00</td>
<td>81.10</td>
<td>11.62</td>
</tr>
<tr>
<td>Punctual and good attendance record</td>
<td>60.00</td>
<td>86.00</td>
<td>70.50</td>
<td>12.01</td>
</tr>
<tr>
<td></td>
<td>Score</td>
<td>Score</td>
<td>Score</td>
<td>Score</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>Takes initiative to solve problems and</td>
<td>60.00</td>
<td>83.00</td>
<td>70.50</td>
<td>11.70</td>
</tr>
<tr>
<td>make decisions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respected by others</td>
<td>60.00</td>
<td>83.00</td>
<td>70.20</td>
<td>11.53</td>
</tr>
<tr>
<td>Aptitude to serve as mentor, teacher, or</td>
<td>40.00</td>
<td>83.00</td>
<td>60.00</td>
<td>16.76</td>
</tr>
<tr>
<td>trainer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Can evaluate employees for job placement or task assignments</td>
<td>40.00</td>
<td>83.00</td>
<td>60.00</td>
<td>13.95</td>
</tr>
<tr>
<td>Current employee</td>
<td>20.00</td>
<td>60.00</td>
<td>60.00</td>
<td>14.14</td>
</tr>
<tr>
<td>Excellent interpersonal/ communication</td>
<td>40.00</td>
<td>82.00</td>
<td>60.00</td>
<td>14.24</td>
</tr>
<tr>
<td>skills</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Loyal to company and employees</td>
<td>60.00</td>
<td>81.40</td>
<td>60.00</td>
<td>10.21</td>
</tr>
<tr>
<td>Maintains proper balance between</td>
<td>60.00</td>
<td>83.00</td>
<td>60.00</td>
<td>11.40</td>
</tr>
<tr>
<td>possible conflicting needs -</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>company, employee, safety,</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>customer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No personal conflicts or responsibilities</td>
<td>20.00</td>
<td>82.00</td>
<td>60.00</td>
<td>17.94</td>
</tr>
<tr>
<td>that could interfere with job requirements</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plans for daily staffing and production,</td>
<td>20.00</td>
<td>81.00</td>
<td>60.00</td>
<td>18.67</td>
</tr>
<tr>
<td>in addition to longer term staffing</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>and production issues</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Possess a professional manner and</td>
<td>40.00</td>
<td>83.00</td>
<td>60.00</td>
<td>16.50</td>
</tr>
<tr>
<td>appearance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Strong understanding of equipment/processes/business - experienced  
Works overtime or goes beyond minimum expectations to meet deadlines  
College degree in related or relevant field  
Difficulty of change if promotion fails  
Bilingual - Spanish and English

<table>
<thead>
<tr>
<th>Strong understanding of equipment/ processes/ business - experienced</th>
<th>40.00</th>
<th>83.00</th>
<th>60.00</th>
<th>17.16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Works overtime or goes beyond minimum expectations to meet deadlines</td>
<td>40.00</td>
<td>82.00</td>
<td>60.00</td>
<td>13.25</td>
</tr>
<tr>
<td>College degree in related or relevant field</td>
<td>0.00</td>
<td>60.00</td>
<td>40.00</td>
<td>18.97</td>
</tr>
<tr>
<td>Difficulty of change if promotion fails</td>
<td>0.00</td>
<td>81.00</td>
<td>40.00</td>
<td>22.20</td>
</tr>
<tr>
<td>Bilingual - Spanish and English</td>
<td>0.00</td>
<td>40.00</td>
<td>10.00</td>
<td>13.98</td>
</tr>
</tbody>
</table>

Twelve determinates were rated at a 60% influence level, the most frequent median value calculated. Three were supported at 70% and three were at the 40% or lesser median values. With such a large majority earning a 60% influence rating, one has to assume that these factors play an influential role with some individuals and that none of the factors on the list should be totally ignored. The top five, each earning an 80% or higher median influence rating, were the most influential overall, but universal support by each individual cannot be assumed.

**Number of promotions decisions made demographic sub-group results and comparisons**

Comparisons between and among demographic sub-groups were made to determine if the various sub-groups valued the determinants’ influence differently. In addition to providing tables (Table 10 through Table 16) presenting the most influential determinates for each sub-group, defined as having a median a priori probability value of greater than 80%, each table also contains columns listing the current demographic sub-groups’ ratings and the overall group’s ratings of the same determinant.
Table 10

*Experienced Managers’, 2 to 13 Promotion Decisions, Survey Results of Importance Ratings for Determinants in Promotion Decisions, n=5*

<table>
<thead>
<tr>
<th>Determinant</th>
<th>Experienced</th>
<th>Very</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>a priori</em> probability</td>
<td>Experienced</td>
<td><em>a priori</em></td>
<td>probability</td>
</tr>
<tr>
<td>Demonstrates character, integrity, and trustworthiness</td>
<td>84.00</td>
<td>83.00</td>
<td>83.50</td>
</tr>
<tr>
<td>Seeks assistance when needed - recognizes issues that must be handled,</td>
<td>82.40</td>
<td>60.00</td>
<td>81.10</td>
</tr>
<tr>
<td>especially those that should include other management personnel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appropriate attitude toward peers, subordinates, and superiors - team player,</td>
<td>82.00</td>
<td>82.40</td>
<td>82.20</td>
</tr>
<tr>
<td>works well with others</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accomplishes tasks, productive, energetic</td>
<td>81.40</td>
<td>83.00</td>
<td>82.40</td>
</tr>
<tr>
<td>Takes initiative to solve problems and make decisions</td>
<td>81.40</td>
<td>60.00</td>
<td>70.50</td>
</tr>
</tbody>
</table>
Good people management skills, uses authority wisely, builds relationships and cares about individuals

Punctual and good attendance record

Respected by others

<table>
<thead>
<tr>
<th>Determinant</th>
<th>Very experienced</th>
<th>Experienced a priori</th>
<th>Overall a priori probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accomplishes tasks, productive, energetic</td>
<td>83.00</td>
<td>81.40</td>
<td>82.40</td>
</tr>
<tr>
<td>Demonstrates character, integrity, and trustworthiness</td>
<td>83.00</td>
<td>84.00</td>
<td>83.50</td>
</tr>
<tr>
<td>Appropriate attitude toward peers, subordinates, and superiors - team player, works well with others</td>
<td>82.40</td>
<td>82.00</td>
<td>82.20</td>
</tr>
<tr>
<td>Aptitude to serve as mentor, teacher, or trainer</td>
<td>81.80</td>
<td>60.00</td>
<td>60.00</td>
</tr>
<tr>
<td>Good people management skills, uses</td>
<td>81.80</td>
<td>81.20</td>
<td>81.50</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>authority wisely, builds relationships and cares about individuals</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The very experienced managers, participated in 14 or more promotion decisions, had a final list of five very influential determinants. Their list included all but one of the overall most influential determinants; seeks assistance when needed - recognizes issues that must be handled, especially those that should include other management personnel. The seeks assistance determinant received a rating of 60% when only considering the input of the most experienced managers. Three of the four interviewed managers mentioned this determinant, and it was supported strongly enough by sufficient participants to earn an 81.10% median rating. The very experienced managers included the determinant of aptitude to serve as mentor, teacher, or trainer to complete their list. This factor was mentioned by two of the four interviewed managers. The experienced managers, participated in 2 to 13 promotions, rated eight items as their most influential. Each of their items received a rating of 70% or higher in the overall ratings, but four were rated as 60% influential by the very experienced group.

Accomplishes tasks, productive, energetic, the second most influential determinant in the overall study, mentioned by all four interviewed managers, and one of the most influential in the very experienced managerial sub-group, was described by interviewed manager 1 (personal communication, April 2012) that “you can talk and theorize, but you must get the items out the door” and “people have to understand the flow of manufacturing” (interviewed manager 3, personal communication, April 2012).
The determinant of *aptitude to serve as mentor, teacher, or trainer* was another factor that the very experienced managers rated highly influential and the experienced managers rated at 60%. The two interviewed managers who mentioned this determinant stated this about supervisors “somebody who can look at workers and understand that is where they came from, guide them and be a trainer themselves” (interviewed manager 2, personal communication, April 2012, and “…teachers, be able to train people” (interviewed manager 3, personal communication, April 2012).

In addition to presenting and comparing the median data in a rating format, a statistical test, see the hypothesis below, was also conducted to determine if the two sub-groups of the number of promotions demographic were statistically different in their ratings. An analysis among the three educational levels sub-groups and between the two ages sub-groups was not conducted because logical sub-groups of a sufficient size could not be created in order to perform a valid test. The groups of associate degree and some college only contained 2 managers, whereas if bachelor degrees were added to this group, this left master’s level at only 3 managers. In the age group, there were only three persons under 45 years of age, with the rest of the managers in the 45- to 64-year-old sub-group.

**Hypothesis**

$H_0$: $Mdn_1 = Mdn_2$. There is no statistically significant difference in median determinant *a priori* probabilities for each determinant between very experienced managers, 14 or more promotion decisions, and experienced managers, between 2 and 13 promotion decisions.

$H_a$: $Mdn_1 \neq Mdn_2$. There is a statistically significant in median determinant *a priori* probabilities for each determinant between very experienced and experienced managers.
Reviewing Table 10 and Table 11, which show the ratings for the promotion demographic sub-groups, the most influential determinants vary in order and inclusion. The Mann-Whitney test was used to determine if there was a statistical difference between the very experienced managers’ median ratings and the experienced managers’ median ratings for the most influential determinants. The results, using a 95% confidence interval, reveal there was no statistical difference in the medians for any of the determinants. The null hypothesis, $H_0$, should be accepted.

**Additional demographic sub-group results and comparisons**

Table 12

25- to 44-year-old Managers’ Survey Results of Importance Ratings for Determinants in Promotion Decisions, $n=3$

<table>
<thead>
<tr>
<th>Determinant</th>
<th>25- to 44-year-old</th>
<th>45- to 64-year-old</th>
<th>Overall a priori probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accomplishes tasks, productive, energetic</td>
<td>84.00</td>
<td>81.80</td>
<td>82.40</td>
</tr>
<tr>
<td>Appropriate attitude toward peers, subordinates, and superiors - team player, works well with others</td>
<td>84.00</td>
<td>81.80</td>
<td>70.50</td>
</tr>
<tr>
<td>Demonstrates character, integrity, and trustworthiness</td>
<td>84.00</td>
<td>83.00</td>
<td>83.50</td>
</tr>
</tbody>
</table>
Seeks assistance when needed - recognizes issues that must be handled, especially those that should include other management personnel

Table 13

45- to 64-year-old Managers’ Survey Results of Importance Ratings for Determinants in Promotion Decisions, n= 7

<table>
<thead>
<tr>
<th>Determinant</th>
<th>45- to 64-year-old</th>
<th>25- to 44-year-old</th>
<th>Overall a priori probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrates character, integrity, and trustworthiness</td>
<td>83.00</td>
<td>84.00</td>
<td>83.50</td>
</tr>
<tr>
<td>Accomplishes tasks, productive, energetic</td>
<td>81.80</td>
<td>84.00</td>
<td>82.40</td>
</tr>
<tr>
<td>Appropriate attitude toward peers, subordinates, and superiors - team player, works well with others</td>
<td>81.80</td>
<td>84.00</td>
<td>82.20</td>
</tr>
<tr>
<td>Good people management skills, uses authority wisely, builds relationships and cares about individuals</td>
<td>81.80</td>
<td>60.00</td>
<td>81.50</td>
</tr>
<tr>
<td>Determinant</td>
<td>25- to 44-year old managers</td>
<td>45- to 64-year old managers</td>
<td></td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-----------------------------</td>
<td>-----------------------------</td>
<td></td>
</tr>
<tr>
<td>Aptitude to serve as mentor, teacher, or trainer</td>
<td>60.00</td>
<td>60.00</td>
<td></td>
</tr>
<tr>
<td>Excellent interpersonal/communication skills</td>
<td>60.00</td>
<td>60.00</td>
<td></td>
</tr>
<tr>
<td>Punctual and good attendance record</td>
<td>70.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seeks assistance when needed - recognizes issues that must be handled, especially those that should include other management personnel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Takes initiative to solve problems and make decisions</td>
<td>70.50</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respected by others</td>
<td>70.20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The 25- to 44-year old managers rated four determinants as highly influential. Each of their selections was in the overall influential list. *Good people management skills*, the omitted determinant, were rated as 60% influential. The 45- to 64-year old managers rated ten determinants as most influential. In addition to the five overall most influential determinants, they included another five. Two of the additional determinants were also mentioned by all four interviewed managers, *excellent interpersonal/communication skills* and *respected by others*.
Table 14

*Education Level 1, Associate’s Degree and Some College, Survey Results of Importance Ratings for Determinants in Promotion Decisions, n=2*

<table>
<thead>
<tr>
<th>Determinant</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accomplishes tasks, productive, energetic</td>
<td>82.70</td>
<td>60.00</td>
<td>83.00</td>
<td>82.40</td>
</tr>
<tr>
<td>Demonstrates character, integrity, and trustworthiness</td>
<td>82.70</td>
<td>85.00</td>
<td>83.00</td>
<td>83.50</td>
</tr>
<tr>
<td>Maintains proper balance between possible conflicting needs - company, employee, safety, customer</td>
<td>82.10</td>
<td>60.00</td>
<td>60.00</td>
<td>60.00</td>
</tr>
<tr>
<td>Respected by others</td>
<td>82.00</td>
<td>60.00</td>
<td>80.40</td>
<td>70.20</td>
</tr>
<tr>
<td>Appropriate attitude toward peers, subordinates, and superiors - team player, works well with others</td>
<td>81.70</td>
<td>84.00</td>
<td>82.40</td>
<td>82.20</td>
</tr>
<tr>
<td>Good people management skills, uses authority wisely, builds relationships and cares about individuals</td>
<td>81.60</td>
<td>60.00</td>
<td>81.80</td>
<td>81.50</td>
</tr>
</tbody>
</table>
Works overtime or goes beyond minimum expectations to meet deadlines

| Loyal to company and employees | 81.60 | 60.00 | 60.00 | 60.00 |

Table 15

*Education Level 2, Bachelor’s Degrees, Survey Results of Importance Ratings for Determinants in Promotion Decisions, n=5*

<table>
<thead>
<tr>
<th>Determinant</th>
<th>Educational level</th>
<th>2</th>
<th>1</th>
<th>3</th>
<th>Overall</th>
</tr>
</thead>
<tbody>
<tr>
<td>Demonstrates character, integrity, and trustworthiness</td>
<td>85.00</td>
<td>82.70</td>
<td>83.00</td>
<td>83.50</td>
<td></td>
</tr>
<tr>
<td>Appropriate attitude toward peers, subordinates, and superiors - team player, works well with others</td>
<td>84.00</td>
<td>81.70</td>
<td>82.40</td>
<td>82.20</td>
<td></td>
</tr>
<tr>
<td>Seeks assistance when needed - recognizes issues that must be handled, especially those that should include other management personnel</td>
<td>82.40</td>
<td>70.60</td>
<td>81.00</td>
<td>81.10</td>
<td></td>
</tr>
</tbody>
</table>
Table 16

*Education Level 3, Master’s Degrees, Survey Results of Importance Ratings for Determinants in Promotion Decisions, n=3*

<table>
<thead>
<tr>
<th>Determinant</th>
<th>Educational levels</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Accomplishes tasks, productive, energetic</td>
<td>83.00</td>
</tr>
<tr>
<td>Demonstrates character, integrity, and trustworthiness</td>
<td>83.00</td>
</tr>
<tr>
<td>Appropriate attitude toward peers, subordinates, and superiors - team player, works well with others</td>
<td>82.40</td>
</tr>
<tr>
<td>Takes initiative to solve problems and make decisions</td>
<td>82.40</td>
</tr>
<tr>
<td>Aptitude to serve as mentor, teacher, or trainer</td>
<td>81.80</td>
</tr>
<tr>
<td>Good people management skills, uses authority wisely, builds relationships and cares about individuals</td>
<td>81.80</td>
</tr>
<tr>
<td>Excellent interpersonal/ communication skills</td>
<td>81.40</td>
</tr>
<tr>
<td>Punctual and good attendance record</td>
<td>81.00</td>
</tr>
</tbody>
</table>
Seeks assistance when needed -
recognition issues that must be handled, especially those that should include other management personnel

<table>
<thead>
<tr>
<th></th>
<th>81.00</th>
<th>70.60</th>
<th>82.40</th>
<th>81.10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respected by others</td>
<td>80.40</td>
<td>82.00</td>
<td>60.00</td>
<td>70.20</td>
</tr>
</tbody>
</table>

The educational sub-groups data reflected the same patterns as the overall and other demographic groups. Of special interest is that the associates degree and some college sub-group, n=2, included as three of their most influential determinates maintains proper balance between possible conflicting needs, works overtime, and loyal. No other sub-groups rated these at the 80% or higher influence. Loyal was mentioned by three of the four interviewed managers and two managers mentioned the other determinants.

The bachelor’s degree sub-group, n=5, was the most discriminating. They only selected three determinants as their most influential. Each of these was also included in the overall most influential ratings. The master’s degree sub-group acted as many of the other sub-groups with a selection of five determinants rated as most influential. Two of these also differed from the overall group influential ratings.

Overall, an interesting point in the results was the variation in the number of determinants that were rated as very influential for the different sub-groups. The number of determinants included in the lists varied from three to ten determinants that met the 80% criteria. There was nothing in the data to explain this phenomena, so further study is needed to explore the possible influence of demographic status on decision-making and its possible impact on the promotion.
process. Additionally, due to the small sample size, further analysis of statistical significance of the differences could not be calculated.

**Bayesian analysis**

The number of influential determinants in the overall survey results was five. Most influential was defined as having an *a priori* median probability of 80% or higher. In order to further review the impact of the determinants on decision-making, a Bayesian analysis was conducted to evaluate the probability of receiving a promotion when a person was rated positive in the most influential determinant categories. A Bayesian analysis or belief network is a graphical model that can be used to represent human judgmental knowledge. The assumption is that the influence ratings are equivalent to the probability of a positive reaction by the decision-maker upon the promotion decision. Using this relationship, the likelihood of a positive promotion decision being made when a supervisor candidate is viewed as possessing each of the five most influential characteristics or decision-making determinants is 82.1%. The other 17.9% of the decision is reserved for additional factors that were not included in the Bayesian analysis. The results of the analysis are presented in Figure 2.
Summary

This chapter contained the results of the interviews conducted during the qualitative part of the study. Also summarized are the quantitative findings from the internet survey developed using the interview results. The interview process provided a list of 22 determinants that managers stated were influential in their promotion decision-making process. The survey results confirmed that these were the most influential factors in a promotion decision because no additional factors were added to the list by the survey participants. The final survey results showed that the participants had pared the list down to five most influential factors. The most
influential determinants were defined by evaluating the median \textit{a priori} probability ratings. A factor with an \textit{a priori} probability influence rating of 80\% or higher was deemed most influential. The factors rated as the most influential were also factors mentioned by all of the interviewed managers with the exception of \textit{seeks assistance}, which was mentioned by three of the four managers. These five factors accounted for approximately 82\% of the influence in the decision-making process. In addition, presented were the survey results of the most influential determinants for each sub-group within the demographic categories of age, educational level, and number of promotion decisions. While each of the sub-groups differed in their \textit{a priori} probability ratings and final ranking of influence, there was no statistical difference in the medians for the two sub-groups in the number of promotion decisions demographic. The other demographic category sub-groups contained too few data points to conduct a statistical analysis.
CHAPTER 5

DISCUSSION AND RECOMMENDATIONS

Promotion is a valuable tool used in practically every organization. It may be used to increase worker motivation, reward those who have performed well, encourage an employee to remain with the organization and/or fill higher responsibility positions (Carmeli, Shalom, & Weisberg, 2007; Dessler, 2011; Kosteas, 2011; Pergamit & Veum, 1999; Pfeifer, 2010). The requirements or expectations that a worker must fulfill in order to earn a promotion are not always clearly defined (Service & Lockamy, 2008). The purpose of this exploratory study was to increase the knowledge about promotion by investigating the determinants that decision-makers consider important when making promotion decisions. This chapter is comprised of a discussion of the research results, implications, and recommendations for further research and study.

Discussion

Five determinants were identified to be the most influential in the decision-making process of advancing employees to first level manufacturing supervisor positions. Most influential was defined as having a median influence rating of 80% or higher. These determinants accounted for approximately 82% of the probability of a positive promotion outcome using a Bayesian analysis. The ratings order among the demographic groups varied, but the statistical significance of the differences could only be tested within the number of promotion
decisions group. For that group, the median ratings order was not statistically significantly different. Table 17 lists the most influential determinants in order of highest ratings.

Table 17

*Most Influential Determinants in the Promotion to Supervisor Decision*

<table>
<thead>
<tr>
<th>Determinants</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Demonstrates character, integrity, and trustworthiness</td>
</tr>
<tr>
<td>• Accomplishes tasks, productive, energetic</td>
</tr>
<tr>
<td>• Appropriate attitude toward peers, subordinates, and superiors - team player, works well with others</td>
</tr>
<tr>
<td>• Good people management skills, uses authority wisely, builds relationships and cares about individuals</td>
</tr>
<tr>
<td>• Seeks assistance when needed - recognizes issues that must be handled, especially those that should include other management personnel</td>
</tr>
</tbody>
</table>

All but one of the five determinants that were rated as most influential was listed by each of the four interviewed managers. The exception was *seeks assistance*, and it was mentioned by three of the managers. The determinants of *excellent interpersonal/communication skills* and *respected by others* were mentioned by all of the managers, but they did not earn an 80% or higher rating.

Demonstrates character, integrity, and trustworthiness was rated the most influential determinant by the surveyed managers. It was also included in each of the sub-groups highest ratings lists. In addition, this determinant was mentioned by each of the interviewed managers, and one manager summarized the thoughts of all the interviewees with the following statement:
If you ask for one [determinant], your individual honesty, integrity, character, whatever you want to call that, is it because it will hit most of the other things I am talking about. If you have that, a foundation to go back to, what is right and wrong, you can learn these other things. …if you fail there, you can do some of the other things for a while, but if you don’t go back to honesty, it will all tumble eventually (interviewed manager 1, personal communication, April 2012).

Another interviewed manager stated this thought even more succinctly when he said “don’t lie to me… just be honest and up-front” (interviewed manager 4, personal communication, April 2012).

A review of the most influential determinants reveals that soft skills are the most highly rated. Technical skills, listed as strong understanding of equipment/processes/business – experienced, were included in the original determinant list, but only garnered overall support at 60%. Additionally, the technical skills determinant did not make the most influential list, 80% or higher rating of support, within any demographic sub-group. The 60% rating seemed to reflect support and a possible requirement for technical knowledge in a promotion candidate, but an employee would likely be better served when considering promotion to a supervisor position to focus his or her resources on the development of relationship skills. The higher importance of relationship and managerial skills rather than technical skills was supported in a study by Hysong (2008). Hysong (2008) found that technical skills were valuable to managers as a source of credibility and a means to identify with subordinates, but that technical skills did not significantly contribute to the production output. Therefore, technical skills, while important, should not be the most influential determinant in selecting technical managers.
The results of the promotion studies of higher-level managers conducted by Lockamy and Service (2011) and Longenecker and Fink (2008) provided a comparison for the results of this study, which focused on first-level managers or supervisors. The determinants that were noted as most influential in all of the studies were related to: (1) **team work and ability to work with others**, and (2) **communication skills**. The determinant of **accomplishes tasks, productive, and energetic** could be equated to **strong performance in track record** in the Longenecker and Fink (2008) study. It is interesting to note again that **demonstrates character, integrity, and trustworthiness** was the most influential determinant in this study and was a factor in the Longenecker and Fink (2008) study, but it was not an important final factor in the Lockamy and Service (2011) study. **Good people management skills** and **seeks assistance when needed** were not listed in the results of either of the higher management studies but was one of the most influential determinants for supervisors according to this study’s results.

None of the promotion determinants that were found in the manufacturing promotion study by Pfeifer (2010) were included in the most influential list. Pfeifer’s study was based in Germany and was from the perspective of a tournament promotion theory. His positive promotion-correlated factors of higher education, punctual and good attendance record, and works overtime were in the original list created by very-experienced managers, but the other managers rated attendance approximately 70% median influence, with works overtime and college degree (higher education) rating 60% and 40%, respectively. The difference in results may be because this study used a manager’s self-analysis of factors, whereas the other study used an analysis of determinants gathered from records of promoted and non-promoted persons.
Implications

“We need to be building that kind of bullpen, if you will, of people that can be promoted and go on to the next step. Who is going to be that next supervisor, who is going to be the next plant manager?” (interviewed manager 3, personal communication, April 2012). The unease reflected in this statement was a recurring theme in each interview. Concern for the development of the next managers and leaders of organizations are, likewise, a principal responsibility of human resource development professionals and managers. The role of supervisors has been evolving and continues to change due to technological, social, and economic factors. Promotion is also an important element in many people’s careers. The number of studies evaluating promotion determinants at the decision-making level is very limited, especially at the supervisor level. Most studies focus on (a) investigation of factors associated with employees being rated promotable, (b) examination of decisions for a given position, (c) description of fictitious employees to determine one to promote, and (d) examination of the number of promotions an individual has received to determine the predictors of success (Breaugh, 2011). The results of this study can be used to enhance the pool of supervisor candidates, provide managers insight into the promotion decision-making process, and possibly improve the promotion process.

An organization could focus on employee development and use the determinants as intervention goals. The aim would be to increase the skills and knowledge of potential supervisors so that the pool of possible candidates was increased and the quality of candidates was improved. This is especially critical for employers with a limited employee pool as often found in rural areas.

The data could also be utilized for the development of promotion decision-makers. Managers could review their personal decision-making paradigms and compare them to the
determinants that managers who participated in this study considered influential. While the response rate to the survey was somewhat limited, the experience level of the participants was extensive. Conversations could begin about the decision-making process. Managers need to make conscious decisions and not rely on unknown biases when selecting the management and leadership of the organization.

Communication issues could also be addressed utilizing the study results. Managers should communicate with other managers to ensure that the correct determinants are being considered when making promotion decisions. Employees need to know the determinants that management thinks are important for success in the job and for promotion. If this information remains unknown, the promotion process will not be understood and could result in dissatisfaction with decisions and feelings of unfairness.

As a result of this study, additional insight into promotion decisions has been made. The results could also be used in several ways to improve organizational and personal performance. The study design and results could likewise be used as a reference for additional investigations that would further increase the understanding of the promotion decision-making process.

**Recommendations**

This study was limited in geography, participation, and economic sector. In order to expand and confirm the findings about manufacturing supervisor promotion decision-making, this study should be replicated in another geographical area. It would be beneficial to discover if this study’s findings were provincial or universal. In addition, a larger pool of participants would allow one to conduct further research into the possibility that demographic differences have a statistically significant impact upon the final ratings of the determinants. This study uncovered differences in the median determinant rating order between demographic sub-groups, but
statistical significance of the differences was not found or for most of the sub-groups could not be determined.

An additional area of interest may be a comparison of promotion determinants among different manufacturing sectors. The equipment utilized and the skills needed to successfully work in a particular manufacturing sector could influence the job requirements of the supervisors, and therefore, impact the promotion decision determinants. Another influence, and this is likely reflected in the type of manufacturing facilities located in a geographic area, is the education and skill level of the local employee pool.

Furthermore, a study of promotion decision-making determinants should be expanded to include other economic sectors such as retail, food service, or health care. Supervisors, or first-level managers, play a critical role in every organization and economic sector. Because of the critical importance of the first-level managerial position and the use of promotions to meet personnel and business objectives, increased knowledge about the promotion process could provide a mechanism to improve business outcomes.

Additionally, a list of promotion determinants should be developed from the perspective of current supervisors or employees wanting to advance to the role of manufacturing supervisor. A comparison of the promotion determinants could then be made to conclude if managers and employees are viewing the promotion decision-making process similarly or if there is a gap in expectations and critical factors.
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APPENDIX A: INFORMED CONSENT FOR INTERVIEW

IDENTIFICATION OF INFLUENTIAL PROMOTION DECISION DETERMINANTS FOR ADVANCEMENT TO FIRST-LEVEL MANUFACTURING SUPERVISOR

You are being invited to participate in a research study about influential decision-making factors when determining which persons to promote to the role of manufacturing supervisor. This study is being conducted by Sandra B. Serkownek with Dr. Kathryn Hoff, academic advisor with Visual Communication & Technology Education at Bowling Green State University and Indiana State University. This study is being conducted as part of a dissertation. Your participation in this study is entirely voluntary. Please read the information below and ask questions about anything you do not understand before deciding whether or not to participate.

You were selected as a possible participant in this study because you are a manager who has been involved in supervisor promotion decisions and employed by a manufacturing facility located in southern middle Tennessee that employs more than 50 persons. There will be approximately two to four other persons in this segment of the study.

● PURPOSE OF THE STUDY

This study is designed to identify and describe the factors that are the most influential in the decision-making process of promoting persons to the job of manufacturing supervisor.

● PROCEDURES

If you volunteer to participate in this study, you will be asked to do the following things:

Communicate with the researcher via personal interview and email and:

1. Respond to the interviewer questions about production supervisors, promotion, and the determinants believed to be important to the promotion decision-making process.
2. Agree to let the researcher record the interview to facilitate correct notes.
3. Complete the demographic survey concerning generic job title, number of years’ experience as a manager, and company size and ownership.

The interview should take less than 45 minutes to complete.

● POTENTIAL RISKS AND DISCOMFORTS

There are no known risks and no costs to you if you decide to participate in this research study.

● POTENTIAL BENEFITS TO SUBJECTS AND/OR TO SOCIETY

The information you provide will be used to identify promotion decision factors. This information will then be used in a survey to evaluate promotion decision factors and their relative importance in promotion.
decisions. The information collected may not benefit you directly, but the information learned in this study should provide more general benefits. Potential uses of the results could be training or career development initiatives in addition to increasing overall knowledge about promotion.

- **CONFIDENTIALITY**

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of (1) removing all personally identifiable information from notes and communication before using any comments in the working and final analysis, (2) keeping all participant information in a password protected file, (3) reporting only demographic data that cannot be personally identifiable, (4) using a password protected email, and (5) deleting the recorded interview immediately upon completion of note creation. The researcher will not disclose whether an individual was invited to participate in the interview or whether he or she accepted or declined the opportunity to participate.

- **PARTICIPATION AND WITHDRAWAL**

You can choose whether or not to be in this study. If you volunteer to be in this study, you may withdraw at any time without consequences. You may also refuse to answer any questions you do not want to answer. Also, by participating in this study you are agreeing that you are 18 years of age or older. In addition, your decision to participate or not will not impact any relationship you may have with Bowling Green State University or Indiana State University.

- **IDENTIFICATION OF INVESTIGATORS**

If you have any questions about the study, please contact Sandra Serkownek, 1665 Hampshire Pike, Columbia, TN 38401, 931-540-2673, sserkownek@sycamores.indstate.edu or Dr. Kathryn Hoff, 212 Technology Building, Bowling Green State University, Bowling Green, OH 43403, (419) 372-7557, khoff@bgsu.edu.

- **RIGHTS OF RESEARCH SUBJECTS**

If you have any questions about your rights as a research subject or if you feel you’ve been placed at risk, you may contact Indiana State University Institutional Review Board (IRB) by mail at Indiana State University, Office of Sponsored Programs, Terre Haute, IN, 47809, by phone at (812)237-8217, or by email at irb@indstate.edu.

I have been informed of the procedures described above. My questions have been answered to my satisfaction, and I agree to participate in this study. My consent will be documented by emailing my acceptance to the researcher.

*Date of IRB Approval:* February 1, 2012  
*IRB Number:* 12-058
APPENDIX B: INVITATIONS TO SURVEY PARTICIPANTS

Subject: Supervisor Promotion Study by Columbia State professor

I am an associate professor at Columbia State Community College and a doctoral candidate in the Technology Management program at Indiana State University. For my dissertation research, I am studying the factors that are considered important by managers when deciding which individual to promote to the position of production supervisor, foreman, lead, team leader, etc.

The study question is: "In today’s operating environment for manufacturing organizations, which promotion decision determinants do advancement decision-makers consider most influential when filling first-line production supervisor positions?"

Because of your position as a manager who has been part of the supervisor promotion decision-making process in a local manufacturing facility, I am asking you to complete an online survey. Your involvement and experience in this area makes your opinion vital to my research. Please complete the online survey by XXX. The survey should take approximately 13 minutes to complete.

The opening page of the survey is a detailed description of the study. Please review this material. When you click next on the survey, you are consenting to participate in the study as outlined. If you have additional questions or concerns, please do not hesitate to contact me or one of the other persons listed in the material.

At the end of this email is a link that will take you to the survey site. Remember, you are thinking about the process of promoting individuals to the position of first-line production supervisor. You will have the capability of starting and stopping the survey as needed.

Thank you for your participation and remember that all data reported will not personally identify you in anyway.

Survey link: http://edu.surveygizmo.com/s3/948805/Supervisor-Promotion-Determinant-Influence-Ratings

Deadline for responses: XXX

If the link does not automatically work, please copy and paste it into your web browser.

Thank you for your participation. Your input is invaluable to this study.
If there are others at your facility who have also been involved in promotion decisions, please forward this invitation to them.

Sandra Serkownik

Survey Reminder

Subject: Information Request - Survey Reminder for Supervisor Promotion Study

If you responded to my earlier survey request, I sincerely appreciate your assistance and quick reply. Your input will be invaluable in helping me understand the supervisor promotion process in our local manufacturing environment.

If you have not yet responded, I would greatly appreciate you taking the opportunity to share your insight with me. Without the benefit of your experience, I cannot hope to understand the significance of the factors involved in making the supervisor promotion decision.

It is my plan to share your input in several ways: complete my dissertation, thereby publishing my findings and making them available to others who may be interested in manufacturing, supervisors, or promotion; disseminating the information to my fellow Columbia State faculty members so we can better prepare our students for “real-world” workplace expectations; and also providing the information to the Economic and Community Development group so they may work with you on possible training opportunities. I am also willing to share my findings with you if you are interested.

As a reminder, the survey is online and anonymous and should take approximately 13 minutes to complete. At the end of this email is a link that will take you to the survey site. Remember, you are thinking about the process of promoting individuals to the position of first-line production supervisor, foreman, team leader, or first-line manager. You will have the capability of starting and stopping the survey as needed.

Thank you for your participation and remember that all data reported will not personally identify you in anyway.

Survey link: http://edu.surveygizmo.com/s3/948805/Supervisor-Promotion-Determinant-Influence-Ratings

Deadline for responses: XXX

If the link does not automatically work, please copy and paste it into your web browser.

If there are other managers at your facility who have also been or are currently involved in promotion decisions, please forward this invitation to them.
Thank you again for your participation and sharing of your knowledge and time. Your input is instrumental to this study.

Sandra Serkownek
APPENDIX C: INFORMED CONSENT FOR ONLINE SURVEY

IDENTIFICATION OF INFLUENTIAL PROMOTION DECISION DETERMINANTS FOR ADVANCEMENT TO FIRST-LEVEL MANUFACTURING SUPERVISOR

You are being invited to participate in a research study about influential decision-making factors when determining which persons to promote to the role of manufacturing supervisor. This study is being conducted by Sandra B. Serkownek with Dr. Kathryn Hoff, academic advisor with Visual Communication & Technology Education at Bowling Green State University and Indiana State University.

You were selected as a possible participant in this study because you are a manager who has been involved in supervisor promotion decisions and employed by a manufacturing facility located in southern middle Tennessee that employs or recently employed more than 50 persons.

There are no known risks or costs to you if you decide to participate in this research study. The information you provide will be used to evaluate promotion decision factors and their relative importance in the promotion decision-making process. The questionnaire will take about 12 minutes to complete. The information collected may not benefit you directly, but the findings from this study could be used to create training or career development initiatives in addition to increasing overall knowledge about promotion.

This survey is anonymous, but since the internet is being used, absolute anonymity cannot be guaranteed. Persons invited to participate will not be disclosed, IP addresses will not be collected, and demographic data will be reported as a group, and only reported if the group is large enough to limit the potential of identifying an individual participant. No one will be able to link you to your answers, and no one will know whether or not you participated in the study. Should the data be published, no individual information will be disclosed. After you complete the survey, it is recommended that you clear your internet browser and page history.

Your participation in this study is voluntary. By completing the survey, you are voluntarily agreeing to participate and are stating that you are 18 years of age or older. You are free to decline to answer any particular question you do not wish to answer for any reason. You may also withdraw from the study at any time. In addition, your decision to participate or not will not impact any relationship you may have with Bowling Green State University or Indiana State University.

If you have any questions about the study, please contact Sandra Serkownek, 1665 Hampshire Pike, Columbia, TN 38401, 931-540-2673, sserkownek@sycamores.indstate.edu or Dr. Kathryn Hoff.
Hoff, 212 Technology Building, Bowling Green State University, Bowling Green, OH 43403, (419) 372-7557, khoff@bgsu.edu.

If you have any questions about your rights as a research subject or if you feel you’ve been placed at risk, you may contact the Indiana State University Institutional Review Board (IRB) by mail at Indiana State University, Office of Sponsored Programs, Terre Haute, IN, 47809, by phone at (812) 237-8217, or by e-mail at irb@indstate.edu.

Date of IRB Approval: 2/1/2012
IRB Number: 12-058
APPENDIX D: INTERVIEW GUIDE

- Time of Interview:
- Date:
- Place:
- Interviewee:
- Position of Interviewee:
- Company info: total size and type of ownership
- Year of managerial experience of Interviewee:

I am a professor at Columbia State Community College and a doctoral candidate in the Technology Management program at Indiana State University. For my dissertation research, I am interviewing 3-5 experts to have them identify and describe influential promotion decision determinants for advancement to a first-level manufacturing supervisor. In order to further refine the findings, I will be surveying other managers and asking them to rate the importance or influence of the promotion determinants that the experts listed.

The study question is: "In today’s operating environment for manufacturing organizations, which promotion decision determinants do advancement decision-makers consider most influential when filling first-line production supervisor positions?"

I would like to record the interview so I may create accurate notes of our conversation. After I complete my notes, the recording will be deleted. In order to keep your identity confidential in the notes and in the final analysis, you will only be referenced by a generic work
title and a notation of whether your employer is a local or national/multi-national company. I do not foresee the interview taking more than 45 minutes.

Questions:

1. How long have you been involved in making supervisor promotion decisions, approximately how many decisions have you made, and do you usually make them alone or with others? Also, tell me about this company.

2. Describe the ideal production supervisor?

3. What information about the candidates do you actively seek? What are your sources for this information? What type of questions and information do you seek during the interview?

4. In today’s operating environment for manufacturing organizations, which promotion decision determinants do advancement decision-makers consider most influential when filling first-line production supervisor positions? What items first come to your mind when you consider this question?

5. Do you have anything to add? Do you have any questions for me?

Thank you.
APPENDIX E: ONLINE SURVEY

Welcome

IDENTIFICATION OF INFLUENTIAL PROMOTION DECISION DETERMINANTS FOR ADVANCEMENT TO FIRST-LEVEL MANUFACTURING SUPERVISOR

You are being invited to participate in a research study about influential decision-making factors when determining which persons to promote to the role of manufacturing supervisor. This study is being conducted by Sandra B. Serkownek with Dr. Kathryn Hoff, academic advisor with Visual Communication & Technology Education at Bowling Green State University and Indiana State University. This study is being conducted as part of a dissertation.

You were selected as a possible participant in this study because you are a manager who has been involved in supervisor promotion decisions and employed by a manufacturing facility located in southern middle Tennessee that employs or recently employed more than 50 persons. There are no known risks or costs to you if you decide to participate in this research study. The information you provide will be used to evaluate promotion decision factors and their relative importance in the promotion decision-making process. The questionnaire will take approximately 13 minutes to complete. The information collected may not benefit you directly, but the findings from this study could be used to create training or career development initiatives in addition to increasing overall knowledge about promotion.

This survey is anonymous, but since the internet is being used, absolute anonymity cannot be guaranteed. Persons invited to participate will not be disclosed, IP addresses will not be collected, and demographic data will be reported as a group, and only reported if the group is large enough to limit the potential of identifying an individual participant. No one will be able to link you to your answers, and no one will know whether or not you participated in the study. Should the data be published, no individual information will be disclosed. After you complete the survey, it is recommended that you clear your internet browser and page history.

Your participation in this study is voluntary. By completing the survey, you are voluntarily agreeing to participate and are stating that you are 18 years of age or older. You are free to decline to answer any particular question you do not wish to answer for any reason. You may also withdraw from the study at any time. In addition, your decision to participate or not will not impact any relationship you may have with Bowling Green State University or Indiana State University.

If you have any questions about the study, please contact Sandra Serkownek, 1665 Hampshire Pike, Columbia, TN 38401, 931-540-2673, sserkownek@sycamores.indstate.edu or Dr. Kathryn
Hoff, 212 Technology Building, Bowling Green State University, Bowling Green, OH 43403, (419) 372-7557, khoff@bgsu.edu.

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Date of IRB Approval: 2/1/2012
IRB Number: 12-058

Promotion Decisions
This survey question must be answered. If you select "Prefer not to Answer", you may complete the survey but your responses will not be included in the researcher's study analysis.

Total number of manufacturing production supervisor promotion decisions you have made in your career*
( ) 0-1
( ) 2-7
( ) 8-13
( ) 14 or more
( ) Prefer not to Answer (your survey responses will not be used in the study analysis)
( ) Exit the Survey

Importance of Factors
Review the list, and for each factor, decide its level of importance (VERY IMPORTANT, IMPORTANT, MODERATELY IMPORTANT, OF LITTLE IMPORTANCE, UNIMPORTANT) in your supervisor promotion decision-making.

<table>
<thead>
<tr>
<th>Importance of Promotion Factors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accomplishes tasks, productive, energetic</td>
</tr>
<tr>
<td>Very Important</td>
</tr>
<tr>
<td>Important</td>
</tr>
<tr>
<td>Moderately Important</td>
</tr>
<tr>
<td>Of Little Importance</td>
</tr>
<tr>
<td>Unimportant</td>
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<tr>
<td>Feature</td>
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<tr>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Appropriate attitude toward peers, subordinates, and superiors - team player, works well with others</td>
</tr>
<tr>
<td>Aptitude to serve as mentor, teacher, or trainer</td>
</tr>
<tr>
<td>Bilingual - Spanish and English</td>
</tr>
<tr>
<td>Can evaluate employees for job placement or task assignments</td>
</tr>
<tr>
<td>College degree in related or relevant field</td>
</tr>
<tr>
<td>Current employee</td>
</tr>
<tr>
<td>Demonstrates character, integrity, and trustworthiness</td>
</tr>
<tr>
<td>Difficulty of change if promotion fails</td>
</tr>
<tr>
<td>Excellent interpersonal/communication skills</td>
</tr>
<tr>
<td>Good people management skills, uses authority wisely, builds relationships and cares about individuals</td>
</tr>
<tr>
<td>Loyal to company and employees</td>
</tr>
<tr>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Maintains proper balance between possible conflicting needs - company, employee, safety, customer</td>
</tr>
<tr>
<td>No personal conflicts or responsibilities that could interfere with job requirements</td>
</tr>
<tr>
<td>Plans for daily staffing and production, in addition to longer term staffing and production issues</td>
</tr>
<tr>
<td>Possess a professional manner and appearance</td>
</tr>
<tr>
<td>Punctual and good attendance record</td>
</tr>
<tr>
<td>Respected by others</td>
</tr>
<tr>
<td>Seeks assistance when needed - recognizes issues that must be handled, especially those that should include other management personnel</td>
</tr>
<tr>
<td>Strong understanding of equipment/processes/business - experienced</td>
</tr>
</tbody>
</table>
THE NEXT PART OF THE SURVEY IS DIFFERENT IN PRINT THAN IT WAS ONLINE. FOR EACH OF THE FOLLOWING SECTIONS, ONLY THE DETERMINANTS THAT WERE RATED ON THE LIKERT PAGE WITH THE APPROPRIATE RATING VALUE (VERY IMPORTANT FOR THE FIRST SECTION) APPEARED FOR THE PARTICIPANT TO RATE ON A 0-100 SCALE. THE OTHERS WERE HIDDEN FROM VIEW AND REQUIRED NO ACTION FROM THE PARTICIPANT.

Very important Ratings
Using a 0-100% point scale, rate the influence that each factor has on your decision-making when compared to your other factors in its importance grouping. When you add your importance ratings, your sum should equal or be close to 100. Use only whole numbers.

For example, if you are deciding upon a restaurant and your top choices are location, price, and food type; if location was much more important than the others, you would enter 90 for Location, 5 for price and 5 for food type. If all were about equal in importance, you would enter 33,33,34. Again, try to have a sum close to 100 for the page.

- Accomplishes tasks, productive, energetic
- Appropriate attitude toward peers, subordinates, and superiors - team player, works well with others
- Aptitude to serve as mentor, teacher, or trainer
- Bilingual - Spanish and English
- Can evaluate employees for job placement or task assignments
- College degree in related or relevant field
- Current employee
- Demonstrates character, integrity, and trustworthiness
- Difficulty of change if promotion fails
- Excellent interpersonal/ communication skills
- Good people management skills, uses authority wisely, builds relationships and cares about individuals
- Loyal to company and employees
- Maintains proper balance between possible conflicting needs - company, employee, safety, customer
- No personal conflicts or responsibilities that could interfere with job requirements
• Plans for daily staffing and production, in addition to longer term staffing and production issue
• Possess a professional manner and appearance
• Punctual and good attendance record
• Respected by others
• Seeks assistance when needed - recognizes issues that must be handled, especially those that should include other management personnel
• Strong understanding of equipment/ processes/ business - experienced
• Takes initiative to solve problems and make decisions
• Works overtime or goes beyond minimum expectations to meet deadlines
• Sum of Relative Ratings for Very Important

Important Ratings
Using a 0-100% point scale, rate the influence that each factor has on your decision-making when compared to your other factors in its importance grouping. When you add your importance ratings, your sum should equal or be close to 100. Use only whole numbers.

For example, if you are deciding upon a restaurant and your top choices are location, price, and food type; if location was much more important than the others, you would enter 90 for Location, 5 for price and 5 for food type. If all were about equal in importance, you would enter 33,33,34. Again, try to have a sum close to 100 for the page.

• Accomplishes tasks, productive, energetic
• Appropriate attitude toward peers, subordinates, and superiors - team player, works well with others
• Aptitude to serve as mentor, teacher, or trainer
• Bilingual - Spanish and English
• Can evaluate employees for job placement or task assignments
• College degree in related or relevant field
• Current employee
• Demonstrates character, integrity, and trustworthiness
• Difficulty of change if promotion fails
• Excellent interpersonal/ communication skills
• Good people management skills, uses authority wisely, builds relationships and cares about individuals
• Loyal to company and employees
• Maintains proper balance between possible conflicting needs - company, employee, safety, customer
• No personal conflicts or responsibilities that could interfere with job requirements
• Plans for daily staffing and production, in addition to longer term staffing and production issue
• Possess a professional manner and appearance
• Punctual and good attendance record
• Respected by others
• Seeks assistance when needed - recognizes issues that must be handled, especially those that should include other management personnel
• Strong understanding of equipment/processes/business - experienced
• Takes initiative to solve problems and make decisions
• Works overtime or goes beyond minimum expectations to meet deadlines
• Sum of Relative Ratings for Important

Moderately Important Ratings
Using a 0-100% point scale, rate the influence that each factor has on your decision-making when compared to your other factors in its importance grouping. When you add your importance ratings, your sum should equal or be close to 100. Use only whole numbers.

For example, if you are deciding upon a restaurant and your top choices are location, price, and food type; if location was much more important than the others, you would enter 90 for Location, 5 for price and 5 for food type. If all were about equal in importance, you would enter 33,33,34. Again, try to have a sum close to 100 for the page.

• Accomplishes tasks, productive, energetic
• Appropriate attitude toward peers, subordinates, and superiors - team player, works well with others
• Aptitude to serve as mentor, teacher, or trainer
• Bilingual - Spanish and English
• Can evaluate employees for job placement or task assignments
• College degree in related or relevant field
• Current employee
• Demonstrates character, integrity, and trustworthiness
• Difficulty of change if promotion fails
• Excellent interpersonal/communication skills
• Good people management skills, uses authority wisely, builds relationships and cares about individuals
• Loyal to company and employees
• Maintains proper balance between possible conflicting needs - company, employee, safety, customer
• No personal conflicts or responsibilities that could interfere with job requirements
• Plans for daily staffing and production, in addition to longer term staffing and production issue
• Possess a professional manner and appearance
• Punctual and good attendance record
• Respected by others
• Seeks assistance when needed - recognizes issues that must be handled, especially those that should include other management personnel
• Strong understanding of equipment/processes/business - experienced
• Takes initiative to solve problems and make decisions
• Works overtime or goes beyond minimum expectations to meet deadlines
• Sum of Relative Ratings for Moderately Important

Of Little Importance Ratings
Using a 0-100% point scale, rate the influence that each factor has on your decision-making when compared to your other factors in its importance grouping. When you add your importance ratings, your sum should equal or be close to 100. Use only whole numbers.

For example, if you are deciding upon a restaurant and your top choices are location, price, and food type; if location was much more important than the others, you would enter 90 for Location, 5 for price and 5 for food type. If all were about equal in importance, you would enter 33,33,34. Again, try to have a sum close to 100 for the page.

• Accomplishes tasks, productive, energetic
• Appropriate attitude toward peers, subordinates, and superiors - team player, works well with others
• Aptitude to serve as mentor, teacher, or trainer
• Bilingual - Spanish and English
• Can evaluate employees for job placement or task assignments
• College degree in related or relevant field
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• Demonstrates character, integrity, and trustworthiness
• Difficulty of change if promotion fails
• Excellent interpersonal/communication skills
• Good people management skills, uses authority wisely, builds relationships and cares about individuals
• Loyal to company and employees
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• Plans for daily staffing and production, in addition to longer term staffing and production issue
• Possess a professional manner and appearance
• Punctual and good attendance record
• Respected by others
• Seeks assistance when needed - recognizes issues that must be handled, especially those that should include other management personnel
• Strong understanding of equipment/processes/business - experienced
• Takes initiative to solve problems and make decisions
• Works overtime or goes beyond minimum expectations to meet deadlines
• Sum of Relative Ratings for Little Importance

Unimportant Ratings
Using a 0-100% point scale, rate the influence that each factor has on your decision-making when compared to your other factors in its importance grouping. When you add your importance ratings, your sum should equal or be close to 100. Use only whole numbers.
For example, if you are deciding upon a restaurant and your top choices are location, price, and food type; if location was much more important than the others, you would enter 90 for Location, 5 for price and 5 for food type. If all were about equal in importance, you would enter 33,33,34. Again, try to have a sum close to 100 for the page.

- Accomplishes tasks, productive, energetic
- Appropriate attitude toward peers, subordinates, and superiors - team player, works well with others
- Aptitude to serve as mentor, teacher, or trainer
- Bilingual - Spanish and English
- Can evaluate employees for job placement or task assignments
- College degree in related or relevant field
- Current employee
- Demonstrates character, integrity, and trustworthiness
- Difficulty of change if promotion fails
- Excellent interpersonal/communication skills
- Good people management skills, uses authority wisely, builds relationships and cares about individuals
- Loyal to company and employees
- Maintains proper balance between possible conflicting needs - company, employee, safety, customer
- No personal conflicts or responsibilities that could interfere with job requirements
- Plans for daily staffing and production, in addition to longer term staffing and production issue
- Possess a professional manner and appearance
- Punctual and good attendance record
- Respected by others
- Seeks assistance when needed - recognizes issues that must be handled, especially those that should include other management personnel
- Strong understanding of equipment/processes/business - experienced
- Takes initiative to solve problems and make decisions
- Works overtime or goes beyond minimum expectations to meet deadlines
- Sum of Relative Ratings for Unimportant

Additional Very Important Factors
Are there any other factors that were not listed in this survey that you consider VERY IMPORTANT to your decision-making process, and you would have included in your Top 5? If there are, please enter them in the space provided.
Factors VERY IMPORTANT to me that were not included in survey
Your Age
( ) 18-24
( ) 25-34
( ) 35-44
( ) 45-54
( ) 55-64
( ) 65-74
( ) 74 or older

Your Gender
( ) Male
( ) Female

Your Completed Educational Level
( ) Elementary school to 8th grade
( ) 9th, 10th or 11th grade
( ) 12th grade, no diploma
( ) High school graduate - high school diploma or the equivalent (for example: GED)
( ) Some college credit, no degree
( ) Associate degree (for example: AA, AS, AAS)
( ) Bachelor's degree (for example: BA, BS)
( ) Master's or Professional degree (for example: MA, MS, MBA, MD, DDS, DVM, LLB, JD)
( ) Doctorate degree (for example: PhD, EdD)

Thank You!

Thank you for completing this survey and participating in the study. Your input has been invaluable. If you want to request a copy of the final study results, please contact Sandra Serkownek, 1665 Hampshire Pike, Columbia, TN 38401, 931-540-2673, sserkownek@sycamores.indstate.edu.