# Skilled workers' perceptions of team and hierarchical work structures and their effects on job satisfaction: an empirical study of a manufacturing organisation.

*Dissertation Submitted by*

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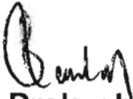
## Master of Business Administration

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## Declaration

I, Prakash.Bansilal, student number 2002 75715 declare that this dissertation is based on the research that I have performed and the material present is my own work otherwise where acknowledgements have been given to other authors and researchers.

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# Table of Contents

# Chapter 1 – Introduction to Problem and Need for Study

## 1.1. Background and Problem Statement

In the traditional hierarchical organization, sixty percent or more of the employees perform short cycle jobs (the time one starts a job or task until they start it over again). The learning curve for these jobs is short often less than several days. Once the cycle is learned, the value of the employee's contribution to the organization is limited to accomplishing the results of the routine to which the employee has been assigned. Without the opportunity for additional learning and new challenges, the job becomes boring. There is little opportunity for the employee to make decisions, solve problems or use his or her creative thinking to make improvements. This situation is not the fault of management; it is the fault of the organizational structure and management operating system. It doesn't have to be this way. Management needs to capture the enthusiasm, creativity, thinking power, decision-making and problem solving ability of every employee. The answer to capturing the full value of the human resource asset is to convert from a traditional hierarchical to a team based "high performance" organization.

Team-Based Organization with self-managed teams establishes:

- the flexibility to make changes;
- a willingness on the part of everyone to incorporate new technologies;
- the ability of everyone to identify and satisfy company and customer requirements;
- the ability to continually improve quality, operating effectiveness and efficiency;
- The power to improve the company's competitive strength by developing a learning, knowledgeable, flexible and empowered workforce.


The Team Based Organization (TBO) with self-managed teams includes principles, structure and processes that overcome the weaknesses inherent in the traditional hierarchical organization. The design replaces the factors that promote division, fear, competition, and conflict with factors that promote unity, risk-taking, co-operation, co-ordination, communications and collaboration. Self-managed team membership builds a sense of belonging and team decision-making builds a sense of ownership in organization. Changing the organization to function in teams to accomplish work and make decisions, relieves people's frustrations, removes indifference and reduces management stress.

## 1.2. The Need for the study

"It is dangerous to assume that you know what is motivating someone because you really can't "read his or her mind". Since it is part of a manager's job to get their work done through others, managers need to understand why people do things, that is, what motivates

them? So that one could convince ones employees to work towards the goals of the organization." *(internet reference 16).*

Continuous improvement is one of the objectives of every company and this should provide the company with achieving its desired objectives as well as the employee achieving job satisfaction Methods need to be devised to capture the benefits to employees as well as the employer. By embarking on this study, management will be better able to understand what motivates its employees and whether employees are willing to make changes to the existing systems.

Employee satisfaction is a crucial element in the ingredients of success. One of the greatest assets that any company could have is a satisfied work force. Many employers embark on programs of human capital investment and this research is aimed at providing input to the human capital investment objective. Employees have the ability to determine the success or failure of the organization and its is therefore important that studies be devoted so that organizational success may be achieved. Managers are focused in achieving specific objectives set out by their respective departments and therefore do not have the time to research any other factors that may influence the outcome of their objectives, it has therefore has become necessary for this research to be conducted so that the destiny of the company may be directed to a more successful one. Metso Minerals, the organization within which the survey is conducted is a knowledge based solutions provider, which focuses on providing a product as well as knowledge on products together with after market sales and service. It therefore becomes necessary that employees are knowledgeable about the products that are marketed and this survey will provide an avenue to achieve this objective by determining whether employees prefer to work in teams, which will enhance knowledge dissemination.

### 1.2.1.Company Profile

Metso Minerals Isithebe is situated in South Africa with headquarters located in Finland, the economic structure of the two countries are different in many respects. Finland is a first world country as compared to South Africa which is a third world country, Productivity per employee and quality issues are common difference between factories located in Finland and South Africa.Its is important to meet overall corporate objectives to be competitive in the global market. The study aims at providing information, which will assist in the improvements of quality and productivity per employee.

## 1.3.Literature Review

An organization uses a person's mind to carry out the management functions of planning, organizing, directing and controlling of defined areas of responsibility. Each of these activities involves creativity, decision-making, problem solving, action planning and evaluation of decision outcomes. Upper level teams continue to manage the "what", "why" and "when" responsibilities and lower level teams start managing the "how" responsibilities. By downloading decision-making, problem solving and action planning activities to non-supervisory employees, managers have more time to spend on decision-making responsibilities that have dramatic and long-range effect on the company.

Existing research indicates that collective decisions are better than individual decisions a high percentage of the time. By restructuring the entire organization into teams, the format is available to establish collective decisions as the norm. Upper level teams make better decisions because they are collective and because they take into consideration the needs of each function impacted by the decision.

# Chapter 2 – Research on Job satisfaction, Motivation and Organisational Structures

## 2.1. Job Satisfaction

### 2.1.1. Introduction

"A musician must make music, an artist must paint, a poet must write, if he is to be ultimately at peace with himself. What a man can be, he must be." Maslow (1943) Maslow's great insight was to place actualization into a hierarchy of motivation. Self-actualization, as he called it, is the highest drive, but before a person can turn to it, he or she must satisfy other, lower motivations like hunger, safety and belonging. The hierarchy has five levels. Physiological (hunger, thirst, shelter, sex, etc.), Safety (security, protection from physical and emotional harm), Social (affection, belonging, acceptance, friendship), Esteem (also called ego). The internal ones are self-respect; autonomy, achievement and the external ones are status, recognition, and attention. Self-actualization (doing things).

### 2.1.2. Definition of job satisfaction

Most writers distinguish between job satisfaction and job morale. Morale refers to the group well -being whereas job satisfaction refers to a particular job. Lock (1976) defines job satisfaction as a "pleasurable or positive emotional state, resulting from the appraisal of one's job or job experiences "There is no one agreed definition, however Wanous and Lawler (1975) list nine different operational definitions, each based on different theoretical orientation and each resulting in different measures. The major difference between the definitions is in terms of the different ways in which aspects of job satisfaction are combined. When the relationship between job satisfaction for the different aspects of the job and overall job satisfaction is analysed, considerable differences in the extent of the correlation are found. Wanous and Lawler also found three of nine measures of satisfaction correlated significantly with absenteeism, whilst others did not. As the investigators conclude,"had not a number of operational measures been used here, conclusions about job satisfaction absenteeism relationship would have been determined by the choice of which job satisfaction measures to use"(Lawler 1975).

### 2.1.3. Reasons advanced for the study of Job satisfaction

Over the last few years the value of studying job satisfaction has come to be questioned. Lawler (1995) questions whether wishing to increase the stock of human happiness in the world through improved job satisfaction is a sensible goal. He argues that dissatisfaction can be creative and lead to a change of a constructive kind. "Of what good he asks is the satisfaction of the cud-chewing cow, when man is capable of creativity and personal

psychological growth,"Lawler (1995) Whilst such a question does seem reasonable, it can be argued that if the cud- chewing cow is happy producing milk and satisfying the farmer, this is a reasonably desirable state of affairs. Not everyone longs to be creative in his own right. Some seek their satisfaction basically in the employment of the company of others and it is a value judgement that this is an undesirable state of affairs.

Davis and Cherns (1975), for example, write "the altogether extraordinary emphasis on job satisfaction in the current and professional press appears to be adding to the confusion and apprehension, whilst not clarifying the fundamental issue ...whether to change the means by which society gets its work done"(p14). In fact this dissatisfaction arises because relationships between measures of job satisfaction and factors of economic importance such as productivity have often failed to materialize. Dissatisfaction also arises because it is felt that the current study of job satisfaction is " the study of minima satisfaction possible, under deprived conditions "(Davis, 1971). Even though these objections to job satisfaction studies have some validity. It can never the less be argued that in such a complex area, confusion will often arise, but that only considerable study will help reduce this confusion.

### 2.1.4.Factors Contributing to Job Satisfaction

Through numerous studies, Herzberg developed a theory of work motivation that he referred to as "the motivation–hygiene theory." According to Herzberg, the following factors increase job satisfaction and staff motivation to perform - achievement, recognition for accomplishment, challenging work, increased responsibility and growth and development. **Achievement** is a sense of accomplishment or successful closure of a task or activity. **Recognition** is the acknowledgment of an individual's or group's efforts, accomplishments, or contributions.

For work to be satisfying there must be tasks that are challenging or motivating. Just as each individual prefers some tasks more than others do, each finds some tasks more challenging than others do. It is important for supervisors to identify with their staff the tasks or activities they find challenging.

When employees feel responsible and accountable for their own work, their job satisfaction increases. Everyone needs to continue to grow and develop personally and professionally on the job. When there are limited opportunities for growth and development employees become dissatisfied. Also job satisfaction is one need that many workers crave. A person who gets satisfaction from his job will often sustain high quality performance even when he's disappointed with his compensation, job security or working conditions. One who is

bored, who gets little or no emotional satisfaction from what he's doing, will sooner or later become unreliable, an absentee, or a poor performer.

### 2.1.5.Theoretical considerations

Present day theories of job satisfaction have been divided by Campbell et al (1970) into two categories, content theories and process theories. Content theories give an account of the factors, which influence job satisfaction. Needs hierarchy theory and its development by Herzberg into the two-factor theory of job satisfaction fall within this sector.

Process theories try to give an account of the process by which variables such as expectations, needs and values interact with the characteristics of the job to produce job satisfaction. Equity theory for example argues that job satisfaction occurs when we compare what we put into the job and the reward we receive with those of others and find we were equitably treated. The theory involves taking account of the expectations of the individuals in relation to their job. Reference group theory takes into account the way in which we refer to other individuals in deciding what is equitable. Need and value fulfillment theories account for job satisfaction in terms of the discrepancy between the individuals needs and values and what the job has to offer.

### 2.1.5.1. Maslow's Need Hierarchy Theory

One of the most popular theories on job satisacftion relates to that of Maslow, this is therefore discussed in detail as its relates to the study on hand.

Maslow's need hierarchy Theory

The most popular account of job satisfaction at present is that job satisfaction involves fulfilling the individuals needs. One of the first theories is that of Maslow (1943), who postulated a needs hierarchy, with needs divided into those of a lower order and those of a higher order. The needs are:

1. basic physiological needs

2. safety and security needs

3. social (affection) needs

4. self esteem needs and

5. Self – actualization needs

The first three are lower order needs and the fourth and fifth are higher order needs.

Maslow argues that only after the lower order needs are satisfied is a man capable of being concerned with fulfilling higher order needs. It is worthy to note that teamwork relates to higher order needs.

Whilst the theory has great intuitive appeal as Lock (1976) points out, it has some major drawbacks." Firstly there is no evidence for this hierarchy of needs. Again, it is in the nature of things that mans needs even at the lowest level are not satisfied by one consummatory act. There are always physical needs to be satisfied. Indeed there is some evidence that the satisfying of certain needs leads to the strengthening of those needs, rather than the reverse."Lock (1976) Maslow did not in fact devise his theory in order to account for job satisfaction but a number of theorists have used his theory in this way.

### 2.1.5.2.Herzberg: The difference between satisfaction and dissatisfaction

Related to Maslow's needs hierarchy theory is Herzbergs famous two factor theory of job satisfaction. Herzberg distinguishes two classes of factors involved in job satisfaction. The first group, motivators are factors which if present in the working situation lead to satisfaction, but whose absence does not lead to dissatisfaction. Such factors include achievement, recognition and the intrinsic interest of the work itself and correspond to the higher levels of self-autonomy and self-actualization according to Maslow's hierarchy of needs. These higher order factors are separate and distinct from the second group, hygiene factors, which when inadequate, lead to job dissatisfaction, but which when adequate do not lead to job satisfaction. Among the hygiene factors are pay, security, and physical working conditions and these correspond to the lower order needs in Maslow's hierarchy.

In splitting the factors involved in job satisfaction in this way, Herzberg argues that the causes of job satisfaction and job dissatisfaction are separate and distinct. An analogy might be with the concepts of pleasure and pain. For the normal healthy individual, the mere absence of pain is not pleasurable of itself, although over the short term, it may be that the relief of pain is considered pleasurable. Similarly hygiene factors such as working conditions do not normally lead to feelings of satisfaction when they are good, except in the short term when they are newly introduced. On the other hand when they are bad they do lead to job dissatisfaction. The thrust of Herzberg's argument is that such factors as pay and working conditions are context factors, which have little to do with deriving satisfaction from the job. They are necessary conditions for, but do not themselves produce job satisfaction. On the other hand job satisfaction produced by the job itself allows the individual to grow psychologically that is to achieve a worthwhile aim, to achieve recognition for his efforts so that he can regard himself as a worthwhile individual. Herzberg argues that the absence of such motivators on the job does not lead to dissatisfaction but merely to a failure to achieve satisfaction. Herzberg relates the concept of job satisfaction to the

concept of mental health. Like job satisfaction and dissatisfaction, mental illness is not the obverse of mental health. The causes of mental illness are to be found in the strain imposed by the environment whereas mental health involves reaction to factors involved in psychological growth. The mentally healthy individual will seek psychological growth from his job and Herzberg implies that those which seek satisfaction from hygiene factors have characteristics which add up to neurotic personalities.(internet reference 8)

### 2.1.5.3.Evidence for and against the theory: Herzberg

The basic study reported in his book The Motivation To Work (1959) investigated engineers and accountants and one of the criticism of Herzberg has been that his conclusions are based on far too narrow samples of the working population. Although a large number of studies using his techniques of data collection have confirmed his findings. It must not be thought that Herzberg regards the adequate provision of hygiene factors as unimportant – prevention of pain is as important in its way as the provision of pleasure. In its way, ensuring adequate hygiene factors is as essential for the well being at work as are motivators. Herzberg argues that it is only when hygiene factors such as pay are adequate that one can begin to structure a job so that motivators come to play a part in the individuals satisfaction with his job. Herzberg's emphasis on intrinsic aspects of the job is in part a healthy reaction to the Human Relations school, which saw human relationships at work as the central area of concern for organizational psychology.

### 2.1.5.4.Distinction between Job satisfaction and Dissatisfaction

At the outset it is important to note that  research has shown a distinction between job satisfaction and job dissatisfaction which requires different factors to be considered when analyzing these two important elements of any working environment.

Since separate factors need to be considered, depending on whether job satisfaction or job dissatisfaction is being examined, it follows that these two feels are not opposites of each other. The opposite of job satisfaction is not job dissatisfaction but rather *no* job satisfaction; and, similarly, the opposite of job dissatisfaction is not job satisfaction, but *no* job dissatisfaction.

"Two different needs of man are involved here. One set of needs can be thought of as stemming from his animal nature--the built-in drive to avoid pain from the environment, plus all the learned drives which become conditioned to the basic biological needs."(Herzberg 1966)example, hunger, a basic biological drive, makes it necessary to earn money, and then money becomes a specific drive. The other set of needs relates to that unique human

characteristic, the ability to achieve and, through achievement, to experience psychological growth. The stimuli for the growth needs are tasks that induce growth; in the industrial setting, they are the *job content*. Contrariwise, the stimuli inducing pain-avoidance behaviors are found in the job environment.

The growth or motivator factors that are intrinsic to the job are achievement, recognition for achievement, the work itself, responsibility, and growth or advancement. The dissatisfaction-avoidance or hygiene factors that are extrinsic to the job include company policy and administration, supervision, interpersonal relationships, working conditions, salary, status, and security.

### 2.1.5.4.*Concluding Remarks on Theoretical Considerations*

There are basically two classes of theory of job satisfaction. First those which attempt to give an account of what need values or expectations are important to individuals in determining their degree of job satisfaction i.e. content theories. Second theories which in general terms try to give an account of how the individuals needs, values and expectations interact with the job to provide job satisfaction and dissatisfaction i.e. process theories. An analysis of the content theories of Maslow and Herzberg reveals many major methodological and conceptual problems. As far as Maslow's need hierarchy theory is concerned, it is postulated that we have needs in ascending order from the basics physiological and security needs to the higher order needs of autonomy and self actualization. No real evidence exists to support the theory. Herzberg's theory, which postulates that the cause of satisfaction and dissatisfaction are separate and distinct, can be related to Maslow's needs hierarchy theory. These factors which cause dissatisfaction when not satisfied are lower order needs. Again as with Maslow the major problem with Herzberg's theory is that the evidence apart from that obtained by means of the critical incident technique, does not support the theory. The evidence on dissatisfaction is perhaps not so clear cut, although here too, it does appear that some individuals derive satisfaction from hygiene factors such as pay whether it is good for them or not. Whatever the merits or otherwise, of Herzberg's theory, it is undoubtedly of great historical importance shifting the emphasis of interest in job satisfaction away from the human relations schools concern with human contacts at work to the importance of the job itself as crucial to an understanding of job satisfaction.

### 2.1.6.*The effect of the actual job on levels of satisfaction*

Exactly how the individual interacts with the job is however the subject of dispute. Some theorists argue that it is the matching of the individuals expectations to what the job offers

which determines job satisfaction. Where expectations are not fulfilled, there will be job dissatisfaction. Whilst this kind of theory has support when the job does not come up to expectations it does not seem to be supported when the job exceeds expectations. Equity theory, an extension of this kind of theorizing argues that job satisfaction arises when the individual compares what he puts into a job and what he gets out of a job, with other peoples inputs and outputs. Where he regards his rewards as being equitable compared to other people, he is satisfied, where he feels they are inequitable, he is dissatisfied.

How the individual comes to compare himself with others is the concern of the reference group theorists. They point to the importance of peer groups in determining what the individual regards as reasonable to expect from his job in terms of reward and what is reasonable to give in terms of effort. Korman (1976)points out,that reference group theory is as yet unable to specify why some individuals choose one reference group whereas other apparently similar individuals choose another. Personality factors must therefore be an important aspect of understanding the kind of rewards and efforts that an individual seeks and expects on a job. For example one can be satisfied with an unexpected promotion or dissatisfied with an expected dismissal. Individual needs and values, just as much as expectations determine whether or not an individual will be satisfied or dissatisfied with a job. Expectations may nevertheless be of critical importance in job satisfaction by determining which values and needs the individual is going to seek to satisfy in the job situation. Further more a framework of expectations may well have considerable value for the individual in giving stability to the job situation.

Process theorists have tried to account for job satisfaction in terms of matching individual needs to what the job provides. Two models are considered the subtractive and the multiplicative, but both have their limitations .As far as the subtractive model is concerned, it fails to take account of the importance of different needs. As far as the multiplicative model is concerned it fails to distinguish how much a need is wanted and how much of the need is wanted. The changing values and adaptations that individuals make over time must be taken into account. Job satisfaction research has largely given a picture of job satisfaction as something static, but job satisfaction involves a dynamic interaction between the individual and his environment.

Whatever the difference and limitations of using one approach, it seems clear that job satisfaction involves the matching of the individuals needs, values and expectations to what the job offers. In such a complex field as job behavior, it is likely that no single theory

accounts for all the phenomena all the time. Expectations, values, individual personality, and cultural background will be influential. However there is no guaranteed overall theory effecting job satisfaction.

### 2.1.7.Sociotecno factors effecting Job Satisfaction

A study by Trist and Bamforth (1951), indicates clearly the demoralizing effects of disrupting ongoing social interactions. Their study involved examining the effects of introducing new technology into coal mines in Britain.Until the time at which the new machinery was introduced, coal working was carried out by small tightly knit work groups who knew each other and chose each other. An important aspect of mining communities is that social relationships outside the work situations are also extremely strong, reinforcing the social satisfaction derived from the work situation. The new longwall system of coal mining involved a re-organisation of work groups of between two and eight men, working on all aspects of coal extraction, groups of up to fifty men, each with specialist tasks, were introduced. One important effect of the change was that communication between individuals was considerably curtailed because of the increase physical distance between men made necessary by the new system.

Predictably, the introduction of the new method of mining had bad effects. Absence, conflict and psychosomatic illness increased markedly and production failed to live up to expectations. Job satisfaction fell and generally unfavorable response to the new system forced management to change the method of work organization. In particular, task specialization and work relationships were altered with the result that morale improved. The above studies show clearly the important psychological effects of supportive work groups. Jobs should be designed to take account of the technology and social systems involved. Where possible, technology should be modified to take account of the fact that individuals have social needs, which if ignored may result in under- utilization of the technology.

A major problem in the introduction of technological change is that a basically beneficial technology can be rejected, or rendered less effective, because workers perceive it as being counter to their interests. Utilizing data obtained from three separate investigations conducted over a two – year period, a tentative, empirically based, dynamic model of technological change is generated. The model suggests that certain pre-emptive steps can be taken by management to maximize the chances of success in the implementation of technical innovations.(*SA Bus Mgmt.1985, 16:31-34*).

Sociotechnical models tend to emphasize the social reaction to technical change without considering the repercussions of the social on the technical, yet the sociotechnical model is purportedly concerned with the reciprocal action of the one upon the other. The problem lies where the sociotechnical approach focuses on how technology can be optimized by rearranging the social system and neglects how the technology can be modified to meet the demands of the social system. Social interactions are very important in the achievement of job satisfaction as depicted by the surveys that were conducted and explained above. This will also be a major factor to consider when implementing any other change that will effect the social interactions of employees. The current survey establishes the perception of employees to a team based organizational structure. The results of the survey indicate a strong favorable move towards the team-based structure. Social interactions which influence job satisfaction need to be maintained when and if a team-based structure is implemented. These are additional factors that need to be considered when implementing any new system. The environmental factors of the mining industry are somewhat similar to the conditions prevailing within the manufacturing industry where the current survey has been conducted. This means that the social behaviour will be similar and tests need to be done to to establish the similarity with regard to the social interactions but the point worth noting is that social interactions will have an impact in the implementation of any new system.

The importance of social relationship work for most individuals is almost self-evident. The study of Van Zelst (1952) shows that allowing individuals to choose their own work mates improves satisfaction, whereas the study by Trist and Bamforth (1951) shows that disrupting social groups reduces job satisfaction. Individuals find work groups attractive for a number of reasons; satisfaction gained through cooperating with others to achieve a goal, the satisfaction arising from feeling valued by others, the protection given by a group against outside threat, and the satisfaction gained from interaction with others as a pleasure in its own right- friendship.

### 2.1.8. Team work influence on job satisfaction

Participation in decision making is of two knods: participation in immediate aspects of the job and participation in distant aspects. From surveys, there is considerable correctional evidence for the relationship between immediate participation and job satisfaction but field studies are far from convincing. As far as distant participation is concerned, there appears to be little evidence to support any causal relationship between participation and job

satisfaction as such. On the other hand, participation schemes do appear popular with employees. It must be noted that what is wanted by employees is not necessarily wanted by managers. To give others say in decision making is to reduce one own power. On balance, however it does seem reasonable to suppose that opening up avenues of communications likely to increase the data base upon which good decision making can be grounded and is a major means of providing feedback both to employees and management, a feature of good jobs according to Hackman and Lawler (1971).

### 2.1.9. Job Satisfaction and Educational Level effects on job satisfaction

A study by Vollmer and Kinney(1955)

Individuals of high ability may be more dissatisfied with jobs, which do not allow for the application of their talents. Vollmer and Kinney (1955) investigated the effect of the level of education on job satisfaction of individuals and they examined the responses of several employees in various institutions in America. Their results indicated that more college than high school educated employees reported dissatisfaction with their jobs. Similarly more high school trained workers reported dissatisfaction than lower trained grammar school educated workers did. Voller and Kinney argue that, because of the greater educational investment it is reasonable to assume that college trained workers generally expect more out of life in terms of higher paid jobs, better working conditions etc. Thus for relatively low-level jobs, they have higher expectations of what a job should offer and therefore lower satisfaction with what they get.

The findings on the relationship between educational level and job satisfaction pose another question towards the government, should the government educate large number of its youth in university institutions when jobs are few. Graduates are forced to take jobs below their expectations, which will, eventually lead, to dissatisfied employees. Applying this to any organization, it will be advisable for the company to embark on educational programs for which there is a need and not have open educational support programs. The company within which the survey was conducted has an open educational program where employees are offered assistance with any subject area that they choose to study. It is clears form the above survey that when employees graduate they expect much more and if the company cannot offer these to the employees it will lose they employee or it will have a large number of dissatisfied employees when the job market is difficult to penetrate.

## 2.1.10.Conclusion

Job satisfaction is an important area of study, simply because it makes a difference to the individual employee. One of the most valued assets of the company is its human capital, every effort needs to be made to ensure that employees perform at their very best. There are many factors that will influence job satisfaction as identified in the above sections. The current research explores the effect that the different Organisational structures on job satisfaction. It is however critical to understand the other factors that will effect job satisfaction. It is clear from the exploration above that job satisfaction is not an isolated area of study and there are no defined rules or theories that suggest the best way to make employees satisfied with their jobs, it is however important to know the different factor that influence employee performance so that every individual company consider these factors within the environments within which they operate.

## 2.2. MOTIVATION

### 2.2.1.Introduction

"Regardless of its talents or potential, a caged eagle can at best only conform to the dimensions of its cage. But when it is released, no one need shout encouragement to it to soar, no one need hang motivational slogans on its nest exhorting excellence. When unleashed from the shackles of bureaucracy, when freed from the confines of an operational prison, eagles study their surroundings, spread their wings, and fly!" (Harris, p. 98). The word "motivation" is often used to describe certain sorts of behavior. A student who studies hard and tries for top grades may be described as being "highly motivated", while her friend may say that he is "finding it hard to get motivated" to study for an exam or to start an assignment. Such statements imply that motivation has a major influence on our behavior but they don't really tell us how.

### 2.2.2.Motivation Theory

Motivation theories which were popular in the 1950's include David McClelland's needs theory, which relates to "management by objectives" and Frederick Herzberg's description in Motivation to Work of motivation based upon empowerment and self-esteem (Haasen, p. 9). Probably the most well-known motivation theory is Maslow's Hierarchy of Needs, in which higher level needs include affiliation and recognition, as well as self-respect and competence. Later, Douglas McGregor described an authoritarian and traditional Theory X contrasted with a holistic and participates Theory Y.

### 2.2.2.1. Maslow's Hierarchy of Needs

According to Maslow, human needs are organized in a series of levels-a hierarchy of importance (McGregor, p. 38):

- At the lowest level are the physiological needs. These needs, when satisfied, cease to become motivators of behavior. On the other hand, when basic physiological needs are not satisfied, they become important to the exclusion of everything else.

- When the physiological needs are satisfied, needs at the next higher level begin to motivate behavior. These are the safety needs, for protection against danger, threat, and deprivation. As long as we feel we are being treated fairly, our safety needs will be satisfied. If we become uncertain and confused about management actions, which we do not understand, we will feel insecure and our safety needs will begin to dominate our behavior.

- Once physiological and safety needs are satisfied, social needs become important motivators of behavior. These include the need to belong, to associate with, and to be accepted by one's fellows. While tightly knit, cohesive work groups may be far more effective than an equal number of separate individuals in achieving organizational goals, management actions often tend to divide employees by encouraging competitive behavior, rewarding individual performance, and discouraging discussion with fellow workers. As a consequence, people become resistant to working together.

- Above the social needs are the egoistic needs:

- Self-esteem: needs for self -respect and self-confidence, for autonomy, for achievement, for competence, for knowledge

- Status: needs for recognition, for appreciation, for the deserved respect of others

- Unlike the lower needs, these are rarely satisfied.

- At the top of the pyramid are the needs for self-fulfillment. These are the needs for personal growth and self-development and for realizing one's potential.

In 1954, Maslow first published "Motivation and Personality," which introduced his theory about how people satisfy various personal needs in the context of their work. He postulated, based on his observations as a humanistic psychologist, that there is a general pattern of needs recognition and satisfaction that people follow in generally the same sequence. He also theorized that a person could not recognize or pursue the next higher need in the hierarchy until her or his currently recognized need was substantially or completely satisfied, a concept called prepotency. It is often illustrated, as a pyramid with the survival need at the broad-based bottom and the self-actualization need at the narrow top.

According to various literatures on motivation, individuals often have problems consistently articulating what they want from a job. Therefore, employers have ignored what individuals say that they want, instead telling employees what they want, based on what managers believe most people want under the circumstances. Frequently, these decisions have been based on Maslow's need hierarchy, including the factor of prepotency. As a person Advances through an organization, his employer supply or provide opportunities to satisfy needs higher on Maslow's pyramid. Based on this hierarchy of needs it becomes essential for employers to provide avenues to satisfy higher level self-actualization. Team based organisation provide an opportunity for employees to achieve this higher level of self-actualization whilst helping the company better achieve its missions and goals. One thing that is clear from the above exploration is that employees are important to the organization to achieve its overall objectives. The success of the organization depends on the success of the employee. It is critical to understand motivation and the factors that will lead to employees being positively motivated. Job satisfaction needs to be examined within the context of every organization and strategies need to be developed to ensure that employees are happy at the work place. These aspects will be investigated at Metso Minerals.

### 2.2.2.2.Herzberg's Theory of Motivators and Hygiene Factors

Herzberg (1959) constructed a two-dimensional paradigm of factors affecting people's attitudes about work. He concluded that such factors as company policy, supervision, interpersonal relations, working conditions, and salary are hygiene factors rather than motivators. According to the theory, the absence of hygiene factors can create job dissatisfaction, but their presence does not motivate or create satisfaction.

In contrast, he determined from the data that the motivators were elements that enriched a person's job; he found five factors in particular that was strong determiners of job satisfaction: achievement, recognition, the work itself, responsibility, and advancement. These motivators (satisfies) were associated with long-term positive effects in job performance while the hygiene factors (dissatisfies) consistently produced only short-term changes in job attitudes and performance, which quickly fell back to its previous level.

In summary, satisfies describe a person's relationship with what she or he does, many related to the tasks being performed. Dissatisfies, on the other hand, have to do with a person' relationship to the context or environment in which she or he performs the job. The satisfies relate to what a person does while the dissatisfies relate to the situation in which the person does what he or she does.

### 2.2.2.3.McGregor's Theory y

One outdated management philosophy is based on the assumption that people are basically lazy and therefore requires constant monitoring. The more current philosophy stems from an underlying belief that, given a choice between success and failure, most people would rather succeed--and almost everyone has the potential to be successful. This second philosophy is well-illustrated in McGregor's "Theory Y" in The Human Side of Enterprise. Theory Y is based upon the following:

- "The expenditure of physical and mental effort in work is as natural as play or rest.

- External control and the threat of punishment are not the only means for bringing about effort toward organizational objectives. Man will exercise self-direction and self-control in the service of objectives to which he is committed.

- Commitment to objectives is a function of the rewards associated with their achievement. The most significant of such rewards, e.g., the satisfaction of ego and self-actualization needs, can be direct products of effort directed toward organizational objectives.

- The average human being learns, under proper conditions, not only to accept but to seek responsibility. Avoidance of responsibility, lack of ambition, and emphasis on security are generally consequences of experience, not inherent human characteristics.

- The capacity to exercise a relatively high degree of imagination, ingenuity, and creativity in the solution of organizational problems is widely, not narrowly, distributed in the population.

- Under the conditions of modern industrial life, the intellectual potentialities of the average human being are only partially utilized" (McGregor, p. 47).

Theory Y leads to the conclusion that positive results can be achieved by setting up the right conditions, including creating the right atmosphere, that allow for achievement. If these conditions are not met, however, the negative consequences will occur. "If employees are lazy, indifferent, unwilling to take responsibility, intransigent, uncreative, uncooperative, Theory Y implies that the causes lie in management's methods of organization and control" (McGregor, p. 48). "The implications following from Theory Y are that the organization is likely to suffer if it ignores these personal needs and goals" (McGregor, p. 51).


### 2.2.3.Types of Motivation

#### 2.2.3.1.Extrinsic Motivation

In an article entitled "Asinine Attitudes towards Motivation," Harry Levinson describes his experience:

"Frequently, I have asked executives this question: What is the dominant philosophy of motivation in American management? Almost invariably, they quickly agree that it is the carrot-and-stick philosophy, reward and punishment. Then I ask them to close their eyes for a moment, and to form a picture in their mind's eye with a carrot at one end and a stick at the other. When they have done so, I then ask them to describe the central image in that picture. Most frequently they respond that the central figure is a jackass" (Kerr, p. 8).

*"The characteristics of a jackass are stubbornness, stupidity, willfulness, and unwillingness to go where someone is driving him. These, by interesting coincidence, are also the characteristics of the unmotivated employee" (Kerr, p. 9).*

According to Levinson, the carrot and stick approach leads to a kind of self-fulfilling prophecy-the more one tries to drive people by manipulating their behavior with rewards and punishment, the more they will try to resist by doing things like forming unions and sabotaging management efforts (Kerr, p. 9). "When employees sense that they are being viewed as jackasses, they will automatically see management's messages as manipulative, and they will resist them, no matter how clear the type or how pretty the pictures" (Kerr,p 9).

*"There are many things people won't do for money, like hurt a friend, abandon their loved ones, or jump ten feet off the ground" (Cannie, 1991, p. 212).*

"The first thing management thinks about as a way to reward employees is money, but the last thing it does with money is to use it as an effective reward for anything but attendance" (Schneider, p. 153). The literature tends to agree that the primary motivation of the paycheck is to get one to show up on the job every day, and little more, especially in any long-term sense. "There is no firm basis for the assumption that paying people more will encourage them to do better work or even, in the long run, more work" (Kerr, p. 19).

According to Schneider in Winning the Service Game, paychecks and other cash incentives fail the following motivation tests (Schneider, p. 155):

- Availability - the company may not have cash available for this purpose
- Flexibility - paychecks cannot easily be varied from week to week according to performance
- Reversibility - once given, cash cannot be taken away
- Performance- level of pay is a better predictor of management level or seniority than performance
- Visibility - cash transactions are one-to-one only
- Timeliness - bonuses do not immediately follow the performance of desired behaviors
- Durability - the impact on motivation is short-term at best

"Just because too little money can irritate and demotivate does not mean that more and more money will bring about increased satisfaction, much less increased motivation" (Kerr, p. 19).

## Punishment and Rewards: Two Sides of the Same Coin?

In Alfie Kohn's controversial article on "Why Incentive Plans do not Work," he states: "Punishment and rewards are two sides of the same coin. Rewards have a punitive effect because they, like outright punishment, are manipulative. "Do this and you'll get that" is not really very different from "Do this or here's what will happen to you." In the case of incentives, the reward itself may be highly desired; but by making that bonus contingent on certain behaviors, managers manipulate their subordinates, and that experience of being controlled is likely to assume a punitive quality over time" (Kerr, p. 19).

Brock Vodden of Vodden Consulting offers the following comments on Alfie Kohn's work: "I spent some time looking at abstracts of research on this issue and collected a number of studies that either contradict or qualify the results that Kohn claims. And, studies that support his conclusions. There are some serious problems with Kohn's work. As someone wrote in an article in an ed. journal (paraphrased): "Kohn is 95% right, but oh, that 5%" (Performance Management Review, March 2, 1999).

## Work as Punishment

While Alfie Kohn's research methods and conclusions may be controversial, it is true that many of the rewards we receive at work cannot actually be utilized at work. We can't spend our paychecks there, and we have to wait until retirement to collect on our pensions and other accrued benefits. Work, then, is the *penalty we have to pay* to enjoy these benefits. "It is not surprising, therefore, that for many wage earners work is perceived as a form of punishment which is the price to be paid for various kinds of satisfaction away from the job" (McGregor, p. 40).

In addition to concrete rewards, Schneider identifies three additional rewards that may give rise to more effective extrinsic motivators (Schneider, p. 153):

- The content of the job itself
- Recognition and feedback from coworkers, supervisors, and customers
- Accomplishing goals that are challenging and meaningful.

In relative terms, research tends to agree that there are other factors besides concrete rewards, which are more important in determining employee satisfaction. In a study involving hundreds of employees, "the results showed that...confusion, politics, and conflicting goals on the job--inhibiting factors that made it tough to do good work--were

more consequential than issues like pay and supervisory style, which organizations often assume to be the problem" (Schneider, p. 158).


### 2.2.3.2. Intrinsic Motivation

*"A task without a vision is drudgery.*

*A vision without a task is but a dream.*

*But a vision with a task is the hope of the world."*

*Inscription on a church wall in the county of Sussex, England*

"Since the mid-1970's, new theories have emerged to focus on intrinsic motivational processes and on the "self-systems" that determine an individual's behavior. So far, management is mostly unaware of these new developments" (Haasen, p. 9). For example, the results of a research study conducted by Professor Teresa Amabile of Harvard University showed that *creativity* will be highest when there is strong intrinsic motivation (Haasen, p. 39).

Hassen goes on to describe how this works:

"Intrinsic motivation is itself the "outcome," the result of a work situation that people enjoy-- because they are in charge, because they have the opportunity to acquire new skills and abilities to match a different challenge, or because they are part of a successful team. Intrinsic motivation leads to astounding creativity and productive energy that seems to have virtually no limit" (Haasen, p. 92).

Intrinsic motivation, then, is motivation, which comes from *the inside* of a person. "It is an emotional preference for a task that gives us pleasure and enjoyment" (Haasen, p. 9). Intrinsic motivation arises from having "a strong emotional interest in an activity and a sense of freedom and autonomy related to it" (Haasen, p. 39).

Intrinsic motivations tend to be deeper and more personal than extrinsic motivations. And self-motivations are, by definition, intrinsic. The following motivations are likely to be intrinsic (Kushel, p. 69):

- Enjoyment of the work itself for its own sake
- Desire to have a "piece of the action," such as sharing visions, missions, leadership, authority, and responsibility
- Pride in performing excellently
- Need to prove some secret point to oneself
- Achievement of a deep-seated value (such as helping another person)
- Having a deep and abiding belief in the importance of the work one is doing
- The excitement and pleasure of a challenge

- Desire to exceed one's previous level of job performance (being self-competitive).

Team based Organisational structures will provide a medium of intrinsic motivation for employees since according to Maslow's hierarchy of needs these needs are higher order needs which will fulfill self actualization needs. Intrinsic motivation is motivation that effects the person personally. By having direct impact on individuals employees are not just extrinsically motivated but they try and better themselves.

## 2.2.4.Factors enhancing Motivation

*"Naturally, integration means working together for the success of the enterprise so we all may share in the resulting rewards. But management's implicit assumption is that working together means adjusting to the requirements of the organization, as management perceives them. In terms of existing views, it seem inconceivable that individuals, seeking their own goals, would further the ends of the enterprise. On the contrary, this would lead to anarchy, chaos, irreconcilable conflicts of self-interest, lack of responsibility, inability to make decisions, and failure to carry out those that were made" (McGregor, p. 53).*
According to McGregor, "All these consequences, and other worse ones, would be inevitable unless conditions could be created such that the *members of the organization perceived that they could achieve their own goals best by directing their efforts toward the success of the enterprise*" (McGregor, p. 53).

Owners and executives from the smallest to the largest of companies pose the question, "What can I do to motivate my people?" All know that motivation—getting the most from the labor force—produces great rewards. How to produce it is the question. What makes people tick? What makes them want to do a good job? What makes them seek excellence instead of accepting far less? In short, what motivates them?In 1966, in his book *Work and the Nature of Man*, Frederick Herzberg described the result of extensive research into the subject of motivation. He found that in general the five most important things that motivate workers for long periods were:
Their own achievement
 Recognition by superiors, peers and subordinates
Liking the work itself
Having responsibility,
Having the chance of advancement,
More recent studies have shown some shifting in the factors to:
Liking the work itself,

Recognition by superiors, peers and subordinates,

Being part of the team and being in on things,

Their own achievement

### 2.2.4.1.Shared Vision

A vision should be clear and sufficient to inspire employees to action. "To capture the hearts of our employees, it is essential that we tell them what we stand for and where we are going. Our vision must be compelling, understandable, and focused" (Harris, p. 21). Dr. King did not say to a crowd of 500,000 civil rights marchers, "I have a strategic plan today." (Harris, p. 21).

"When General Motors formed its Saturn Corporation, the key question was not what kind of car to make but rather "What kind of company do your want to work for?" This is a core question to consider when you want to capture the hearts of employees, and can easily serve as the basis for an employee meeting on creating a company vision" (Harris, p. 25).

### 2.2.4.2.Mutual Mission

For employees to work together towards a common goal, they need to share a mutual mission. This means that they have an understanding of the organization as a whole, how the parts fit together, and where they fit in the structure. "We should open up communications and provide company-wide information on financial and other topics. Decisions should be made in the open, away from the secretive practices of the executive boardroom. This will help to establish a climate of trust and loyalty." (Haasen, p. 95). Training will probably be needed for an employee to acquire this organization-wide understanding. Armed with this perspective, the employee can proceed in joining his co-workers to identify problems and their solutions. "It means that he will continuously be encouraged to develop and utilize voluntarily his capacities, his knowledge, his skill, his ingenuity in ways which contribute to the success of the enterprise" (McGregor, p. 55). Technical professionals, for example, are often motivated most effectively by the desire to see their work contribute to an excellent final product (Kerr, p. 110).

### 2.2.4.3.Ethics

Once employees have a clear understanding of the organization and their role in it, they need to be empowered to act on this understanding. "This means removing corporate hierarchies and top-down power structures. It is not sufficient to simply "delegate" or "push down" authority and responsibilities if the ultimate power is maintained at the top. It means rethinking the need for executive prerogatives and perks and addressing the issue of fairness of executive compensation. It means establishing a clear code of corporate ethics" " (Haasen, p. 95).

According to Harris in <u>Getting Employees to Fall in Love With Your Company</u>, Southwest Airlines, Springfield ReManufacutring, and The Home Depot generate phenomenal levels of employee commitment, productivity, and even love, based upon five key principles:

- "Capture the hearts and minds of all your employees.
- Open communication between all levels of your organization.
- Create partnerships between all employees built upon trust, equality, and sharing.
- Drive learning into every nook and cranny of your company.
- Emancipate the action of every employee to increase service and profits" (Harris, p. 15).

## Case Study: Opel

"A 1993 public relations brochure on the Opel production system makes a surprising statement: "Employee motivation represents one of our largest productivity reserves and is therefore a key element for increasing the international competitiveness of German automobile manufacturers" " (Haasen, p. 62). Continuous improvement at Open is part of the team concept. People on the job understand their immediate work environment and are expected to optimize the process, to change details of the assembly, or to develop new procedures (Haasen, p. 66).

There are two more lessons to consider. One is the surprising level of work motivation created by giving people full control over their jobs and letting them organize their workplace to reach the highest possible degree of overall efficiency. This changes the role of management to becoming a resource of advice and support, based on close partnership and open communications. The other is the importance of learning, or continuous skill acquisition. Learning with the team and across the team structure at Opel provides the people with a good understanding of the conceptual framework of the facility and everyone's role within it (Haasen, p. 68).


*"While the underlying reason for learning may often be to increase people's competence or to foster career development, the experience itself generally is highly motivational and inspires greater personal and group productivity" " (Haasen, p. 46).*
Employees appreciate a chance to learn new skills and to experience personal growth. Taking on and overcoming workplace challenges creates a sense of satisfaction and pride in one's accomplishments. "What do frontline service employees value most on the job? There is increasing evidence that it is their *ability* and *authority* to achieve results for customers, something we call *capability*" (Heskett, 1997, p. 29).
"The chance to learn new skills or apply them in new arenas is an important motivator in a turbulent environment because it's oriented toward securing the future...In the world of high

technology, where people understand uncertainty, the attractiveness of any company often lies in its capacity to provide learning and experience (Kerr, p. 110). Experiences tend to be the most positive when skills and challenges are in balance (Haasen, p. 46).

"Learning becomes a motivational experience, in particular for those of us...having a "mastery orientation." Here, the new theories seem to converge as we experience the excitement that comes from seeing our skills match a particular challenge in front of us. This, then, becomes a major source of intrinsic motivation" (Haasen, p. 10).

Informal training and learning occurs on the job, and may include the supervisor's or a co-worker's sharing of experience and vision pertaining to highly relevant situations while they are occurring.

### 2.2.4.4. Goal Accomplishment

*"A great example of emancipation in action occurred when a newly hired manager asked the chairman of his industry-leading, international high-tech company what he, the manager, should do in his job. At most companies, the answer would have been to work hard, follow guidelines, and stay within budget. But this chairman simply replied, "Do something great!" When was the last time your boss asked you to do something great?"* (Harris, p. 100).

In Winning the Service Game, Benjamin Schneider describes management's failure to capitalize on the intrinsic rewards of goal accomplishment, "Businesses tend to overlook the fact that goal accomplishment itself (e.g. seeing customers leave with big smiles on their faces) can be a highly valued reward for employees...(Managers) should also spend a lot of their time designing jobs and service systems that allow employees to accomplish their service goals and even facilitate goal accomplishment" (Schneider, p. 146).

The Home Depot story is an interesting example of motivating customer service employees by setting an unusual goal that both encourages service excellence and customer loyalty. "The Home Depot's ethics extend to an aggressively pushed policy of "Do not let customer overspend."...The average customer spends only about $40 per visit, but drops in more than thirty times a year!" (Harris, p. 120). "To employees, working for a management that has the goal of service excellence and working in a situation that facilitates service excellence are satisfying in and of themselves" (Schneider, p. 160).

"The more a job inherently resembles a game--with variety, appropriate and flexible challenges, clear goals, and immediate feedback--the more enjoyable it will be regardless of the worker's level of development" (Csikszentmihalyi, 1990, p. 152).

### 2.2.4.5.Employee Development

Feedback and communication between managers and supervisors is very important when it is open, clear, and based on mutual respect. Performance Management systems (the good ones) provide for these

functions. They also involve effective, collaborative objective setting, planning of the work, continuous review of the work, and mutual identification of ways to improve the performance.

Appraisal: The Motivational Purpose

"The common-sense assumption is that telling an individual where he is falling down will provide effective motivation to get him to change. Clearly it will not do so unless he accepts the negative judgment and agrees with it. . This is not too likely...The State is set for rationalization, defensiveness, inability to understand, reactions that the superior is being unfair or arbitrary. These are not conditions conducive to effective motivation" (McGregor, p. 86).

Nor does the old-fashioned bell curve ranking of employees make sense in today's companies. In a statistical bell curve application, half of a company's employees would be ranked "below average." This would more likely occur in a situation where employees were randomly chosen as opposed to being selected for their possession of specific, needed skills. A number of companies are examining this issue and switching from appraisal to a more developmental approach to performance evaluation. Utilizing a developmental approach, employee development plans would emphasize giving employees the skills they need to perform effectively in a dynamic environment. The overriding goal of the development plan would be progress towards achieving stated goals as opposed to a "win/lose" situation where employees would be appraised or graded based on the number of goals accomplished."The best companies make PMMA (Performance Measurement, Management, and Appraisal) work by attacking its underlying problems rather than treating its symptoms. When PMMA works, it is used as a driver for strategy execution and culture change, not merely as a mechanism to generate a performance rating and a merit increase" (The Performance Imperative, p. 241).

### 2.2.4.6.Keys to Motivation according to Donald Dalena (internet reference 15)

Improving productivity through motivating workers has been overshadowed by the results obtained through applying technology and investing new capital

The key concept in better utilizing the human resource is "internal motivation." Efforts to stimulate people to work harder have, quite naturally, been resisted over the years. Therefore, effective approaches to motivation have to move forward on different fronts than

simply working harder. Many companies are adopting a philosophy of management that allows workers greater freedom to determine how to get their work done, shared responsibility for results, greater discretion in hours of work, and increased involvement - all contributing to improve the quality of their working lives.

Donald Dalena, (internet reference 15) a steel worker, marked out these 3 keys that will unlock the door to human progress in the work place:

1. Care is a mirror, its output accurately reflecting the input. Managers who manifest care will eliminate stress, promote trust and improve attitude and morale.

2. Feedback-what we would like to know is our competitive standing with our customers, where the product has come from, what happens to it after it leaves us, its planned future use and current problems connected with its production which influence our work lives in one form or another.

3. The feeling of mutual need." Each worker wants to work. Managers must pay attention to their hired workers, recognize their potential in the work place. In this way many problems would vanish Dalena's remarks are significant. He reveals how different the attitudes of workers of today compared to the old days.

## 2.2.4.7. *Job designs that provide motivation*

### 2.2.4.7.a *Relationship*

Grouping of tasks and the worker's accountability for them should be the basis of a relationship with other persons who are "clients" for the worker's services.

### 2.2.4.7.b *Job Design*

The first principle of job module design is known as horizontal loading, the widening of the scope of the worker's task to provide the worker with variety, widen and increase the stimulation he gets from his work. Vertical loading - adding more challenging tasks, higher responsibilities and a greater degree of self-super-vision and control.

### 2.2.4.7.c. *Feedback*

Worker should regularly receive information about his performance from his "client", from his supervisor, and from standards of performance built into the job itself. This feedback lets him know how well he is meeting the requirements of his job, reinforces good performance, and gives him a basis for self-correction of error.

### 2.2.4.7.d. Task Advancement

The job should offer opportunities for the worker to increase his skills and knowledge, to win recognition and advancement. In addition to the chance for promotion, there should be levels for increasing responsibilities within the job.

### 2.2.4.7.e. Training

Training is so much a part of any relationship between supervisor and subordinate or among peers that it is frequently overlooked as the powerful motivational factor that it can be All employees, at every level, keep on training until they retire. Weekly training sessions are regular and scheduled parts of their work. They are usually conducted by the employees and supervisors themselves, rather than by a trainer Continuous training gives every worker a knowledge of his own performance, of his own standards, and at the same time other fellow workers on his level. It creates the habit of looking at "our work." It creates a community of working and workers... the individual employee tends to see beyond the boundaries of his own specialty and his own department. He knows what goes on. He knows the work of others.

### 2.2.4.7.f. Physical Factors

Some kinds of work cannot be performed efficiently when the physical environment is inadequate. For example, poor lit up work areas. Bad light is an obstacle to performance, the worker loses interest in his task, and soon does not even try to do a good job. In this way the environment has demotivated him.


## Overcoming Demotivation :Case Study Hewlett Packard

Management made sure each worker knew the purposes of the products, where they went after they left the factory and what was the use for. As a result workers felt pride in their accomplishments and a responsibility to do well. They had feedback from their "clients" and could see their work as an important part of the end product. The physical environment was a minor factor to them affecting them. This obstacle was overcome by good leadership.

Hewlett Packard Inc. a huge company, manufacturer of electronic products for industry, medical profession and general public Hewlett and Packard were classmates. They started this company with a philosophy of management far ahead of its time. It remains today an outstanding example of the caring relationship between managers and workers that motivates.

What is the HP way?

Provide workers with a proper environment.

Treating each individual with consideration and respect and recognizing personal achievements.

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## 2.2.4.6.Summary of factors influencing motivation

In this day and age, any company that wants to get ahead is going to have to have motivated workers. Traditional incentive programs have been based upon extrinsic motivators such as salary and benefits. Intrinsic motivation, however, is needed in order to arouse a person's passion or commitment to the job. Shared vision, leadership, teamwork, training, increased capability, and goal accomplishment are powerful motivators which can be encouraged, embedded, or "designed in" to create a high performance culture.

"The implications are profound. If we accept the notion of intrinsic motivation, it implies that there is a powerful potential for self-actualization within each of us. This potential, as we have said, draws its power from our creativity, curiosity, and desire for mastery, as well as from our need for being responsible, having a positive self-image, and enjoying teamwork. Though this potential has often been stifled and crushed, it awaits ways or reasons to be released" " (Haasen, p. 94)

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## 2.3.Team Based Organizational Structures

### 2.3.1.Introduction

A team-based high-performance workplace is one in which the traditional structure and management operating system, which concentrates decision-making authority at the top and requires order-following from all levels below, is set aside in favor of a more participate, decentralized style where teams are delegated management control of defined responsibilities. Team-based high-performance workplaces achieve record quality and productivity levels and increased stakeholder, employee and customer satisfaction by concentrating on practices such as,empowering teams to make decisions about their work so that employees can make continuous improvements in key performance measures; enhancing communication throughout the organization,Building trust between management and non-supervisory employees to ensure worker support of company values; focusing on the quality of products and services as the prime strategy to win and keep customers; and creating a learning organization in which worker training and education are seen as continuous investments in productivity so that employees have the knowledge and abilities they need to be able to contribute more effectively to corporate performance.

The Team Based Organization (TBO) with self-managed team's design includes principles, structure and processes that overcome the weaknesses inherent in the traditional hierarchical organization. The design replaces the factors that promote division, fear, competition, and conflict with factors that promote unity, risk-taking, cooperation, coordination, communications and collaboration.(internet reference 19) Self-managed team membership builds a sense of belonging and team decision-making builds a sense of ownership in organization. Changing the organization to function in teams to accomplish work and make decisions relieves people's frustrations, removes indifference and reduces management stress and frustration. It promotes a willingness to exert physical and mental effort to meet organizational and personal goals.

## 2.3.2.Requirements of Successful Team based implementation

### 2.3.2.1.Top Management Support.

Top managers' needs to learn as much as they can about the structure and management operating system of a high performance design and operating system before deciding whether or not they can support implementing a model. Without top management understanding of a model and support for a conversion initiative, high performance is not possible.

### 2.3.2.2.Improvement Needs.

Identify the opportunities for improvement where teams can help improve the performance in the organization. Without a defined need and application, there will be little or no serious motivation to establish the priority, resources and changes required installing a high performance model.

### 2.3.2.3.Participation

Since team-based high performance requires revising the organization's structure and operating system, everyone has a role to play in the transition to the concept. When senior management makes a commitment to convert to the new system, department managers, and section heads, supervisory and non-supervisory employees all need to be involved—no one can afford to be left out. Employment groups who are not informed and involved in the process of change are likely to resist the tough changes that are needed. Calming everyone's' fears about change is a factor in making a successful transition.

### 2.3.2.4.Knowledge

With technology and information driving change at an unprecedented pace, organizations need employees at all levels that are continually learning. Education and training must be

seen as a top priority in high-performance workplaces, with a payoff in improved leadership, worker flexibility, and effectiveness and improved product and service quality.

Teams and team-based organizations with self-managed teams are not new. Adequate information is documented and available to show that team-based operating systems consistently outperform traditional systems. The hiring of an experienced consulting and training firm to provide model design guidance, consultation and training will reduce trial and error costs and help ensure a smooth transition and achieving desired outcomes.

## 2.3.2.5.Control

Measurement is a core element of high-performance management. A measurement system that evaluates team and company performance needs to be developed.

Audit the implementation process and how the system is developing and performing.

M Make measuring count--use visible scoreboard measures to provide feedback to teams on their accomplishments to measurer its own performance.

Incorporate improvement measures into team performance evaluation, promotion and compensation plans.

### *2.3.2.6.Other Considerations*

### *Team-Based High Performance – Excellent, But Not Easy (internet reference 19 )*

Team-based high-performance involves management providing teams with the following five things—identifying defined areas of responsibility where teams can be delegated some degree of management control; granting the authority to teams to make decisions about their group's work; providing teams with the resources and tools to continually improve their work; providing the training needed to install and maintain the new system; and providing the resources and education needed to enable employees to continually improve their job skills.While this sounds easy enough in practice, it is not. Most western companies operate in certain well-established, traditional ways. Team-based high performance requires changes in virtually every arena of corporate life. Top management may not want to commit resources to prepare everyone for their new responsibilities. Managers, and sometimes workers, are reluctant to have decision-making authority shared between management and employees. However, there is a new frontier available for executives interested in capturing the spirit and intellect of the total workforce for dramatic improvements in operating effectiveness. The experience of companies that are making the change to a high-performance workplace—and seeing an extraordinary return on investment—provides compelling motivation to take the plunge.

### 2.3.3. Objectives of Team Based Structures

The primary objective of Team-Based Organization is to dramatically improve the effectiveness and competitive strength of the organization. The design incorporates a total organizational approach to improving quality, productivity, profits, and employee and customer satisfaction. The strategies for achieving the primary objective are as follows:

- Capture the thinking ability, talent, skills, and enthusiasm of everyone for making continuous improvements.
- Establish management control consistent with the responsibility for conducting work.
- Significantly improve decision-making and action planning throughout the company
- Create a new multi-directional communications system that gets factual information to teams when they need it.
- Make the best use of available resources through focused team efforts.
- Create a working environment where members are willing to exert themselves to meet company and personal goals.

The working environment has beneficial effects on Individuals and this can be used to the benefit of the employee and the employer.

The working environment has an effect on individuals as follows:

- It provides an individual with an identity. As a member of an organization, he carries out a specific function.
- It also gives the worker comradeship, freedom from boredom, and an interest during his working life.
- It also provides self-fulfillment for individual where consideration has been given to ensure that the job is creative and gives job satisfaction.

Work groups may also be influenced positively by the environment within which employees operate; the following can be seen has positive contributors.

- It will affect the morale of the group.
- It will determine whether the group achieves the objectives set by the organization.
- It will motivate the group to give of their best.
- It will determine whether the human relations within an organization are good or bad.
- It will also affect the relations between management and trade unions.

### 2.3.4. Benefits of Team Based Structures

Everyone focuses on the organization's vision, mission, quality policy and operating principles. Teams at every level contribute to accomplishing company goals. Measures are developed to identify continual progress in attaining the top management's vision and achieving goals.

2.3.4.1.The system captures the creativity of the total workforce that is, everyone's ability to create new and better ideas, to experiment, and to implement these ideas with defined action plans to make improvements.

2.3.4.2.The design utilizes team decision-making throughout the organization to improve decisions. The quality of decisions improve for the following reasons: a) the people closest to the situation have the knowledge, responsibility, and authority for making and implementing decisions; b) lower level working teams make decisions which free up managers and executives to have more time to collect data and investigate options before making key decisions; and c) the organization moves from individual to collective decisions as the norm.

2.3.4.3.Management control is delegated to teams at all levels of the organization. Responsibility, authority, and accountability are matched with where work is performed. Because employees at all levels are empowered to make decisions, a sense of ownership permeates the entire company. Waste is dramatically reduced as teams implement ideas and plans to make things better.

2.3.4.4.The team-based operating system can work on top of and in harmony with, the traditional hierarchical operating system. Both systems are used to carry out the functions of the organization for a period of time. The team-based system gradually becomes the operating system of choice as leadership and employees experience the benefits of the new design.

The implementation process can be audited and surveyed. The process of converting to a team-based operating system needs to be assessed to measure progress and to ensure implementation of system elements and supporting membership behaviors. Steady progress toward the objective of becoming a high performance organization is evaluated and course corrections are implemented to overcome identified problems.

2.3.4.5.Structure and operating changes are implemented with minimal disruption. Change brings with it concerns, challenges, and a degree of discomfort. However, these issues are bridged when they are clearly identified and when those affected can agree that the reasons for change are justified and everyone will benefit form successfully implementing a new ways of doing things.

2.3.4.6.The system is viable for experimentation. A pilot project to install the design in a section or department will validate its value. Management does not have to commit the total organization to the design to ascertain its value. When the pilot teams validate the model's

benefits, the design can be introduced in phases throughout the rest of the facility and at other locations.

2.3.4.7.People prefer working in teams to working alone. Teams enable the organization to capture the intelligence of the total organization and to manage this creative power. Employing team strengths represent the direction for structuring organization in the future.

Apart from the many benefits that team based organizational structures have, there are different challenges that the organization will face. When changes need to be made full employee participation and support is needed, without this successful projects may fail. It is critical to access whether employees are ready and support the changes that management may embark. The survey will also provide insight on the perceptions of employees with regard to the current organizational structure as well as the viability of implementing the team based organizational structures.

### 2.3.5.Factors influencing Team based structures
### 2.3.5.1.Shared Ownership: "A Piece of the Action"

*"Partners are actively engaged in the business and have a direct stake in its success. Employees are simply hired for wages or salary. If given a choice between the two, which would rather be--a partner or an employee? Under which definition would you put forth your best efforts?" (Harris, p. 55).*

Research by Corey Rosen and Michael Quarry() shows that despite occasional "blips" or failures among employee-owned organizations, on the whole employee stock ownership plans really do have a positive impact on organization performance. In an article entitled "How well is Employee Ownership working?" Corey Rosen and Michael Quarrey share the results of their rigorous long-term study of forty-five companies before and after instituting ESOP plans:

"The results of this analysis proved striking. During the five years before instituting their ESOPs, the 45 companies had, on average, grown moderately faster than the 238 comparison companies: annual employment growth was 1.21% faster, and sales growth, 1.89% faster. During the five years after these companies instituted ESOPs, however, their annual employment growth outstripped that of the comparison companies by 5.05%, while sales growth was 5.4% faster. Moreover, 73% of the ESOP companies in our sample significantly improved their performance after they set up their plans" (Kerr, p. 46).

"Not only have workers gained financially, but we can prove that ESOP companies have grown much faster than they would have without their ownership plans. We have found,

moreover, that ESOP companies grow fastest when ownership is combined with a program for worker participation. A synergy emerges between the two: ownership provides a strong incentive for employees to work productively, and opportunities for participation enhance productivity by providing channels for workers' ideas and talents" (Kerr, p. 43).

O'Connell emphasizes the empowering aspects of employee ownership. "Stock ownership also gives employees a stake in the company's future. More companies are recognizing that creating a sense of ownership is a great way to empower and connect employees--to get individualists working together" (O'Connell, p. 3).

## 2.3.5.2.Work Design

*"The sooner we realize that the quality of the work experience can be transformed at will, the sooner we can improve this enormously important dimension of life." (Csikszentmihalyi, 1990, p. 154).*

One intervention which can be utilized to make jobs more intrinsically motivating and attractive is job re-design, which involves examining each job's structure for possible improvements which would make the job itself more rewarding. The rewarding components of a job's structure include (Schneider, p. 157):

- Skill variety
- Task identity - visible outcome
- Task significance - impact on others
- Autonomy - freedom in determining schedule, procedures
- Job feedback - results indicate how well done

Mihaly Csikszentmihalyi, of the University of Chicago, describes a peak performance state of "flow" which occurs when one's job challenges and one's sense of autonomy on the job combine to create a perfect sense of balance and accomplishment (Haasen, p. 9):

***Challenge + sense of control = flow***

"In theory, any job could be changed so as to make it more enjoyable by following the prescription of the flow model. At present, however, whether work is enjoyable or not ranks quite low among the concerns of those who have the power to influence the nature of a given job. Management has to care for productivity first and foremost, and union bosses have to keep safety, security, and compensations uppermost in their minds. In the short run these priorities might well conflict with flow-producing conditions. This is regrettable, because if workers really enjoyed their jobs they would not only benefit personally, but sooner or later they would almost certainly produce more efficiently and reach all the other goals that now take precedence" (Csikszentmihalyi, 1990, p. 154).

"Although, as we have seen, people generally long to leave their places of work and get home, ready to put their hard-earned free time to good use, all too often they have no idea what to do there. Ironically, jobs are actually easier to enjoy than free time, because like flow activities they have built-in goals, feedback, rules, and challenges, all of which encourage one to become involved in one's work, to concentrate and lose oneself in it" (Csikszentmihalyi, 1990, p. 162).

## 2.3.6.Desirable outcomes of Team Based Organisation

The desirable outcomes of the team-based system justify the investment, time and effort to conduct a work redesign initiative. Costs associated with the redesign process are recovered within the first year of the improvement initiative. (internet reference 22)

The new system provides both long and short-term benefits. Some benefits like reduced turnover and absenteeism, fewer accidents, improved housekeeping, fewer defects, and improved efficiency can be realized in the first twelve months of the implementation process. Other benefits like improved workflow, reduced inventories, reduced lead and set up times and improved quality are continually enjoyed over a longer time frame.

A list of desirable outcomes generated from a successful conversion to Team-Based Organization is as follows:

- A system-wide focuses on the organization's vision, mission, quality policy, operating principles, goals and improvement strategies.
- Capture of everyone's ideas and enthusiasm to promote continuous improvements
- Establishment of improved decision-making through the use of team decisions throughout the organization.
- Establish change as the organization norm.
- A focus on meeting customer needs that results in increased customer satisfaction
- Improved productivity resulting from member satisfaction and interest in performing work.
- Reduced waste through improved communications and team involvement.
- Clear standards of performance for teams' at all organizational levels
- The identification and use of new and untapped skills and abilities within the organization.
- Elimination of confusion on how best to approach the task of acquiring the benefits of empowerment and self-managed teams.

Making key decisions.

### 2.3.7. Conclusion

The exploration on motivation included various theories, case studies and articles that are relevant to the current study. Motivation and job satisfaction are subject areas that cannot be separated since they compliment one another. There has been various studies conducted to establish what motivates employees. Employees are human in nature and every individual is different, this means that there can be no one universally accepted theory or guideline that will define the criteria for motivation employees. There are however common characteristics that employee's display which can be used to motivate them and it is these characteristics and values that research attempts to uncover. The focus in the current study is on teamwork and research is conducted to establish whether employees will be motivated by working in teams. It is also important to note the different factors that could motivate employees since employees are an important asset to any organisation.

## 2.4. Traditional Organizational Structures

### 2.4.1. Introduction

The word organization could take the following meanings:

- an institution or functional group such as a business or a society
- The *process* of organizing. This is the way in which work is arranged and allocated among members of an organization so that the goals of the "organization" can be most efficiently achieved.

The process of organizing is dividing up the work that is done among areas and employees and linking together these areas and jobs in order to form a unified whole, (a single working unit where all of its parts work together to achieve the organizations goals).

### 2.4.2. Division of Work

The division of work is the breaking down of the jobs that the organization needs to do in order to achieve its goals. A craftsperson that is making, selling and designing chairs would do a lot of different things in the course of that activity. If the chair was being mass produced in a large company the tasks would probably be broken down into smaller sections handled by different people such as purchasing, design, sales and marketing, production etc. All of these areas could be broken down even further.

It is believed that job specialization leads to greater efficiency and higher output per person than a more general approach but it does have its problems such as creating boring and repetitive jobs, but there are strategies for helping to deal with these problems.

## 2.5.Human Resources and Social concerns

### 2.5.1.Developing organisations through people

Researchers at the University at London provide insight into what empowers management groups to make better, more competitive strategic decisions. The quality of decisions is improved when all members of the group have access to information.

A group of people working together is what forms a company or organization. One person seldom performs work alone. If quality management decisions are to be made, each manager must be able to access and understand information possessed by other managers. This collaboration is especially important when forming company-wide strategy. Researchers studying groups of MBA students found that groups of specialists performed best when they worked within a decentralized structure and formed strong working relationships with most other members of the group. So specialists (staff members who know a lot about one or two areas of management) must be able to share information with other specialists for the group as a whole to make good strategic management decisions. Specialist groups were less successful in coming up with overall strategy resulting in greater market share when they adopted organizational structures that looked a lot like traditional organizations in which reporting relationships were in layers. Each layer reporting to the next layer and so on, limiting contacts.

Overall, groups composed of students with across-the-board working knowledge of marketing, finance, etc were the most successful in competing for market share. It seems that when information is shared to begin with, (everyone knowing something about what others know), success is easier to obtain. Such groups were successful regardless of the structure adopted by the group. Working and communicating within layers was not a hindrance to student groups consisting of members with generalist knowledge. Since each member of the group has an understanding of the expertise of others in the group, it is not necessary for them to communicate directly or learn from each other. Therefore, the formalized structure and resulting limited communication does not slow down such groups. When knowledge is equally distributed among members of a work group, less communication is needed.

It is interesting to note that groups of student generalists will be successful no matter what kind of organizational structure they work within. Such student groups were able to make quality decisions allowing them to gain greater market share in both structured and layered working environments or a flat more collaborative environment. But what organization has a management team that consists of members who understand all areas of management that

will allow them to ignore the quality of communication fostered by their organizational structure? It is a truly rare and gifted manager who understands everything about the organization. What single executive understands human resources, marketing, finance, international markets, management information systems, engineering, and product development? Therefore, given that no one can know everything and that knowing or understanding everything is important to making good decisions, the organization structure of choice should be flat or team-based.

## 2.6.Knowledge ,Training and Development

Flat or team-based organizational structure is the only way engineers can learn which way the market is going from the marketing staff, and where the marketing staff can understand the engineering problems that have a bearing on product development and distribution. The finance people will learn where the glitches are and plan ahead regarding money flow if they know what the engineering and marketing people know. Knowledge is becoming more and more specialized; and communication among specialists is what will make for a vital organization that can make quality decisions based on what the people working for it know.

The quality of decisions improves when each member of the group understands the expertise of the other members of the group. Groups consisting of generalists (people who know about several areas of expertise) make quality decisions no matter what structure they work within. Groups of specialists perform equally well with groups of generalists when the organizational structure allows communication and working relationships to be formed with other members of the group. Use of information possessed by members vital to making good decisions is improved when communication or group structure is flat.

## 2.7.Case Study: Organizational Transformation

## By JOAN LANCOURT and CHARLES SAVAGE

### 2.71.Introduction

Seven companies--Oticon, Eastman Johnsonville Foods, The Canadian Imperial Bank of Commerce, W.L. Gore, Semco, and Williams Technologies--have journeyed down the path of organizational transformation, and in each case there has been a significant shift in the role of human resources. The experiences of these companies illustrate the fact that transformation takes as many shapes as there are companies. But if we compare their experiences, a number of themes emerge that will be helpful to those whose organizations are just beginning to change.

We are living in what Peter Drucker calls "the Age of Discontinuity"-a time that subjects all of us to wave after wave of fundamental change and forces us to engage in what Charles Handy calls "upside-down thinking." Virtually everything we know and all our assumptions about managerial practice are being called into question, and for good reason. The old methods are no longer working well enough. The stakes are high: the questions we must answer concern the kind of fundamental redefinition of our companies that will not only liberate and support innovation at all levels of the organization, but also spur the creation of a whole new economy.

Historically, our industrial wealth has been built on the exploitation and depletion of our natural resources. However, recent technological advances and increases in global developments are undercutting the very foundation of that economy. Rather than raw materials or physical assets, knowledge is now hailed as the new source of wealth and the basis for competitive advantage. But to leverage knowledge assets, we must fundamentally transform the way we organize and use this most human of resources.

What have these companies been doing, and how has the human resource function fared in the transformation process?

### 2.7.2.Themes in Organisational Transformation

Despite differences in size, industry, and nationality, there appear to be four common themes that characterize the process and ultimate shape of the organizational transformations were studied. They are: redefining the business and focusing on the customer; teaming and supporting nonhierarchical structures; leadership and shared values; and a change in language.

### 2.7.2.1.Teaming and Supporting Nonhierarchical Structures

Teaming across organizational boundaries appears to be a hallmark of companies in transformation. In fact, a number of the companies in the sample have eliminated many of the traditional organizational boundaries entirely.

Oticon has eliminated not only functional departments but also job tides and the physical barriers imposed by office walls. Work is organized by project teams, and people join teams based on their competencies and interest. There are only three levels in the company: project sponsors (the former management team); project leaders; and project coworkers. All employees (including the CEO) are expected to work on multiple projects, with at least one in their core competency and one in which they feel they can add value based on their other competencies or interests. For example, the CEO, working on a new training manual, and an administrative coworker with Spanish-language

competency is working with a team responsible for marketing and selling a new product in Spanish-speaking countries. This flat, project-focused teaming structure has created a knowledge-based, networked organization that Oticon calls its "spaghetti" organizational structure.

Given such flat, fluid structures, it is not unfair to ask, "What holds it all together?" If there is so little hierarchy, and no central or top-down control, how does the organization move cohesively in the right direction? This leads us to the theme of alignment through shared values and goals.

### 2.7.2.2.Leadership and Shared Values

Like a genetic code, shared values become the shaper of organizational and individual behaviors, and when they are truly shared, order is achieved without the need for a host of external control mechanisms. Four operating principles to guide behavior(intenet reference 25)

- The Freedom principle encourages associates to grow in knowledge, skill, and scope of responsibility.

- The Waterline principle states that mistakes, which are inevitable in any dynamic organization, "above the waterline" are not a serious offense. However, mistakes "below the water line" can sink the ship. Therefore, before taking a serious risk, associates need to check with other key people.

- The Commitment principle indicates that associates are expected to keep any commitments they make.

- The Fairness principle mandates that associates be fair to everyone else, including suppliers and customers.


The Multijob principle requires everyone to work on a project outside his or her area of prime competence. This is based on the assumption that "a top chip designer who performs a marketing function in one project becomes a much better chip designer . . .. Because he sees the world stereophonically."

### 2.7.2.3 A Focus on Career and Competency Development

Because they have recognized the role and value of their knowledge assets, most of the companies in the sample have focused great attention on identifying and developing their core competencies. This has inevitably led to a greater focus on the need for continuous career and skill development. Although the companies have handled the focus on people development in many different ways, in almost every case, the work encompasses far more than simply putting together a series of training programs.

As these examples of innovative organizations illustrate, organizational transformation has had a significant impact on the shape and responsibilities of the traditional human resources function. Whether there continues to be a wide variety of forms or whether a new, more standard model emerges remains to be seen. What is already evident, however, is that as we shift from industrial-era models to knowledge-era models, and to the discovery that the real assets in our companies are knowledge assets, there will be an increasing need to create more "fluid, temporary structures that facilitate relationships and an open flow of communication" and to find ways to "elevate people above technology and processes.

To do this, organizations will not only need to develop superior teaming skills in order to continually team and reteam the core talents of the organization, but will also have to increase significantly their capability and capacity for continuous change. Prevailing models of change management will have to be refrained: "unfreezing, change, and refreezing" is no longer a useful model. Oticon and Semco, for example, never refreeze. They are swirling, ever--changing, dynamic, and somewhat chaotic virtual businesses--and they are able to operate that way because they, like Johnsonville Foods and W.L. Gore, have been built on a bedrock of trust, shared vision, and a common set of values.

### 2.8.An Interesting Model used to measure the benefit of Teams(extract)

*John Conover Subject: Bureaucracy, Efficiency, Learning LO149*

*Recently, there has been some comments here about Bureaucracies, and their inefficiencies. In a past life, I made an attempt to use algorithmic analysis, (the science that computer programmers use to optimise execution time of a process running in a machine,) to evaluate organisational efficiency. The rationale was that if administrations were mechanisation of workflow in an organisation, then the organisation's workflow could probably be analysed by the principles of algorithmic analysis. What prompted this was that I was having to turn a dysfunctional engineering organisation, (where the previous management's concept to hurry things along was to "throw resources at problems.") I was aware of Fred Brooks "Mythical Man Month," and some comments by Stanislaw Ulam that the management issues that have to be addressed in an organisation grow exponentially with the number of individuals in the organisation. Some of the comments made here about bureaucracies prompted me to dig out a paper that I wrote (but never published,) about a decade or so ago on applying algorithmic principles to organisational analysis. I abandoned the concept because it did not offer a precise methodology of organisational metrics since the value of the metric variables had to be inferred through indirect means, and, in addition, I had to made an assumption, that worst case, organisational performance would be*

*Exponential (NP) on the complexity of what the organisation was attempting to do-which I felt was a far to stringent constraint. However, there were some interesting things that came out of the paper. Starting with a very simple two-person "mom and pop shop" organisational model, the model is extended into a flat organisational structure, and finally, a hierarchical structure. Some of the interesting formalities that fall out of the math:*

*1) In a hierarchical organisational structure, the optimum number of people in each sub-tree of the hierarchy is 6, which agrees closely with military doctrine*

*2) If you calculate the magnitude of resources required to complete a project by summing the the sub-components in the pert chart, you will make an optimistic error of a factor of 2 in the resources or time required to complete the project, which agrees with Brooks and Ulam's observations. (In NP problems, in some sense, the sum of the parts is larger than the whole.)*

*3) Flatter organisation structures are superior, except when the complexity of what the organisation is attempting to do passes a certain point, then hierarchical structures are more efficient, which seems to be supported by military doctrine.*

*4) In flat structures, the economic optimum, and the minimum time to solve a problem are coincident solutions-in hierarchical structures, they are not-but are close (e.g., in hierarchical organisational structures, you may do a project with minimum cost, or minimum time, but not both-but in flat structures you can.)*

*4) There exists an economic optimum, for an organisation solving a problem of a given complexity, and this economic function has law of diminishing returns on the number of people that are assigned to solve the problem. The point at which adding more resources actually delay the solution of the problem might be a mathematical definition of bureaucracy.*

*5) When I dug out the paper, (to look at the bureaucratic content,) I was somewhat astonished that the best methodology of increasing organisational performance was through learning of skill sets-which, oddly enough, completely dominated technical, structural, and organisational methodology, at least in large organisations. (It is the only variable which has a linear effect on the complexity of the problem-all of the others have decreasing returns.)*

*I was fascinated by that even though the organisational models are probably too simple to be of any practical or quantitative value, it would seem that there may some qualitative significance. The above uses a model to show the difference between Team based and hierarchical structures with reference to changes in value to the company*

## 2.9. Conclusion

Traditional organisational structures are slowly being replaced by team based structures. There are various benefits to be derived from moving in this direction, case studies above attempt to show the change in the success of the organisation by changing its organisational structure. Embarking on change programs need to be carefully assessed within the context of the business environment. People management is an important area in this regard. The discussions above show the benefits that companies have achieved when making organisational transformations, there are however many factors to be considered when changes need to be made. Change is inevitable and knowledge in this area is important to the overall success of the company.

## Chapter 3 - Methodology

### 3.1. Introduction

This chapter discusses the objectives of the study and the different sampling methods and techniques that were used in the analysis. Profiles and biographical data are also included in the analysis. Samples of population are used and reliability of these samples are also tested.

### 3.2. Objective of Study

Employee satisfaction is a crucial element in the ingredients of success. One of the greatest assets that any company could have is a satisfied work force. Many employers embark on programs of human capital investment and this research is aimed at providing input to the human capital investment objective. Employees have the ability to determine the success or failure of the organization and its is therefore Important that studies be devoted so that organizational success may be achieved. Managers are focused in achieving specific objectives set out by their respective departments and therefore do not have the time to research any other factors that may influence the outcome of their objectives, it has therefore become necessary for this research to be conducted so that the destiny of the company may be directed to a more successful one. Metso Minerals, the organization within which the survey is conducted is a knowledge based solutions provider, which focuses on providing a product as well as knowledge on products together with after market sales and service. It therefore becomes necessary that employees are knowledgeable about the products that are marketed and this survey will provide an avenue to achieve this objective by determining whether employees prefer to work in teams, which will enhance knowledge dissemination.

### 3.3. Sampling Theory

In this study I have used two groups, one comprising of a sample of people working in a team based organisation structure and the other comprising of people working in the traditional organizational structure. The population was first stratified into groups, which consisted of skilled and unskilled workers by using the payroll to distinguish these criteria. From the group of skilled workers a random sample was drawn to be used in this survey. All the employees selected in the sample participated in this survey, there were no omissions since the survey was conducted at my current place of employment and it was possible to follow up on missing returns.

### 3.4.Profile of Sample

#### 1.Number of Working Years

| | 1 to 5 Years | 6 To 10 Years | Greater Than 10 years | Total |
|---|---|---|---|---|
| Number Of Respondents | 20 | 11 | 20 | 51 |
| Percentage % | 39.21 | 21.56 | 39.21 | 100 |
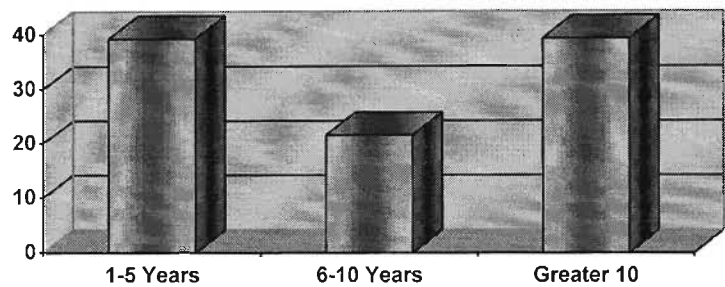


#### 2.Highest Level of education obtained

| | Less Than Matric | Matric | Technicon | University | Total |
|---|---|---|---|---|---|
| Number of Respondent | 6 | 26 | 17 | 2 | 51 |
| Percentage Respondent | 11.76 | 50.98 | 33.33 | 3.93 | 100 |
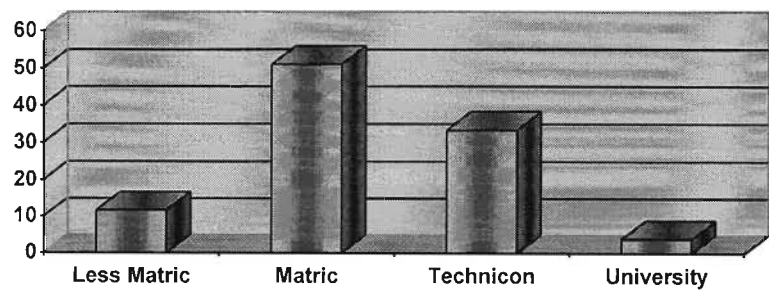


#### 3.Ethic group

| | Black | White | Coloured | Indian | Total |
|---|---|---|---|---|---|
| Number of Respondent | 26 | 14 | 3 | 8 | 51 |
| Percentage Respondent | 50.98 | 27.45 | 5.88 | 15.69 | 100 |
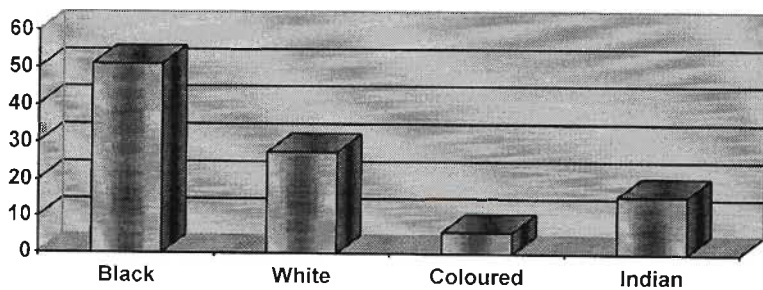


53

### 3.5.Measuring Instrument

The measuring instrument used in this study is the questionnaire, which provided the relevant data, however other information presented in this study was conducted through interviews with the relevant personel. The questionnaire was designed to test the job satisfaction level and the perceptions of working in a team based organizational structure as compare to the traditional structure. Standard global questionnaire regarding job satisfaction was used. The reliability of the results have also been tested and indicates that a high reliability can be placed on the data investigated.

### 3.6.Statistical Analysis

### 3.6.1.Descriptive Statistics

Descriptive statistics include summary information about the distribution, variability, and central tendency of a variable. Most of the available statistics (including z scores) are based on normal theory and are appropriate for quantitative variables (interval- or ratio-level measurements) with symmetric distributions.

Measures of central tendency indicate the location of the distribution; they include the mean, median, and 5% trimmed mean. Measures of dispersion show the dissimilarity of the values; these include standard error, variance, standard deviation, minimum, maximum, range, and interquartile range. The descriptive statistics also include measures of the shape of the distribution; skewness and kurtosis are displayed with their standard errors.

The Frequencies procedure provides statistics and graphical displays that are useful for describing many types of variables and are also used in this section of the analysis.

### 3.6.2.Inferential Statistics

The anova test is used to determine if there is a statistical difference in attitude between the different lengths of service. The Sig value (p-value) is used to indicate any significant difference. However, the mean attitude values are also calculated and used in the analysis. The Pearson chi-square statistics is used to indicate any statistical relationship between groups.

### 3.7.Summary

The results of the survey supports the hypothesis. Employees working in the team based organizational structure scored higher on job satisfaction than those of the traditional working structure. The inferential statistics performed will be used to substantiate the above statements.

# Chapter 4 – Research Findings

## 4.1.Introduction

### 4.1.1. Company Background

Metso Minerals South Africa (Pty) Ltd. is a manufacturing company situated in the industrial area of Isithebe in Kwa Zulu Natal. The Company is involved in the manufacturing of manganese castings used in the mining and quarrying sectors. The market for the products are mainly the global market which accounts for eighty percent of the total company turnover. The initial objective for the locating the plant in this area was to capture the benefits of the labour market, which were mainly unskilled employees. The manufacturing process of the company is labour intensive which means that labour accounts for a large portion of the running costs. The working environment has changed over time and this has put new dimensions the success of the company.

### 4.1.2.Training and Development

The work force at present consists of between 45 to 50 percent skilled workers with the remaining employees being unskilled or semi skilled. The company is a knowledge - based solutions provider, which means that the company places a high focus on the customer. Key customer success concepts have been developed and integrated into the objective of the company. The company provides an after market sales and support program which would mean that employees need to know the product and be in constant contact with customers. With knowledge being the primary focus the company has embarked on many in-house training and external training programs. The projected number of skilled workers in the next five years would be around 70 percent. This would definitely result in more productive work force. The survey will give management an indication of the perceptions of employees regarding team - based structures. The head office of the company is Finland which is developed economy and Metso Finland has team based structures. The results of this survey would be important in implementing team-based structures in the future.

### 4.1.3.Organisation Structure

The company employs the traditional structure with one section having a team based structure. This structure was implemented by the departmental manager due to the nature of the department itself. The success of this department needs to be reviewed to establish whether there are differences in productivity and job satisfaction as compared with the other departments.

### 4.1.4.Stability and Security

The company is very stable and financially strong when compared with the financial requirements as per the financial policy statements and objectives. Employees have recently become more aware of the financial influences of the currency markets. The fluctuations in the currency with regard to the dollar, pound, Euro and other currencies has resulted in the increased prices of consumer goods as well as industrial goods. Employees have taken more interest with regard to the company success. This is evident from the the participation and involvement in the employee councils.

### 4.1.5.Participation, Involvement and access to information

Employees belong to different unions and these unions display strong involvement in the affairs of the company. This process also helps open up the gap between the employees and management. This also acts as an avenue for information dissemination. Employees belong to different councils, which handles different working problems and issues. example Employee equity council, Skills Deveploment Council.With these factors in place it is important to note that the working conditions have changed and will continue to change. Employees are more knowledgeable about the products and markets and they are always seeking more information, which will help them assess their future with the company as well as the future of the company.

### 4.2. Descriptive Statistics
### 4.2.1.Frequency
### Frequency Table
*N=51*

| Question Number | Strongly Agree | Agree | Neither agree nor disagree | Disagree | Strongly Disagree | Total |
|---|---|---|---|---|---|---|
| Q 5 | 15.7 | 47.1 | 15.7 | 17.6 | 3.9 | 100 |
| Q 6 | 2.0 | 13.7 | 25.5 | 45.1 | 13.7 | 100 |
| Q 7 | 9.8 | 49 | 27.5 | 11.8 | 2.0 | 100 |
| Q 8 | 3.9 | 27.5 | 17.6 | 45.1 | 5.9 | 100 |
| Q 9 | 5.9 | 27.5 | 29.4 | 25.5 | 11.8 | 100 |
| Q 10 | 11.8 | 21.6 | 25.5 | 35.3 | 5.9 | 100 |
| Q 11 | 17.6 | 25.5 | 33.3 | 19.6 | 3.9 | 100 |
| Q 12 | 2.0 | 17.6 | 21.6 | 45.1 | 13.7 | 100 |
| Q 13 | 15.7 | 37.3 | 27.5 | 13.7 | 5.9 | 100 |
| Q 14 | 9.8 | 41.2 | 29.4 | 17.6 | 2.0 | 100 |
| Q 15 | 3.9 | 19.6 | 31.4 | 29.4 | 15.7 | 100 |
| Q 17 | 15.7 | 56.9 | 15.7 | 11.8 | 0 | 100 |
| Q 18 | 0 | 15.7 | 17.6 | 56.9 | 9.8 | 100 |

| | | | | | |
|---|---|---|---|---|---|
| Q 19 | 2.0 | 11.8 | 27.5 | 49.0 | 9.8 | 100 |
| Q 20 | 7.8 | 39.2 | 27.5 | 21.6 | 3.9 | 100 |
| Q 21 | 9.8 | 54.9 | 13.7 | 21.6 | 0 | 100 |
| Q 22 | 0 | 7.8 | 17.6 | 51.0 | 23.5 | 100 |
| Q 23 | 21.6 | 68.6 | 5.9 | 3.9 | 0 | 100 |
| Q 24 | 15.7 | 66.7 | 15.7 | 2.0 | 0 | 100 |
| Q 25 | 7.8 | 7.8 | 51.0 | 33.3 | 0 | 100 |
| Q 26 | 21.6 | 58.8 | 17.6 | 2.00 | 0 | 100 |

## 4.2.2.Analysis of Satisfaction Levels

The results of the survey supports the hypothesis. Employees working in the team based organizational structure scored higher on job satisfaction than those of the traditional working structure. This will be discussed using the inferential statistics. Questions 9-15 was designed to test job satisfaction levels.

**Results**

Question6 was used to determine the satisfaction level of employees working in the two different structures, 76 % of those employed in the team based structure were satisfied whilst 53% of those working in the traditional structure were satisfied.

When asked if employees disliked their job 0 % agreed with this statement in the team based structure whilst 26% agreed with this in the hierarchical.

Employees in the team structure were also more enthusiastic about their job, 76% compared to 43%.

23 % of those employees in team based were willing to quit their jobs if they could compare to 37 % employed in the traditional structure.

5% stated that they disliked their job in the team-based structure compared to 30% of those in the hierarchical structure.

From the above statistics, it is clear that the satisfaction level of people working in teams were greater than those who worked in the traditional system.

## 4.2.3.Analysis on Perceptions of team and hierarchical systems

The overall perceptions of employees indicated that employees preferred to work in teams as opposed to the traditional working structure.73% of the total sample enjoyed working in teams or preferred to work in teams.

When asked if teamwork would slow down the production or pace or other employees 10% agree on this whilst 59 % disagreed.

Teamwork is also cited as being the provider of effective communication 88%, and resulting in better understanding of co-workers 82%.

80% of the employees agreed that everyone helps when working in teams to meet the required production levels.

**Results**

It is evident from the above survey that skilled employees prefer to work in teams which they believe is the best medium to achieve production targets. There are many factors that need to be considered when changing to team based organisation, which specifically relate to employees' perception of change. Certain employees may not favor changing from one way of working structure to another and this may cause problems when implementing new systems. Employee resistance needs to be considered and cultural factors need to be taken into account. Although the survey indicated a preference to team based organisational structure these factors need to be considered to ensure a successful implementation. Skilled workers also feel the need to participate in the decisions of the organization since these invariably effects the employee as well. Employees need to be given greater responsibilities so that they are motivated to perform better at all times.

### 4.3.Inferential Statistics

### 4.3.1.Hypothesis

Skilled workers working in work teams experience higher level of job satisfaction than those working in hierarchical groups.

### 4.3.2.Reliability

In general, the concept of reliability refers to how accurate, on the average the estimate of the true score is in a population of objects to be measured. Cronbach's alpha coefficient was computed to determine the reliability of the lickert items. Alpha values close to 1 indicate a high degree of internal consistency and reliability amongst the lickert scale items. For all three, the Alpha values are around 0.8 indicating a high degree of internal consistency & reliability.

### 4.3.3.T-test

The total score for attitude was calculated by totaling all the lickert scale items to create a total score for attitude. There were 22 items.

If everyone strongly agreed, then the total attitude score would be 22*1

If everyone agree, then the total attitude score would be 22*2=44,

If everyone strongly disagreed, then the total attitude would be 110.

Hence the possible scores for positive attitude/job satisfaction range from 22 to 55 and negative attitude/dissatisfaction from 77 to 110. Scores bet 55 and 77 would indicate neither agree/disagree.

The t-test tests to determine if there is a difference in attitude between the team based Organisational groups and Hierarchical groups. The p-value =0.001 indicates a significant difference. The mean attitude for the Team based group is 47.3 and is lower than Hierarchical group indicating that the team-based group has a more positive attitude than the Hierarchical group.

### 4.3.4.Anova

The anova test is used to determine if there is a statistical difference in attitude between the different lengths of service. The Significance(p-value) is greater than 0.05 indicating no significant difference. However, if one looks at the means, the mean attitude values indicate that those with long service are more satisfied than those between 1-5 years of service. Anovas have also been computed separately for team based group and hierarchical group with the lower mean score indicating positive attitude.

### 4.3.5.Crosstabs

The crosstab table with the corresponding chi-square tests compares the lickert scale questions between groups. I combined agree & strongly agree. Also disagree & strongly disagree. For example, the crosstab for Q5 and group shows that 16 people from both team based group and Hierarchical group agree to Question 5 while 10 from Hierarchical group disagreed and 1 from team based group disagree. The Pearson chi-square statistics indicate a p-value (Asymp sig) of 0.051 indicating no statistical relationship between group and question 5.

The crosstab for question6 and group is showing statistical significance (p=0.001) but because 75% of the cells have counts less than 5, the chi-square is not valid. Since one can only use significant chi-square results if not more than 20% of the cells have frequencies less than 5.

### 4.4.Summary

The environment within employees operate in the current time is different from the environment that employees have been working in from the start of the century, this in itself suggests that changes need to be made to adapt to the changing and dynamic environment. There has been a shift from treating employees solely as instruments of

production as in the structure of FORD; to one where the employee has greater decision making ability and participation in the success of the organization.

The survey conducted clearly shows a higher level of job satisfaction between employees who work in the team based organizational structure as compared to those that work in the traditional structures. Employees also prefer to work in teams as indicated by the survey. These are factors, which the company needs to consider in order to increase the level of job satisfaction as well as motivate employees to produce better in the work environment. Further work needs to be done regarding the implementation of team structures but the benefits derived from such a system clearly exceed the costs involved. There are many other factors, which will effect the implementation of new policies, procedures or working structures, these need to be carefully analyzed before any project is undertaken. The company aims to be a market leader in the provision of mineral processing equipment and hence should always keep in pace with the current trends and practices that will enable it to be a market leader.

To be competitive in the current market, one of the key success factors will be the employee work force. Every effort needs to be focused in this human capital investment. Success of the organization depends greatly on the satisfaction of employees and it is therefore recommended that team based organizational structures be seriously considered.

## 4.5. Limitations

This research has been conducted using a manufacturing company situated in the Isithebe industrial area. The population of this area is predominantly black and the research has not received a racial mix and this may limit the results in some respects. Cultural differences, beliefs and religion may have an impact in the manner that people prefer to work. This directly effects the employee's choice of working in teams or working in the traditional structures.

The job satisfaction levels may differ between racial groups as well, Employees may not be able to blend in properly with the different racial groups and this may result in lower job satisfaction levels of employees. It must be appreciated that the Company has an imbalance in its management structure created by the apartheid era, this may also have an influence on the satisfaction level of employees. Some employees may be unhappy because of this imbalance and therefore are enthusiastic about making changes. Changing to a team based structure may be construed as an opportunity to correct past imbalances in the employment structure.

Literacy level in the area within which the company operates is low. This means that employees may be convinced by their peers to adopt any changes without really relating the changes on their personal circumstances. The workforce is highly unionized as well; this may also influence the decisions of employees. The research was conducted on an individual basis and this adds to the reliability of the results.

When one considers Maslow's hierarchy of needs and relate this to the employees within the current industrial site, very few employees will be seeking to achieve the higher levels of self actualization since their basic needs are not fully met. Discussions with management reveal that many employees are still committed to achieving the basic needs. This is also a rural area, which lacks many of the basic facilities that may be found in other urban areas. Employees therefore need to achieve their basic needs first before moving to the higher levels of self-actualization, this may effect the employees motivational as well as the employee's choice of working structure. The above factors are important when analyzing the results of the survey conducted at Metso Minerals- Isithebe.

## Chapter 5 - Recommendations

### 5.1.Introduction

This chapter aims to provide recommendations for the company with regard to the findings that have been identified in chapter four. However it should be noted that various suggestions have been made in other chapters when considering the literature that was explored. This chapter aims to provide general recommendations with regard to the survey that has been conducted.

### 5.2.Recommendations

It is clear from the research conducted that employees working in the team based structure obtain greater levels of job satisfaction that those working in the hierarchical structure. Employees also prefer to work in teams as opposed to the traditional structure. Management knows the perceptions of employees and what needs to be assessed is whether the company is ready to embark on the change process. The following recommendations and suggestions are made.

### 5.2.1General suggestions

- Management needs to consider the internal strengths and weakness of the company with regard to implementing team based structures.
- It is suggested that a task team be formed so that assessments can be made.
- The company has associated companies and head offices in developed countries; they should be involved in the provision of information and assessment process.
- Suggestions from employees, trade unions and companies in similar industries should be considered in making any decisions
- Employee participation and involvement is critical towards the overall success of the implementation process
- It is critical to consider the suggestions offered under the sociotehno section of this dissertation since this section highlights the need for employee participation in the implementation of any change within the organisation.

Socio technical models

Sociotechnical models tend to emphasize the social reaction to technical change without considering the repercussions of the social on the technical, yet the sociotechnical model is purportedly concerned with the reciprocal action of the one upon the other. The problem lies where the sociotechnical approach focuses on how technology can be optimized by rearranging the social system and neglects how the technology can be modified to meet the

demands of the social system. Social interactions are very important in the achievement of job satisfaction.

There are various factors that will influence job satisfaction and the motivation to work. This has been identified in the previous sections and it is important to consider these factors when implementing any sort of change.

### 5.2.2.Suggestions to enhance motivation

• Employees are motivated when their own achievement is recognized by superiors, peers and subordinates. Management should design jobs so that employees could, monitor their own achievement, superiors should be able to recognise good performance and this needs to be communicated to employees.

• The nature of the work is important for employees to be motivated, jobs should be designed so that employees are able to make their own input and they should be involved in the production process of the company.

• Responsibility also serves as motivating factor to employees, jobs need to be designed so that employee's feel responsible for the jobs that they perform, this will increase their motivation to perform better.

• Employees must be given the chance of advancement within the organisation, career planning and corporate succession is an important area of human resources management and this will help employees have a chance of advancement within the organisation. Training and development needs can also be identified when corporate succession and career planning is done. Employees also have clear path within the organisation towards which they could work to.

• Employees need to be part of a team and not isolated, jobs must be designed so that there is adequate social interaction between employees in the organisation.

• It is important that jobs be designed so that employees are motivated to work and will continue to improve themselves at their work. This is an important area which needs to be considered when jobs are designed. This area may also require the certain expertise from different personnel and needs to be assessed so that the right decisions can be made.

### 5.2.3.Suggestions for implementation of Team Based Structures

### - Top Management Support.

Top managers' needs to learn as much as they can about the structure and management operating system of a high performance design and operating system before deciding whether or not they can support implementing a model.

**- Improvement Needs.**

Identify the opportunities for improvement where teams can help improve the performance in the organization. Without a defined need and application, there will be little or no serious motivation to establish the priority, resources and changes required in installing a high performance model.

**- Participation**

Since team-based high performance requires revising the organization's structure and operating system, everyone has a role to play in the transition to the concept. When senior management makes a commitment to convert to the new system, department managers, and section heads, supervisory and non-supervisory employees all need to be involved—no one can afford to be left out. Employment groups who are not informed and involved in the process of change are likely to resist the tough changes that are needed. Calming everyone's' fears about change is a factor in making a successful transition.

**- Knowledge**

With technology and information driving change at an unprecedented pace, organizations need employees at all levels that are continually learning. Education and training must be seen as a top priority in high-performance workplaces, with a payoff in improved leadership, worker flexibility, and effectiveness and improved product and service quality.

Teams and team-based organizations with self-managed teams are not new. Adequate information is documented and available to show that team-based operating systems consistently outperform traditional systems. The hiring of an experienced consulting and training firm to provide model design guidance, consultation and training will reduce trial and error costs and help ensure a smooth transition and achieving desired outcomes.

**- Control**

Measurement is a core element of high-performance management. A measurement system that evaluates team and company performance needs to be developed.

- Audit the implementation process and how the system is developing and performing.

- Make measuring count--use visible scoreboard measures to provide feedback to teams on their accomplishments to measurer its own performance.

- Incorporate improvement measures into team performance evaluation, promotion and compensation plans.

### 5.3.Conclusions

"Frequently combined with empowerment in the workplace is the use of teams. Teams share responsibility and autonomy and usually carry out a series of interconnected tasks in ways that yield improved effectiveness and speed" (Schneider, p. 140).

Says Professor Richard Hackman of Harvard University; "The motivational structure of a group task strongly influences the group's productivity. By "motivational structure," we mean a team's ability to carry out a meaningful task, one requiring multiple skills, different roles for team members, and collective responsibility for the outcome" (Haasen, p. 41).

"A team-based organizational structure makes it possible to assign responsibility for a meaningful process segment, even an entire work area, to a team. These broader and more important responsibilities create a different and more satisfactory experience for all team members. Cross training and flexibility within the team make the work more diverse and enjoyable." (Haasen, p. 47).

Team-Based Organization with self-managed teams establishes: the flexibility to make changes; willingness on the part of everyone to incorporate new technologies;

The ability of everyone to identify and satisfy company and customer requirements;

The ability to continually improve quality, operating effectiveness and efficiency;

The power to improve the company's competitive strength by developing a learning, knowledgeable, flexible and empowered workforce.

An organization increases its ability to adapt to change by having knowledge of the following:Knowledge of Strategies and Technologies Used for Improvements, Knowledge of Customers and Customer Requirements,Knowledge about Key Competitors,Knowledge of Products and Markets .

Traditional structures have worked in the past but how long will it survive in the future. From the literature review it is clear that employees have changed considerably during the recent years, work environment has also changed dramatically. This needs to be taken seriously and if it is not, it could lead to the closure of any business. Human capital investment is critical to the success of any company and from the research conducted at Metso Minerals, it is imperative that the suggestions be implemented. Workers prefer to work in teams and employees in teams are more satisfied that workers in the traditional system. This therefore cannot be ignored but needs to be take in consideration to establish knowledge based, competitive global solutions provider as defined in the mission and objectives statement of the company.

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# Appendices to Chapter 4

## 4.3. Inferential Statistics

### 4.3.2.Reliability

**Table 1 (Reliability)- Hierarchical Organisational Structure**

```
R E L I A B I L I T Y    A N A L Y S I S   -   S C A L E    (A L P H A)
```

Item-total Statistics

|     | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Alpha if Item Deleted |
|-----|-----------|-----------|-----------|-----------|
| Q5  | 54.6333   | 94.9299   | .8194     | .8802     |
| Q6  | 55.6333   | 97.3437   | .8761     | .8800     |
| Q7  | 54.6333   | 97.9644   | .8394     | .8811     |
| Q8  | 55.4667   | 94.6023   | .8894     | .8782     |
| Q9  | 55.2667   | 96.1333   | .8204     | .8807     |
| Q10 | 54.1667   | 97.4540   | .8148     | .8814     |
| Q11 | 54.4333   | 96.8747   | .7571     | .8827     |
| Q12 | 55.5667   | 97.2885   | .8308     | .8809     |
| Q13 | 54.4000   | 96.1103   | .8394     | .8802     |
| Q14 | 54.4333   | 97.9782   | .8959     | .8801     |
| Q15 | 54.1667   | 100.0747  | .6995     | .8851     |
| Q17 | 55.0333   | 119.6885  | -.3333    | .9112     |
| Q18 | 53.9333   | 108.8920  | .2533     | .8973     |
| Q19 | 53.9000   | 112.8517  | .0702     | .8995     |
| Q20 | 54.4000   | 103.7655  | .5310     | .8901     |
| Q21 | 54.7333   | 102.6851  | .5747     | .8889     |
| Q22 | 53.6333   | 112.6540  | .0516     | .9016     |
| Q23 | 55.4667   | 115.0161  | -.0917    | .9022     |
| Q24 | 55.2667   | 118.8230  | -.3582    | .9074     |
| Q25 | 54.1667   | 108.4195  | .4021     | .8934     |
| Q26 | 55.3333   | 116.7816  | -.2122    | .9050     |

Reliability Coefficients

N of Cases =     30.0                    N of Items = 21

Alpha =     .8954

In general, the concept of reliability refers to how accurate, on the average; the estimate of the true score is in a population of objects to be measured. Cronbach's alpha coefficient was computed to determine the reliability of the lickert items. Alpha values close to 1 indicate a high degree of internal consistency and reliability amongst the lickert scale items. The coefficient of of .8954 indicated a high degree of reliability within the hierarchical organisational structure.

## Table 2 (Reliability)- Team Based Organisational Structure

```
R E L I A B I L I T Y    A N A L Y S I S    -    S C A L E    (A L P H A)
```

Item-total Statistics

|  | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item- Total Correlation | Alpha if Item Deleted |
|---|---|---|---|---|
| Q5 | 45.4286 | 75.3571 | .8812 | .8042 |
| Q6 | 46.4762 | 78.9619 | .6466 | .8148 |
| Q7 | 45.4286 | 80.9571 | .6590 | .8175 |
| Q8 | 45.9048 | 76.6905 | .6523 | .8121 |
| Q9 | 45.9048 | 75.6905 | .6091 | .8131 |
| Q10 | 44.7619 | 71.8905 | .7075 | .8059 |
| Q11 | 45.2381 | 75.9905 | .6962 | .8099 |
| Q12 | 46.4762 | 81.0619 | .4932 | .8210 |
| Q13 | 45.5238 | 75.2619 | .8951 | .8037 |
| Q14 | 45.3810 | 75.5476 | .9051 | .8041 |
| Q15 | 44.0000 | 71.3000 | .7314 | .8042 |
| Q17 | 45.4286 | 87.8571 | .0191 | .8395 |
| Q18 | 43.6667 | 86.7333 | .0805 | .8379 |
| Q19 | 43.9048 | 90.2905 | -.1260 | .8542 |
| Q20 | 45.0952 | 87.6905 | .0017 | .8443 |
| Q21 | 45.2857 | 83.5143 | .2713 | .8301 |
| Q22 | 43.3810 | 90.1476 | -.1223 | .8467 |
| Q23 | 45.5714 | 91.8571 | -.2532 | .8469 |
| Q24 | 45.5714 | 86.0571 | .2324 | .8305 |
| Q25 | 44.5714 | 77.8571 | .5265 | .8180 |
| Q26 | 45.5714 | 86.0571 | .1684 | .8330 |

Reliability Coefficients

N of Cases =    21.0                    N of Items = 21

Alpha =     .8316

The reliability of .8316 is lower than that of the hierarchical Organisational but it still indicated a high degree of reliability within the team based Organisational structure.

### Table 3 (Reliability)- Total

```
R E L I A B I L I T Y    A N A L Y S I S   -   S C A L E   (A L P H A)


Item-total Statistics

                 Scale          Scale       Corrected
                 Mean         Variance        Item-            Alpha
                if Item        if Item        Total           if Item
                Deleted        Deleted     Correlation        Deleted

Q5             50.8431       106.1349         .8596            .8744
Q6             51.8627       108.7608         .8344            .8764
Q7             50.8431       110.1349         .8211            .8774
Q8             51.5294       108.1341         .7946            .8769
Q9             51.4118       107.6871         .7568            .8777
Q10            50.2941       107.1318         .7656            .8773
Q11            50.6471       107.4729         .7751            .8771
Q12            51.8235       109.2682         .7700            .8780
Q13            50.7451       105.3137         .8847            .8734
Q14            50.7059       107.2918         .9186            .8738
Q15            49.9804       112.0996         .5728            .8840
Q17            51.0784       127.3537        -.0821            .9005
Q18            49.7059       123.8918         .0949            .8964
Q19            49.7843       126.2525        -.0280            .8998
Q20            50.5686       116.6502         .4014            .8892
Q21            50.8431       115.0149         .5222            .8856
Q22            49.4118       127.3671        -.0828            .9004
Q23            51.3922       127.6431        -.1060            .8983
Q24            51.2745       126.5631        -.0325            .8967
Q25            50.2157       116.7725         .4872            .8866
Q26            51.3137       125.6996         .0206            .8963



Reliability Coefficients

N of Cases =      51.0                   N of Items = 21

Alpha =      .8911
```

An alpha value of .8911 indicates a high degree of reliability and internal consistency between the data of both companies combined.

### 4.3.3. Test on attitude

**Table 4. T-Test**

ATTITUDE

| COMPANY | Mean | N | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| Hierarchical | 57.4333 | 30 | 10.6857 | 38.00 | 81.00 |
| Tbo | 47.4286 | 21 | 9.4264 | 33.00 | 64.00 |
| Total | 53.3137 | 51 | 11.2472 | 33.00 | 81.00 |

**Independent Samples Test**

| | | t-test for Equality of Means | | |
|---|---|---|---|---|
| | | t | df | Sig. (2-tailed) p-value |
| ATTITUDE | Equal variances assumed | 3.451 | 49 | .001 |

I totaled all the lickert scale items to create a total score for attitude. There were 22 items.

If everyone strongly agreed, then the total attitude score would be 22*1

If everyone agree, then the total attitude score would be 22*2=44,

If everyone strongly disagreed, then the total attitude would be 110.

Hence the possible scores for positive attitude/job satisfaction range from 22 to 55 and negative attitude/dissatisfaction from 77 to 110. Scores bet 55 and 77 would indicate neither agree/disagree

The test on page 6 tests to determine if there is a difference in attitude between the team based organisational structure and hierarchical groups. The p-value =0.001 indicates a significant difference. The first table display the means and std deviations for attitude. The mean attitude for team based structures is 47.3 and is lower than Hierarchical group indicating the the team based group has a more positive attitude than the Hierarchical group.

# 4.3.4.Oneway Analysis of Variance

## Table 5 (Anova – Hierarchical)

**Descriptives[a]**

ATTITUDE

|  | N | Mean | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| 1-5 years | 11 | 58.2727 | 11.7055 | 38.00 | 81.00 |
| 6-10 years | 8 | 57.3750 | 8.4842 | 46.00 | 70.00 |
| >10 years | 11 | 56.6364 | 11.9271 | 43.00 | 75.00 |
| Total | 30 | 57.4333 | 10.6857 | 38.00 | 81.00 |

a. COMPANY = Hierarchical

**ANOVA[a]**

ATTITUDE

|  | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 14.764 | 2 | 7.382 | .060 | .941 |
| Within Groups | 3296.602 | 27 | 122.096 |  |  |
| Total | 3311.367 | 29 |  |  |  |

a. COMPANY = Hierarchical

The anova test is used to determine if there is a statistical difference in attitude between the different lengths of service. The Sig. value (p-value) is greater than 0.05 indicating no significant difference. However, if you look at the means, the mean attitude values indicate that those with long service are more satisfied than those between 1-5 years of service. Lower mean scores indicate a more positive attitude

## Table 6 (Anova – Team Based Structure)

**Descriptives[a]**

ATTITUDE

|  | N | Mean | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| 1-5 years | 9 | 50.3333 | 9.0554 | 35.00 | 62.00 |
| 6-10 years | 3 | 48.0000 | 14.0000 | 38.00 | 64.00 |
| >10 years | 9 | 44.3333 | 8.4113 | 33.00 | 56.00 |
| Total | 21 | 47.4286 | 9.4264 | 33.00 | 64.00 |

a. COMPANY = Tbo

**ANOVA[a]**

ATTITUDE

|  | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 163.143 | 2 | 81.571 | .910 | .420 |
| Within Groups | 1614.000 | 18 | 89.667 |  |  |
| Total | 1777.143 | 20 |  |  |  |

a. COMPANY = Tbo

The p value is 0.420, which is much lower than that of the hierarchical p value of 0.941, however this indicates that there is no statistical difference since both values are greater than p of 0.05.

## Table 7 (Anova – All data)

**Descriptives**

ATTITUDE

|  | N | Mean | Std. Deviation | Minimum | Maximum |
|---|---|---|---|---|---|
| 1-5 years | 20 | 54.7000 | 11.0934 | 35.00 | 81.00 |
| 6-10 years | 11 | 54.8182 | 10.4290 | 38.00 | 70.00 |
| >10 years | 20 | 51.1000 | 12.0039 | 33.00 | 75.00 |
| Total | 51 | 53.3137 | 11.2472 | 33.00 | 81.00 |

**ANOVA**

ATTITUDE

|  | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 161.344 | 2 | 80.672 | .628 | .538 |
| Within Groups | 6163.636 | 48 | 128.409 |  |  |
| Total | 6324.980 | 50 |  |  |  |

The p value combined is 0.538 which indicates that there is no statistical difference between the data.

# 4.3.4.Crosstabs

**Q5. On most days I feel Satisfied with my job.**

## *Table 8*

**Crosstab**

| | | | COMPANY | | Total |
|---|---|---|---|---|---|
| | | | Hierarchical | Tbo | |
| Q5 | agree | Count | 16 | 16 | 32 |
| | | % of Total | 31.4% | 31.4% | 62.7% |
| | neither agree nor disagree | Count | 4 | 4 | 8 |
| | | % of Total | 7.8% | 7.8% | 15.7% |
| | disagree | Count | 10 | 1 | 11 |
| | | % of Total | 19.6% | 2.0% | 21.6% |
| Total | | Count | 30 | 21 | 51 |
| | | % of Total | 58.8% | 41.2% | 100.0% |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 5.961[a] | 2 | .051 |
| Likelihood Ratio | 6.951 | 2 | .031 |
| Linear-by-Linear Association | 4.755 | 1 | .029 |
| N of Valid Cases | 51 | | |

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is 3.29.

# Q6. * I dislike my job.

## Table 9

**Crosstab**

| | | | COMPANY | | Total |
|---|---|---|---|---|---|
| | | | Hierarchical | Tbo | |
| Q6 | .00 | Count | | 7 | 7 |
| | | % of Total | | 13.7% | 13.7% |
| | agree | Count | 22 | 14 | 36 |
| | | % of Total | 43.1% | 27.5% | 70.6% |
| | neither agree nor disagree | Count | 7 | | 7 |
| | | % of Total | 13.7% | | 13.7% |
| | disagree | Count | 1 | | 1 |
| | | % of Total | 2.0% | | 2.0% |
| Total | | Count | 30 | 21 | 51 |
| | | % of Total | 58.8% | 41.2% | 100.0% |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 15.678[a] | 3 | .001 |
| Likelihood Ratio | 20.991 | 3 | .000 |
| Linear-by-Linear Association | 14.987 | 1 | .000 |
| N of Valid Cases | 51 | | |

a. 6 cells (75.0%) have expected count less than 5. The minimum expected count is .41.

# Q7. I am enthusiastic about my job.

## Table 10

**Crosstab**

| | | | COMPANY | | Total |
|---|---|---|---|---|---|
| | | | Hierarchical | Tbo | |
| Q7 | agree | Count | 13 | 17 | 30 |
| | | % of Total | 25.5% | 33.3% | 58.8% |
| | neither agree nor disagree | Count | 10 | 4 | 14 |
| | | % of Total | 19.6% | 7.8% | 27.5% |
| | disagree | Count | 7 | | 7 |
| | | % of Total | 13.7% | | 13.7% |
| Total | | Count | 30 | 21 | 51 |
| | | % of Total | 58.8% | 41.2% | 100.0% |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 8.790[a] | 2 | .012 |
| Likelihood Ratio | 11.299 | 2 | .004 |
| Linear-by-Linear Association | 8.618 | 1 | .003 |
| N of Valid Cases | 51 | | |

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 2.88.

## 8. * I would quit this job at once if I could.

## Table 11

**Crosstab**

| | | | COMPANY | | Total |
|---|---|---|---|---|---|
| | | | Hierarchical | Tbo | |
| Q8 | .00 | Count | 1 | 2 | 3 |
| | | % of Total | 2.0% | 3.9% | 5.9% |
| | agree | Count | 18 | 14 | 32 |
| | | % of Total | 35.3% | 27.5% | 62.7% |
| | neither agree nor disagree | Count | 9 | 5 | 14 |
| | | % of Total | 17.6% | 9.8% | 27.5% |
| | disagree | Count | 2 | | 2 |
| | | % of Total | 3.9% | | 3.9% |
| Total | | Count | 30 | 21 | 51 |
| | | % of Total | 58.8% | 41.2% | 100.0% |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 2.465[a] | 3 | .482 |
| Likelihood Ratio | 3.176 | 3 | .365 |
| Linear-by-Linear Association | 2.017 | 1 | .156 |
| N of Valid Cases | 51 | | |

a. 4 cells (50.0%) have expected count less than 5. The minimum expected count is .82.

**9. \* I would like to change my job for another one.**

## Table 12

**Crosstab**

| | | | COMPANY | | Total |
|---|---|---|---|---|---|
| | | | Hierarchical | Tbo | |
| Q9 | .00 | Count | 2 | 4 | 6 |
| | | % of Total | 3.9% | 7.8% | 11.8% |
| | agree | Count | 15 | 13 | 28 |
| | | % of Total | 29.4% | 25.5% | 54.9% |
| | neither agree nor disagree | Count | 11 | 3 | 14 |
| | | % of Total | 21.6% | 5.9% | 27.5% |
| | disagree | Count | 2 | 1 | 3 |
| | | % of Total | 3.9% | 2.0% | 5.9% |
| Total | | Count | 30 | 21 | 51 |
| | | % of Total | 58.8% | 41.2% | 100.0% |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 4.259[a] | 3 | .235 |
| Likelihood Ratio | 4.426 | 3 | .219 |
| Linear-by-Linear Association | 3.290 | 1 | .070 |
| N of Valid Cases | 51 | | |

a. 4 cells (50.0%) have expected count less than 5. The minimum expected count is 1.24.

## Q10 .I would not like to change my job for another one.

### Table 13

**Crosstab**

| | | | COMPANY | | Total |
|---|---|---|---|---|---|
| | | | Hierarchical | Tbo | |
| Q10 | agree | Count | 7 | 10 | 17 |
| | | % of Total | 13.7% | 19.6% | 33.3% |
| | neither agree nor disagree | Count | 9 | 4 | 13 |
| | | % of Total | 17.6% | 7.8% | 25.5% |
| | disagree | Count | 14 | 7 | 21 |
| | | % of Total | 27.5% | 13.7% | 41.2% |
| Total | | Count | 30 | 21 | 51 |
| | | % of Total | 58.8% | 41.2% | 100.0% |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 3.300[a] | 2 | .192 |
| Likelihood Ratio | 3.288 | 2 | .193 |
| Linear-by-Linear Association | 2.319 | 1 | .128 |
| N of Valid Cases | 51 | | |

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.35.

# Q11. I like my job better than most people like theirs.

## Table 14

**Crosstab**

| | | | COMPANY | | Total |
|---|---|---|---|---|---|
| | | | Hierarchical | Tbo | |
| Q11 | agree | Count | 11 | 11 | 22 |
| | | % of Total | 21.6% | 21.6% | 43.1% |
| | neither agree nor disagree | Count | 8 | 9 | 17 |
| | | % of Total | 15.7% | 17.6% | 33.3% |
| | disagree | Count | 11 | 1 | 12 |
| | | % of Total | 21.6% | 2.0% | 23.5% |
| Total | | Count | 30 | 21 | 51 |
| | | % of Total | 58.8% | 41.2% | 100.0% |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 7.023[a] | 2 | .030 |
| Likelihood Ratio | 8.214 | 2 | .016 |
| Linear-by-Linear Association | 4.371 | 1 | .037 |
| N of Valid Cases | 51 | | |

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 4.94.

**12 * Basically I don't like my job.**

## Table 15

**Crosstab**

| | | | COMPANY | | |
| | | | Hierarchical | Tbo | Total |
|---|---|---|---|---|---|
| Q12 | .00 | Count | 1 | 6 | 7 |
| | | % of Total | 2.0% | 11.8% | 13.7% |
| | agree | Count | 20 | 14 | 34 |
| | | % of Total | 39.2% | 27.5% | 66.7% |
| | neither agree nor disagree | Count | 8 | 1 | 9 |
| | | % of Total | 15.7% | 2.0% | 17.6% |
| | disagree | Count | 1 | | 1 |
| | | % of Total | 2.0% | | 2.0% |
| Total | | Count | 30 | 21 | 51 |
| | | % of Total | 58.8% | 41.2% | 100.0% |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 9.791[a] | 3 | .020 |
| Likelihood Ratio | 11.014 | 3 | .012 |
| Linear-by-Linear Association | 9.454 | 1 | .002 |
| N of Valid Cases | 51 | | |

a. 5 cells (62.5%) have expected count less than 5. The minimum expected count is .41.

84

**Q13.All in all I am satisfied with my job.**

*Table 16*

**Crosstab**

| | | | COMPANY | | |
| --- | --- | --- | --- | --- | --- |
| | | | Hierarchical | Tbo | Total |
| Q13 | agree | Count | 10 | 17 | 27 |
| | | % of Total | 19.6% | 33.3% | 52.9% |
| | neither agree nor disagree | Count | 11 | 3 | 14 |
| | | % of Total | 21.6% | 5.9% | 27.5% |
| | disagree | Count | 9 | 1 | 10 |
| | | % of Total | 17.6% | 2.0% | 19.6% |
| Total | | Count | 30 | 21 | 51 |
| | | % of Total | 58.8% | 41.2% | 100.0% |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
| --- | --- | --- | --- |
| Pearson Chi-Square | 11.558[a] | 2 | .003 |
| Likelihood Ratio | 12.460 | 2 | .002 |
| Linear-by-Linear Association | 10.464 | 1 | .001 |
| N of Valid Cases | 51 | | |

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 4.12.

## 14. I find real enjoyment in my job.

### *Table 17*

**Crosstab**

| | | | COMPANY | | |
| | | | Hierarchical | Tbo | Total |
|---|---|---|---|---|---|
| Q14 | agree | Count | 10 | 16 | 26 |
| | | % of Total | 19.6% | 31.4% | 51.0% |
| | neither agree nor disagree | Count | 11 | 4 | 15 |
| | | % of Total | 21.6% | 7.8% | 29.4% |
| | disagree | Count | 9 | 1 | 10 |
| | | % of Total | 17.6% | 2.0% | 19.6% |
| Total | | Count | 30 | 21 | 51 |
| | | % of Total | 58.8% | 41.2% | 100.0% |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 9.767[a] | 2 | .008 |
| Likelihood Ratio | 10.559 | 2 | .005 |
| Linear-by-Linear Association | 9.245 | 1 | .002 |
| N of Valid Cases | 51 | | |

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 4.12.

## Q15. I would not consider taking another job.

### Table 18

**Crosstab**

| | | | COMPANY | | Total |
|---|---|---|---|---|---|
| | | | Hierarchical | Tbo | |
| Q15 | agree | Count | 7 | 5 | 12 |
| | | % of Total | 13.7% | 9.8% | 23.5% |
| | neither agree nor disagree | Count | 11 | 5 | 16 |
| | | % of Total | 21.6% | 9.8% | 31.4% |
| | disagree | Count | 12 | 11 | 23 |
| | | % of Total | 23.5% | 21.6% | 45.1% |
| Total | | Count | 30 | 21 | 51 |
| | | % of Total | 58.8% | 41.2% | 100.0% |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 1.072[a] | 2 | .585 |
| Likelihood Ratio | 1.088 | 2 | .580 |
| Linear-by-Linear Association | .268 | 1 | .604 |
| N of Valid Cases | 51 | | |

a. 1 cells (16.7%) have expected count less than 5. The minimum expected count is 4.94.

## Q17. I enjoy working in teams.

### Table 19

**Crosstab**

| | | | COMPANY | | Total |
|---|---|---|---|---|---|
| | | | Hierarchical | Tbo | |
| Q17 | agree | Count | 21 | 16 | 37 |
| | | % of Total | 41.2% | 31.4% | 72.5% |
| | neither agree nor disagree | Count | 4 | 4 | 8 |
| | | % of Total | 7.8% | 7.8% | 15.7% |
| | disagree | Count | 5 | 1 | 6 |
| | | % of Total | 9.8% | 2.0% | 11.8% |
| Total | | Count | 30 | 21 | 51 |
| | | % of Total | 58.8% | 41.2% | 100.0% |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 1.810[a] | 2 | .404 |
| Likelihood Ratio | 1.992 | 2 | .369 |
| Linear-by-Linear Association | .837 | 1 | .360 |
| N of Valid Cases | 51 | | |

a. 4 cells (66.7%) have expected count less than 5. The minimum expected count is 2.47.

## Q18. I would prefer to work on my own rather than be part of a team

### Table 20

**Crosstab**

| | | | COMPANY | | Total |
|---|---|---|---|---|---|
| | | | Hierarchical | Tbo | |
| Q18 | agree | Count | 6 | 2 | 8 |
| | | % of Total | 11.8% | 3.9% | 15.7% |
| | neither agree nor disagree | Count | 4 | 5 | 9 |
| | | % of Total | 7.8% | 9.8% | 17.6% |
| | disagree | Count | 20 | 14 | 34 |
| | | % of Total | 39.2% | 27.5% | 66.7% |
| Total | | Count | 30 | 21 | 51 |
| | | % of Total | 58.8% | 41.2% | 100.0% |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 1.633[a] | 2 | .442 |
| Likelihood Ratio | 1.672 | 2 | .433 |
| Linear-by-Linear Association | .236 | 1 | .627 |
| N of Valid Cases | 51 | | |

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is 3.29.

# Q19 Team work tends to slow down the most productive workers

## Table 21

**Crosstab**

| | | | COMPANY | | Total |
|---|---|---|---|---|---|
| | | | Hierarchical | Tbo | |
| Q19 | agree | Count | 2 | 5 | 7 |
| | | % of Total | 3.9% | 9.8% | 13.7% |
| | neither agree nor disagree | Count | 10 | 4 | 14 |
| | | % of Total | 19.6% | 7.8% | 27.5% |
| | disagree | Count | 18 | 12 | 30 |
| | | % of Total | 35.3% | 23.5% | 58.8% |
| Total | | Count | 30 | 21 | 51 |
| | | % of Total | 58.8% | 41.2% | 100.0% |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 3.580[a] | 2 | .167 |
| Likelihood Ratio | 3.596 | 2 | .166 |
| Linear-by-Linear Association | .928 | 1 | .335 |
| N of Valid Cases | 51 | | |

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 2.88.

## Q20 Working with a clear hierarchical structure is what I like most

### *Table 22*

**Crosstab**

| | | | COMPANY | | |
|---|---|---|---|---|---|
| | | | Hierarchical | Tbo | Total |
| Q20 | agree | Count | 10 | 14 | 24 |
| | | % of Total | 19.6% | 27.5% | 47.1% |
| | neither agree nor disagree | Count | 10 | 4 | 14 |
| | | % of Total | 19.6% | 7.8% | 27.5% |
| | disagree | Count | 10 | 3 | 13 |
| | | % of Total | 19.6% | 5.9% | 25.5% |
| Total | | Count | 30 | 21 | 51 |
| | | % of Total | 58.8% | 41.2% | 100.0% |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 5.593[a] | 2 | .061 |
| Likelihood Ratio | 5.706 | 2 | .058 |
| Linear-by-Linear Association | 4.894 | 1 | .027 |
| N of Valid Cases | 51 | | |

a. 0 cells (.0%) have expected count less than 5. The minimum expected count is 5.35.

**Q21 Everyone knows what they have to do when there is a clear line of command**

*Table 23*

**Crosstab**

| | | | COMPANY | | Total |
|---|---|---|---|---|---|
| | | | Hierarchical | Tbo | |
| Q21 | agree | Count | 16 | 17 | 33 |
| | | % of Total | 31.4% | 33.3% | 64.7% |
| | neither agree nor disagree | Count | 6 | 1 | 7 |
| | | % of Total | 11.8% | 2.0% | 13.7% |
| | disagree | Count | 8 | 3 | 11 |
| | | % of Total | 15.7% | 5.9% | 21.6% |
| Total | | Count | 30 | 21 | 51 |
| | | % of Total | 58.8% | 41.2% | 100.0% |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 4.424[a] | 2 | .109 |
| Likelihood Ratio | 4.754 | 2 | .093 |
| Linear-by-Linear Association | 2.864 | 1 | .091 |
| N of Valid Cases | 51 | | |

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is 2.88.

## Q22 Team work causes confusion that slows production

### *Table 24*

**Crosstab**

| | | | COMPANY | | Total |
|---|---|---|---|---|---|
| | | | Hierarchical | Tbo | |
| Q22 | agree | Count | 2 | 2 | 4 |
| | | % of Total | 3.9% | 3.9% | 7.8% |
| | neither agree nor disagree | Count | 7 | 2 | 9 |
| | | % of Total | 13.7% | 3.9% | 17.6% |
| | disagree | Count | 21 | 17 | 38 |
| | | % of Total | 41.2% | 33.3% | 74.5% |
| Total | | Count | 30 | 21 | 51 |
| | | % of Total | 58.8% | 41.2% | 100.0% |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 1.662[a] | 2 | .436 |
| Likelihood Ratio | 1.767 | 2 | .413 |
| Linear-by-Linear Association | .209 | 1 | .647 |
| N of Valid Cases | 51 | | |

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is 1.65.

## Q23 Team work produces effective communication

### Table 25

**Crosstab**

| | | | COMPANY | | Total |
|---|---|---|---|---|---|
| | | | Hierarchical | Tbo | |
| Q23 | agree | Count | 27 | 19 | 46 |
| | | % of Total | 52.9% | 37.3% | 90.2% |
| | neither agree nor disagree | Count | 2 | 1 | 3 |
| | | % of Total | 3.9% | 2.0% | 5.9% |
| | disagree | Count | 1 | 1 | 2 |
| | | % of Total | 2.0% | 2.0% | 3.9% |
| Total | | Count | 30 | 21 | 51 |
| | | % of Total | 58.8% | 41.2% | 100.0% |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | .141[a] | 2 | .932 |
| Likelihood Ratio | .142 | 2 | .932 |
| Linear-by-Linear Association | .006 | 1 | .940 |
| N of Valid Cases | 51 | | |

a. 4 cells (66.7%) have expected count less than 5. The minimum expected count is .82.

**Q24 I understand my co-workers better when I work as part of a team**

*Table 26*

**Crosstab**

| | | | COMPANY | | Total |
|---|---|---|---|---|---|
| | | | Hierarchical | Tbo | |
| Q24 | agree | Count | 23 | 19 | 42 |
| | | % of Total | 45.1% | 37.3% | 82.4% |
| | neither agree nor disagree | Count | 6 | 2 | 8 |
| | | % of Total | 11.8% | 3.9% | 15.7% |
| | disagree | Count | 1 | | 1 |
| | | % of Total | 2.0% | | 2.0% |
| Total | | Count | 30 | 21 | 51 |
| | | % of Total | 58.8% | 41.2% | 100.0% |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 1.850[a] | 2 | .396 |
| Likelihood Ratio | 2.264 | 2 | .322 |
| Linear-by-Linear Association | 1.808 | 1 | .179 |
| N of Valid Cases | 51 | | |

a. 4 cells (66.7%) have expected count less than 5. The minimum expected count is .41.

# Q25 I have to work faster when I work in a team

## Table 27

**Crosstab**

| | | | COMPANY | | Total |
|---|---|---|---|---|---|
| | | | Hierarchical | Tbo | |
| Q25 | agree | Count | 1 | 7 | 8 |
| | | % of Total | 2.0% | 13.7% | 15.7% |
| | neither agree nor disagree | Count | 19 | 7 | 26 |
| | | % of Total | 37.3% | 13.7% | 51.0% |
| | disagree | Count | 10 | 7 | 17 |
| | | % of Total | 19.6% | 13.7% | 33.3% |
| Total | | Count | 30 | 21 | 51 |
| | | % of Total | 58.8% | 41.2% | 100.0% |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 9.268[a] | 2 | .010 |
| Likelihood Ratio | 9.752 | 2 | .008 |
| Linear-by-Linear Association | 2.374 | 1 | .123 |
| N of Valid Cases | 51 | | |

a. 2 cells (33.3%) have expected count less than 5. The minimum expected count is 3.29.

**Q26 Everyone helps each other in a team to reach the production targets set**

*Table 28*

**Crosstab**

| | | | COMPANY | | Total |
| | | | Hierarchical | Tbo | |
|---|---|---|---|---|---|
| Q26 | agree | Count | 24 | 17 | 41 |
| | | % of Total | 47.1% | 33.3% | 80.4% |
| | neither agree nor disagree | Count | 5 | 4 | 9 |
| | | % of Total | 9.8% | 7.8% | 17.6% |
| | disagree | Count | 1 | | 1 |
| | | % of Total | 2.0% | | 2.0% |
| Total | | Count | 30 | 21 | 51 |
| | | % of Total | 58.8% | 41.2% | 100.0% |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | .741[a] | 2 | .690 |
| Likelihood Ratio | 1.102 | 2 | .576 |
| Linear-by-Linear Association | .107 | 1 | .744 |
| N of Valid Cases | 51 | | |

a. 3 cells (50.0%) have expected count less than 5. The minimum expected count is .41.

# Oneway Anova - Education

## Table 29 (Hierarchical group)

**Descriptives[a]**

ATTITUDE

|  | N | Mean | Std. Deviation |
|---|---|---|---|
| <matric | 4 | 63.0000 | 13.2916 |
| matric only | 18 | 56.5556 | 8.8864 |
| technicon | 8 | 56.6250 | 13.6061 |
| Total | 30 | 57.4333 | 10.6857 |

a. TEAM = Hierarchical

**ANOVA[a]**

ATTITUDE

|  | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 143.047 | 2 | 71.524 | .610 | .551 |
| Within Groups | 3168.319 | 27 | 117.345 |  |  |
| Total | 3311.367 | 29 |  |  |  |

a. TEAM = Hierarchical

Anova was used to test for a difference in attitude between different levels of education for the Hierarchical team. The Sig value (p-value) >0.05 indicating no significant statistical difference. However, the mean values in the descriptives table show that those with less than matric had a higher score for attitude.

## Table 30 (Team based group)

**Descriptives[a]**

ATTITUDE

| | N | Mean | Std. Deviation |
|---|---|---|---|
| <matric | 2 | 52.5000 | 9.1924 |
| matric only | 8 | 45.6250 | 10.9667 |
| technicon | 9 | 47.8889 | 9.8164 |
| degree | 2 | 47.5000 | .7071 |
| Total | 21 | 47.4286 | 9.4264 |

a. TEAM = Tbo

**ANOVA[a]**

ATTITUDE

| | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 79.379 | 3 | 26.460 | .265 | .850 |
| Within Groups | 1697.764 | 17 | 99.868 | | |
| Total | 1777.143 | 20 | | | |

a. TEAM = Tbo

Anova was used to test for a difference in attitude between different levels of education for the team-based group. The Sig. value (p-value) >0.05 indicating no significant statistical difference. However, the mean values in the descriptive table show that those with less than matric had a higher score for attitude. Similar to Hierarchical team.

# Oneway Anova - Race

## Table 31 (Hierarchical)

*Although the numbers in each race group were not proportionate, Anova was used because we are testing mean attitude score.*

**Descriptives[a]**

ATTITUDE

|  | N | Mean | Std. Deviation |
|---|---|---|---|
| Black | 20 | 58.7000 | 10.9933 |
| white | 6 | 51.1667 | 5.3072 |
| indian | 4 | 60.5000 | 13.7720 |
| Total | 30 | 57.4333 | 10.6857 |

a. TEAM = Hierarchical

**ANOVA[a]**

ATTITUDE

|  | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 305.333 | 2 | 152.667 | 1.371 | .271 |
| Within Groups | 3006.033 | 27 | 111.335 |  |  |
| Total | 3311.367 | 29 |  |  |  |

a. TEAM = Hierarchical

The Sig. value (p-value) >0.05 indicates no significant statistical difference between the race groups for the Hierarchical team. However, the mean values in the descriptive table show that Indians had the highest score for attitude, followed by Africans, then Whites.

# Oneway Anova – Race

## Table 32 (Team Based Group)

**Descriptives[a]**

ATTITUDE

|  | N | Mean | Std. Deviation |
|---|---|---|---|
| Black | 6 | 40.6667 | 7.3666 |
| white | 8 | 49.5000 | 11.5882 |
| coloured | 3 | 53.3333 | 7.3711 |
| indian | 4 | 49.0000 | 3.3665 |
| Total | 21 | 47.4286 | 9.4264 |

a. TEAM = Tbo

**ANOVA[a]**

ATTITUDE

|  | Sum of Squares | df | Mean Square | F | Sig. |
|---|---|---|---|---|---|
| Between Groups | 423.143 | 3 | 141.048 | 1.771 | .191 |
| Within Groups | 1354.000 | 17 | 79.647 |  |  |
| Total | 1777.143 | 20 |  |  |  |

a. TEAM = Tbo

Again, The Sig. value (p-value) >0.05 indicates no significant statistical difference between the race groups for the team. However, the mean values in the descriptives table show that Coloureds had the highest score for attitude and Black the lowest.