

**The Human Side of Construction Management**  
**A Critical Review of Human Resource Management Effectiveness**  
**in the Ethiopian Construction Industry**

A project presented by

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## ABSTRACT

The construction industry is a large business segment that plays a crucial role in the national development of countries and is particularly paramount in developing economies where there is lack of infrastructure. In Ethiopia, the construction industry suffers from lack of properly educated manpower, deficiencies in construction management skills, inefficient utilization of already trained manpower and a host of other problems.

This research is an exploratory investigation of human issues that contribute for the successful completion of construction projects in Ethiopia. Human factors in construction, such as organizational ambience, motivation, leadership and team building practices that help for the better utilization of the resource were assessed. A survey method, using questionnaire and interview techniques, was used to capture employees' attitudes as well as data on employee turnover, absenteeism, lateness and accident rates.

The results of the study showed that employees have good job satisfaction. Employee turnover was observed to be low. Peculiar arrangements for work attendance, whereby the 'psychological contract' of work between employers and employees is observed to work out well, are found to be in place. Substantial number of accidents, out of which some were fatal, has been reported. The 'human resource climate' was found out to be conducive as indicated by the level of job satisfaction and employee turnover.

Higher self-actualization needs of employees have been catered for through a high degree of freedom in performing tasks and challenging tasks. Employees however perceived that they don't receive a fair amount of pay. The predominant leadership style was found to be a *lasses-faire* type but with more task- rather than people-orientation. Team building practices were observed to be low with employees perceiving low team atmosphere, participative meetings and decision-making practices.

In order to effectively and efficiently utilize the human resource in the industry, companies are recommended to (1) cater to the basic needs of employees by providing a fair amount of pay, (2) incorporate incentives to tie performance with rewards, (3) have managers with professional training and experience which practice 'people-oriented' leadership style. Such managers would pursue 'wealth-maximization' goals, which focus on effectiveness and visionary leadership than on efficiency and management, (4) improve team atmosphere in their organization for creating effective communication and conflict resolution platforms, and (5) put in place safety policies and ensure their implementation to decrease accident rates.

# The Human Side of Construction Management

## A Critical Review of Human Resource Management Effectiveness in the Ethiopian Construction Industry

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## ABBREVIATIONS AND NOTES

|      |                                          |
|------|------------------------------------------|
| AE   | Architectural and Engineering            |
| EACE | Ethiopian Association of Civil Engineers |
| HR   | Human Resource(s)                        |
| HRM  | Human Resource Management                |
| ICB  | International Competitive Bidding        |
| P/PC | Production Vs Production Capacity        |

# 1. Introduction

## 1.1 Background

Construction is not only one of the major industry sectors of an economy but is also the largest and accounts for 12 to 25% of the GNP of both developed and developing countries. A major share of the national incomes of many countries is also invested back yearly in construction projects (Tsegaye,1998). Construction plays a crucial role in the national development and is particularly paramount in developing economies where there is lack of infrastructure. Attainment of goals with scarce resources in these countries calls for managing construction projects efficiently for the effective utilization of resources (Ibrahim,1996).

Generally, project management is distinguished from the general management of corporations by the 'temporary' organizations of activities which will be terminated up on the accomplishment of a mission. Project-driven organizations are characterized by the fact that all work centers around projects. Each project acts as a separate cost center having its own profit-and-loss statement and the total profit to the organization is the summation of profits of all projects (Krezner,1987).

Project management in construction has long been applied in the construction industry. The management of construction projects requires knowledge of modern management as well as an understanding of the design and construction process. Construction projects have a specific set of objectives, such as deliverable physical facility and constraints which must be met like a required time frame and planned budget for completion (Hendrickson,1999).

Results achieved in the management of business and industry reflect considerable ability to predict and control human behavior. The fact that a company is economically successful means, among other things, that management has been able to attract people in to the organization and to organize and direct their efforts towards the production and sale of goods or services at a profit (McGregor,1960).

Ritz (1984) asserts that the human element in construction management is a critical factor for the successful execution of construction projects. He further states the proper handling of human factors is the third leg of the stool leading to successful construction projects. This is



because even when a project has been planned, organized and controlled perfectly, it could still fail if its human factors are mishandled. Harrison (1992) also lists “management of human relations problems and conflicts” as one of the four critical elements that determine the success or failure of a project. [The other three are: the structure of project organization, the methodology used for planning and control, and the effectiveness of integration]. The indispensability of human factors in a construction project setting has also been reiterated by Ibrahim (Ibrahim,1996) who argues that resources in the construction industry – finance, material, equipment – are transformed in to productive use by the human element. The global construction industry, worth \$3.4 trillion– and of that enormous sum up to 40% is lost in wastage. The wastage is a combination of many factors out of which people problems constitute a major share (O’Sullivan,2002). One important aspect that has to be addressed in managing construction projects is thus the management of people in a construction project setting.

## 1.2 Statement of the Problem

The construction industry in Ethiopia plays a crucial role in the national economic development of the country. The construction sector is the prominent contributor in the provision of infrastructure in the country. The sector also creates huge employment opportunities there by sustaining a very large portion of the entire workforce (Alemayehu,2002). Apart from its role in the country’s development by means of provisions of infrastructure and creation of job opportunities to citizens, the construction sector is also important in that it is a major capital expenditure item in a country where resources are scarce. In the fiscal year of 1998/99 alone Birr 1.32 billion construction budget was allocated for the National Regional States. This is a staggering 67.4% of the total budget allocated for the fiscal year in the states, i.e. Birr 1.96 billion (EACE,1999).

While the importance of the construction sector in Ethiopia can be demonstrated by the above facts, Ibrahim (1996) reports the unfortunate state construction projects in Ethiopia suffer with considerable delays and subsequent cost overruns. Ibrahim further points out that human inefficiency is one of the major factors affecting construction projects in Ethiopia and the provision of good construction management practice incorporating tools for addressing people management problems in the Ethiopian construction project management setting can

minimize the problems and address the major underlying reasons for construction project delays, waste, excessive spending, and ultimately dissatisfied clients and exasperated contractors. Like many other developing economies Ethiopia's economy is characterized by the abundance of labor force and shortage of capital. The construction industry is one of the sectors in the country that suffer from lack of properly educated and trained human resources. Ibrahim however points out that the human resource problem in construction in Ethiopia is not only that of training but one of effective utilization of the already trained personnel. This can be achieved if the human factor in construction which is mostly neglected is well understood i.e. the need for motivation, effective leadership, choice of the right team and training are properly addressed.

The human aspect of construction projects that critically affects the success or failure of construction projects, which in turn will significantly impact the construction sector and hence the national economic development, merits a deeper investigation to identify problem areas as well as propose solutions to problems. A way forward to addressing the role of human factors in the Ethiopian construction industry is by assessing the effectiveness of the human resource management practice in the industry so as to evaluate the human resource function and its contribution to the achievement of companies' business objectives.

### 1.3 Review of Literature

The study of people in organizations is no new phenomenon. The Greeks and all civilizations who discovered how to organize large number of people fruitfully applied organizational theory. In more modern times, people have started to think about people in organizations more systematically (Handy,1999). According to Ivancevich and Glueck (Ivancevich and Glueck,1989), there are three crucial elements which are needed for organizations to be effective: mission and strategy, organizational structure and human resource management. People are important because they do the work and create the ideas that allow the organization to survive. Shifts in the composition, education and work attitudes of employees result in a change of the entire organizational environment. Managers, hence, have to respond to these changes and treat the human resources of the organization as the key to effectiveness, the survival and prosperity of the company.



The construction company, like any other organization, must recognize the key importance of human resources for its survival and effectiveness. Even more, the construction company need to further realize the strategic importance of human resources for its success since it is highly labor-intensive, people constitute a considerable portion of its total costs and as the human element animates other resources (Ibrahim,1996); it has also high organizational complexity and an inherent conflict situation (Harrison,1992) as well as must face the challenges of securing sustainable projects and works (Alemayehu,2002).

Handy (1999) identifies the most important factors affecting organizational effectiveness and illustrates them using an Ishikawa diagram which is given in Appendix E-1. The figure gives a schematic representation of more than sixty variables that are put in a logical sequence to show the possible causes of various effects relating to organizational effectiveness. While other managers could suggest more variables or group of the variables differently, Handy put certain headings that facilitate the study of variables in groups. The various variables that affect organizational effectiveness can be grouped in to the following clusters;

- Ability of employees,
- Motivation to Work,
- Roles and Interaction,
- Leadership,
- Group Relations,
- Systems and Structures,
- Economic Environment,
- Physical Environment, and
- Technological Environment.

Management is about obtaining results through people. As the mission and strategy, organizational structure and human resource management are crucial elements needed for the effectiveness of organizations in general, a construction project also needs to have effective project management systems, project organization and peoples system to be successful. From the group of variables identified for organizational effectiveness, most studies of human behavior in project management settings identify three elements. These elements are

Motivation to Work, Leadership and Group Behavior (Harrison,1992; Hancock and Newcombe,1996; Ibrahim,1996).

## 1.4 Scope of the Study

The subject of human resource management in the Ethiopian construction industry has not been adequately researched. However, both the areas of human resource management and construction management are vast fields of expertise and it is almost impossible to address all salient issues pertaining to managing human resources in construction project management settings of a country in a single research undertaking. Thus, this research study tries to give some theoretical background to the critical people factors in organizations as they apply to the construction sector and explore the application of certain HRM theories in selected construction and consulting organizations.

## 1.5 Objectives of the Study

The general objective of the research project is to integrate conceptual material from several disciplines with practical experience by applying knowledge and skills for the definition and analysis of problems. In this research project, therefore, the main objective of the research is the identification, analysis and solution formulation of human resources management problems in Ethiopian construction project settings that contribute for the successful completion of the projects, i.e. as specified, on schedule and with in budget. The specific objectives of the research project are:-

1. To examine the needs hierarchy amongst Ethiopian construction personnel and identify the motivational practices used;
2. To observe the style of leadership prevalent amongst Ethiopian construction company owners and construction supervisors;
3. To assess the extent of application of participative management for the purpose of effective team building amongst companies in the Ethiopian construction industry; and
4. To examine the human resource climate existing in the Ethiopian construction industry and identify problem areas that affect human resources function's effectiveness.



## 1.6 Significance of the Study

The successful completion of construction projects, i.e. as specified, on schedule and with in budget, benefits all participants in the construction process including construction foremen, engineers, architects, builders, owners, contractors, managers, academicians and administrators. It also benefits the general public at large since the avoidance of waste, excessive cost and delays in the construction of physical facilities ultimately affects the cost of goods and services rendered by the constructed physical facilities.

The results of this research are envisaged to specifically benefit the following parties in the Ethiopian Construction Industry:-

1. *Owners of Constructed Facilities* - As clients of construction projects, they supply resources for the construction process and eventually use the facilities once the construction is completed.
2. *Contractors* - As the major employers of the workforce in the construction industry, they could benefit from the exploration and identification of effective human resources management practices and problems areas in the country as well as establishing better communication with owners, planners, designers and regulatory bodies.
3. *Project Managers* - These are management people from the side of the contractor, owner, consultant or design-constructor who are in charge of the construction activity. These people direct and coordinate human and material resources to achieve predetermined objectives of cost, time and quality satisfaction. The lessons and experiences drawn from this research in exploring the Ethiopian construction project management setting could help them to have better insights to effective human resources practices in the industry.
4. *Academicians* - Professionals working in the various educational institutes of the country can use this research as a platform for launching more research in the area.
5. *Public Works Authority* - Government bodies, such as the Ministry of Infrastructure and the Ministry of Capacity Building, that are concerned in the regulation of the construction of public works could benefit from the insights drawn in this research.

## 1.7 Research Methodology

The basic research design used in the research project is an 'exploratory research methodology' using both primary and secondary data. An exploratory research methodology was chosen in order to assess the magnitude and scope of problems and facilitate for the suggestion of solutions. Primary data was obtained from consulting firms and contractors by two means 1) From questionnaires distributed to construction personnel; and 2) From interviews with human resource specialists.

Apart from the primary data captured through questionnaires and interviews, secondary data from articles, journals, books and the Internet have been used in conducting the research project.

The research method employed was the 'survey research method' which allowed questions to be directed to large groups of people. This method permitted for the exploration of current issues by establishing people's views on what they think, believe, value or feel.

The sampling method employed to conduct the survey used a combination of two sampling techniques: 'Cluster Sampling' and 'Quota Sampling'. Cluster sampling was used to select the particular companies included in the survey and offered advantages of representativeness while Quota sampling followed the cluster sampling and allowed identification of the specific construction personnel to be included with advantages of economy of effort.

## 1.8 Tools for Analysis

In the research project, a survey of 24 companies in the Ethiopian construction industry was conducted. Of this total number of companies, 18 are construction companies above Grade 5 (G-5), representing 10% of the total construction companies above the specified grade in the country (N=181). The Ministry of Infrastructure gives grades to contracting companies based on their human and non-human resources thereby specifying the maximum value of each construction project they can undertake. According to the Ministry of Infrastructure a G-5 construction company can take a project with a maximum value of Birr 5 million. The sample however, included all types of construction companies; i.e. Building Contractors (BC), Road



Contractors (RC), General Contractors (GC) and Specialty Contractors (SC). On the other hand, former Ministry of Works and Urban Development (now called Ministry of Infrastructure) had registered 46 engineering consultancy firms. The survey included 6 companies representing approximately 12% of the total architectural/engineering consulting firms registered by the national professional association. From the total 18 companies included in the sample, the researcher received a response of 69 questionnaires out of 72 (95.8%) and conducted 23 interviews out of 24 (95.8%). The interview was conducted with a human resource executive or administration department heads of each company included in the sample. Three questionnaires were given to each company selected in the sample and construction personnel representing a quota from three different categories of professional practice have given their responses. The three different categories from which a quota has been drawn are: Designers (Office engineers/architects), Supervisors (Site engineers) and Construction foremen.

The questionnaire was a structured questionnaire designed with the aim of capturing the views and beliefs of construction personnel regarding the human resource management practices in their respective construction and consultancy companies. The human resources management practices explored HRM activities of acquisition, development, reward and motivation, maintenance and departure of employees as well as Organizational issues of motivation, leadership and team building. In addition to identifying people management issues in the selected companies, the questionnaire also facilitated the gauging of attitudes of employees regarding their general satisfaction in their work and their company. The interview was, on the other hand, semi-structured and designed to capture such information as employee turnover, absenteeism rates, lateness rates and accident rates & safety practices.

### 1.9 Limitation of the Study

In attempting to assess practices and problem areas at a country level, time and finance constraints were evidently encountered. The unavailability of previous studies, data and information limited the research study to concentrate on selected few issues and precluded various human resources activities that make up the human resource function.



The 'Survey Method' that was employed involved human respondents and the basic data were obtained by talking to people, either face-to-face or by written questionnaire. This gave rise to a problem of dealing with verbal reports, both oral and written, and thus the researcher was limited to the data which people were able and willing to report in the first place. However, a non-survey method (structured observation) was employed to verify conclusions rather than taking people at their word.

The 'Quota Sampling Method' that was used in conjunction with the 'Cluster Sampling Method' also had a drawback. While it split the sample that was narrowed down by cluster sampling in to subgroups to reflect diversity in the proportion in which it occurs in the population, it wouldn't give each person in the population an equal chance of being selected in to the sample. This might distort the conclusion that the researcher seeks to make, due to an uncontrolled or unrealized influence. Nevertheless, this draw back of 'quota sampling' (non-probability sampling techniques in general) was well set off by the fact that the method was flexible, afford better opportunity for collaboration with respondents and is particularly useful for the familiarization of issues being investigated.

## 2. The Human Side of Organizations

Newcombe et al (cited in Ibrahim 1996) developed a system model with inputs, conversion systems and outputs for distinguishing the important elements related to human factors in an organization. The model they developed can be slightly modified to capture some of the most important human factors that determine organizational effectiveness of companies in the construction industry. This modified model of addressing human factors in organizations can form a framework for investigating the human side of construction management. This modified model is shown in fig. 2.2.

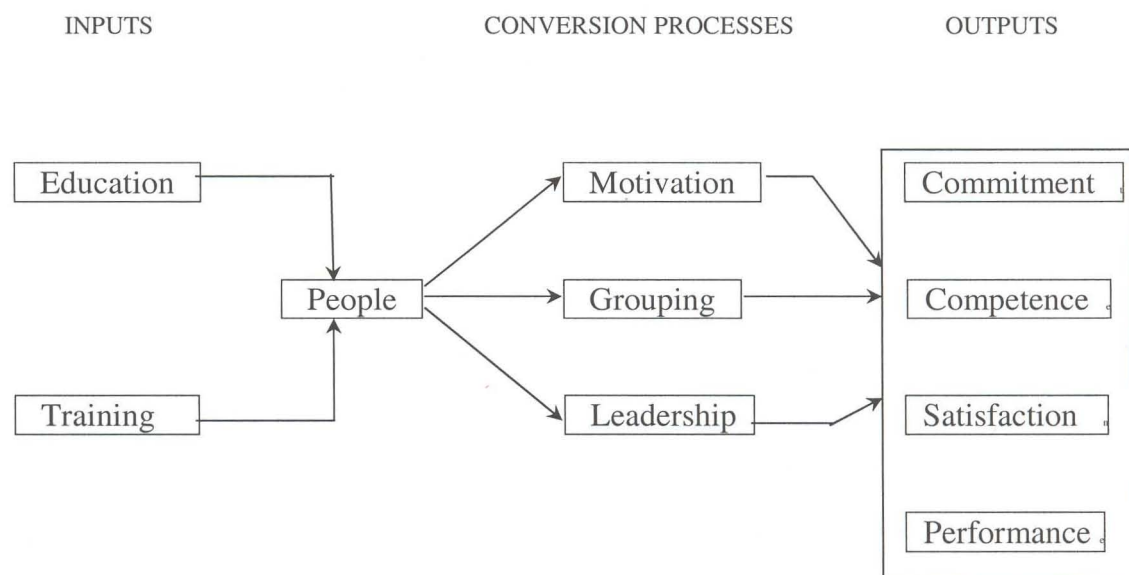


Figure 2.1 A modified Systems model for depicting Human Factors that affect Organizational Effectiveness of a Company in the Construction Industry (Cited in Ibrahim, 1996)

### 2.1 Motivation to Work

In general terms, motivation is concerned with the forces which instigate, give direction to and sustain behavior. This is to mean, motivation is what arouses people in to action, determines the goals towards which these actions are channeled and influences the vigor and persistence with which such goals are pursued. Motivation is important because it is one of the major factors that affect performance.

A common difficulty for managers is to balance the organization's requirements for productivity and efficiency with the desires of the workforce for those elements of gain – such as job satisfaction and motivation – which are not purely financial. As motivation is an 'internal decision process' that determines the intensity, direction and persistence of efforts towards achieving a goal, an understanding of the process is vital for making better decisions affecting people in organizations. The employee's decision is often unconscious, instinctive, or physical as when he/she goes in search of food, or more psychological, as when he/she seeks security under threat; or it may be a conscious and deliberate as when he/she decides to leave or join a firm, or to sacrifice or optimize resources. An understanding of what motivates people can help in influencing the workforce by changing the components of that motivation process there by managing the human resources for the achievement of objectives. The same process can also enable in acquiring more knowledge of the implications of decisions and their likely outcome.

Each of the motivation theories forwarded by behavioral scientists have grains of truth, but overall, no general theory of motivation has been fully accepted. This is usually attributed to the complexity of the subject – which encompasses diverse psychological and sociological bases. It is also because the factors which affect motivation vary with time and circumstances. All motivation theories stem from some underlying assumptions about people. To a large extent unproven, they have evolved through time in to certain categories reflecting the dominant opinion of the time. Schein (cited in Handy,1999) has classified these assumptions about people in to five categories. These are:

1. *The rational-economic assumption.* This assumption holds that people's actions are based on self-interest and they are primarily motivated by economic needs. The organization offers incentives to which people are passive agents to be motivated, manipulated and controlled. People's irrational feelings and unpredictable traits must be also controlled. Management people who are self-motivated, self-controlling and in charge of their emotions must assume responsibility for the management of the others. This assumption is used in McGregor's Theory X (1960) and is given in Appendix A-1.
2. *The Social assumption.* This assumption holds that people are essentially social animals and gain their basic sense of identity from relationships with others. As a result of the rationalization of tasks following the industrial revolution, much of the meaning has gone out of work itself and must be sought in the social relationships of the job. It also assumes



that people are more influenced by peers than management incentives and management can only be effective to the extent that it can mobilize and rely on the social needs of employees. In the 'social assumption' issues of leadership style and group behavior are therefore of great importance. Most prominent works using this assumption include studies conducted by Elton Mayo (1945) and Henry Mintzberg (1973).

3. *The Self-actualizing assumption.* This assumption holds that people are primarily self-motivated and self-controlled. People seek to be treated as mature individuals on the job and use their capabilities. External controls and pressures are likely to be seen as reducing the autonomy of people thereby affecting their motivation. Given a chance, people will voluntarily integrate their own goals with those of the organization. There are many studies that used this assumption, but to name few important one, we have the need hierarchy theory of Abraham Maslow (1943) and McGregor's Theory Y. Other studies that gave evidence of the validity of this approach include the research's done by Mayo (1945) and Herzberg (1966).
4. *The Complex assumption.* The central theme of this assumption is that 'there is no one correct managerial strategy'. The term 'complex man' is used to refer to the fact that people are variable. People have a hierarchy of motives that change over time and with the situation. The organization can teach people new motives and these motives can also change with the organization, or part of the organization that the person is currently working in. Hence, managers should not necessarily seek to find fulfillment of all the needs of their employees but rather try to choose the best strategy amongst a variety of managerial strategies in view of the appropriateness to the situation and to people's needs. All the above cited studies use this assumption, but it can also be particularly found in the studies conducted by Whyte (1955) and Zaleznik (1958).
5. *The Psychological assumption.* This assumption holds that a person is a complex, unfolding, maturing organism who passes through physiological and psychological stages of development. People evolve an ego ideal towards which they strive. The most powerful motivating forces in them, over and above such basic drives as hunger, sexuality and aggression, is needed to bring people closer to their ideal.

The above assumptions about people signify the evolution ideas about motivation and can be investigated under two themes. These themes are: -

- Needs-driven motivation, and
- Goal-directed motivation.

### 2.1.1 Needs-driven motivation

Need-driven motivation theories, also called content theories, attempt to predict human behavior at work with the general assumption people behave so as to satisfy their human needs. The underlying concept of these theories is that an unmet need force moves a person in to action and hence motivates him. The most popular 'need-satisfaction' theories are forwarded by Maslow(1943), Herzberg(1966), Alderfer(1969) and McClelland(1986). These theories, though varying in labeling needs, agree on an the ascending order of sophistication of needs. The Motivation Matrix diagram shown on the next page summarizes the philosophies of the theories in an application areas while each model has been given in appendix A-2 to Appendix A-6.

Table 2.2: Motivation Matrix

|        | PERSONAL                                                                                                                                      | BUSINESS                                                                                                                    | MOTIVATORS                                                                                                                                                                               |
|--------|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| GROWTH | <ul style="list-style-type: none"><li>• Actualization</li><li>• Achievement</li><li>• Esteem</li><li>• Independence</li><li>• Power</li></ul> | <ul style="list-style-type: none"><li>• Advancement</li><li>• Challenging Work</li><li>• Title</li></ul>                    | <ul style="list-style-type: none"><li>• Opportunities to Advance</li><li>• Opportunities to Learn</li><li>• Job Enrichment</li><li>• Increased Control</li><li>• Participation</li></ul> |
| SOCIAL | <ul style="list-style-type: none"><li>• Status</li><li>• Love</li><li>• Belongingness</li><li>• Affiliation</li></ul>                         | <ul style="list-style-type: none"><li>• Acceptance</li><li>• Professional Relationship</li><li>• Respect of Peers</li></ul> | <ul style="list-style-type: none"><li>• Praise and Recognition</li><li>• Socialization</li><li>• Compliments</li><li>• Group Activities</li></ul>                                        |
| BASIC  | <ul style="list-style-type: none"><li>• Safety</li><li>• Stability</li><li>• Food, Air, etc</li></ul>                                         | <ul style="list-style-type: none"><li>• Working Condition</li><li>• Benefits</li><li>• Money</li></ul>                      | <ul style="list-style-type: none"><li>• Status quo</li><li>• Incentives</li><li>• Money, Bonuses, etc</li><li>• Favorable Working Conditions</li></ul>                                   |

Source: *Analyzing Organizational Behavior (Smith,1991)*

The key concepts incorporated in need driven theories can be summarized as:

- *Each individual has different levels of needs, arranged hierarchically in an ascending order of sophistication – basic to complex.* The basic-level needs are those for food, air, water,



shelter, etc. Midlevel needs focus on the sense of belongingness that everyone must feel. Higher-level needs include the needs for independence, autonomy, creative expression and self-actualization.

- *Each individual has varying requirements for need-satisfaction at each level.* Some people focus more on satisfying one level of need more than others.
- *Once a level has been satisfied, it no longer has the same motivational impact on behavior.* Money for example, ceases to be a motivator when an employee's financial needs are met. Furthermore, when the basic-level needs of an employee are met, he/she is drawn to meet the next-higher level of needs, and this continues until the peak experience of self-actualization. Maslow defined self-actualization as "becoming more and more of what a person is capable of becoming" and said the more a person experiences it the more he/she wants it.

What can be drawn from 'need-oriented motivation' theories is that once an employee's basic-level needs for salary, benefits, decent working conditions and stability are met, the employee is motivated to satisfy higher-level needs such as professional acceptance, respect of peers, opportunities for advancement, creative expression and self-actualization.

### 2.1.2 Goal-directed motivation

Goal-driven motivation theories focus on the choices people make in selecting and maintaining behavior by reckoning its consequences. These theories view motivation as a process rather than a set of individual needs and characteristics. Goal-driven motivation theories try to establish a set of relationship between a set of variables and their effect on behavior. Thus, they can crudely be described as using a 'carrot-approach' to the achievement of tasks. This is to say, they use 'incentives' in shaping and reinforcing behavior of employees in the direction that is beneficial to the organization. There are two major theories that stress goal as important motivators of behavior. These are, the equity and the expectancy theories.

The equity theory holds that what an individual perceives regarding his/her equal treatment in comparison to colleagues, i.e. those who are equal on job terms, as the same career level, sharing the same job description and so forth; is a critical factor in influencing the individual's motivation. Thus, according to the equity theory, the need for perceived equitable treatment and the idea of perceived fairness are major factors in determining job performance and satisfaction. A model for an equity theory is given in Appendix A-7.



The expectancy theory on the other hand emphasizes the relationship between effort and reward. In trying to establish the relationship between effort and reward, the theory uses three important links: Linking effort and performance, Linking performance and outcomes and Linking outcomes and effort.

The ability and skill of the individual, the clarity of objectives and resources (tools, materials, information, etc.) are all important factors in establishing the link between effort and performance. Ability for example is a key factor since if a person does not have the ability to achieve an acceptable level of performance, he/she may need to switch in to another job. Clarity of objectives is another critical factor because if a person does not know exactly what is required, it is difficult for him/her to judge what level of performance is acceptable, or how much effort is needed. The third key factor is the availability of sufficient resources to allow performance to occur.

The link that individuals perceive to exist between performance and outcomes generates motivation – or not, as the case may be. Employees must believe that a certain level of performance will result in certain outcomes, including promotions, and managers must make clear to subordinates the relationship between the two. The outcomes could be of two types. The first group is *extrinsic* which are material benefits you get from working on the job such as pay. The second group is *intrinsic* which are generally more abstract results that one gets from actually doing the job or from the performance of the work. Examples of this type include ‘a sense of achievement’ and ‘praise for a job well done’ and its opposite are one such as ‘a reprimand for poor performance’.

Finally in linking outcomes and effort, a feedback loop will be established which will improve the inputs of performance. Thus, expectancy theory can be summarized in that rewards, both extrinsic and intrinsic must be perceived to be fair rewards. ‘A fair day’s pay for a fair day’s work’ clearly portrays the theory. A model for expectancy theory is given in Appendix A-8.

The two goal-driven theories, apart from their ‘process’ approach to motivation, differ from need-oriented theories in that they believe performance did not follow on from job satisfaction but rather job satisfaction is the result of a goal being reached or a valued outcome being achieved.

### 2.1.3 Construction-related motivation studies

Motivation is a central element of managing people in construction for there are large number of people, with variety of crafts and knowledge as well as intermittent requirements at the construction site. Nevertheless, the majority of studies on the subject of motivation have been undertaken in the manufacturing sector, where organizations tend to have a permanent structures. Hancock and Newcombe (1996) attribute some of the reasons for neglecting construction, with its project-based employees, in motivation studies as:

- general lack of the required documentary evidence;
- hesitation of social scientists who have little interest or knowledge of construction;
- lack of construction researchers with adequate understanding of social sciences, and
- inadequate funding for research from the industry.

Hancock and Newcombe (1996) also identifies that the problem in studying motivational aspects within the construction industry is exacerbated by the use of a typically classical school approach to motivation by construction managers. The main trust of this school of thought is based up on the straightforward exchange of financial rewards for performance and this is the basis on which many firms in the construction industry still operate. Mackenzie and Harris (1984) however, supported with study findings, argue that the classical school approach is an outmoded way of working. Their studies show that construction workers are more likely to be motivated by practices attuned to contemporary theories and that the desire simply to receive a wage increase is frequently being suppressed by higher-order needs like job security, a sense of belonging and welfare.

Job satisfaction is a central issue to motivating construction employees. Construction managers can pay more attention to 'job design' where they can put motivational theories in to practice. The idea of studying jobs goes back to classical theory. In his study of job design for shop floor workers, Taylor (1911) proposed that the best person should be selected and trained in the best methods in order to improve productivity. In the human relations school, where people like Mayo, Likert and McGregor made contributions, there was an equal concern for redesigning jobs but here for the purpose of removing the monotony and boredom out of jobs and incorporate senses of challenge, autonomy, achievement and psychological maturity. While the main concern of the classical school of thought was productivity, the



concern of the school human relations was to improve the quality of working life of employees. Thus job design need be concerned with increasing the job satisfaction of workers there by improving their productivity and their quality of work life.

Langford, Hancock *et al* (cited in Hancock and Newcombe, 1996) see job design as comprising four inter-related functions, i.e.

- the process and principles employed which determine the content of a job aimed at achieving the organization's objectives
- the effective allocation of jobs among the organization's employees
- establishment of the relationships that should exist between the job holder and his/her colleagues, supervisors and subordinates
- establishments of the necessary personnel support system in terms of selection, training, supervision, assignment, rewards, etc.

They identify that each of these points must be given equal consideration because restructuring the organization or providing increased rewards will not succeed if the work necessarily to achieve the organization's objectives has not been effectively designed, allocated and arranged. There are three approaches to job design. These are job rotation, job enlargement and job enrichment. A conceptual model for job design is given in appendix A-9.

## 2.2 Leadership

Leadership and management are two terms that are often confused. Robbins (2001) contrasts the two by stating that good management brings about order and consistency by drawing up formal plans, designing rigid organization structures and monitoring results against plans while good leadership is coping with change so as to establish direction by developing a vision of the future, communicating the vision to others and inspiring them to overcome hurdles. Covey (1995) shares this view when he defines management as being concerned with efficiency – doing things right where as leadership as being concerned with effectiveness – doing the right things.



For an organization to be effective, its managers need to be able to integrate the workforce in to a well-motivated and productive team, committed to the completion of projects and the firm's general success. According to Hancock and Newcombe (1996), this can be a difficult task in construction due to the likely changing workforce (on a project-by-project basis) and the use of subcontracted labor. The above factors can frequently combine to create a complex and turbulent internal environment and strong leadership is required to deal with it.

Major discussion points in leadership include whether "an individual is born to be a leader" or "he/she is trained to be a leader"; whether a leader should give more importance to the "task" or to the "people" and whether there is "an effective leader" or "a leader effective on one situation and ineffective in another". Overtime, the quest for answers to the above questions have evolved to three sets of theories about leadership. These are trait theories, style theories and contingency theories. An exploration of this theories is important in order to relate them to appropriate styles of leadership in the construction industry.

### 2.2.1 Trait theories

One major area of study about leadership has been the identification of the traits that distinguishes leaders. Handy (1998) identified the following leadership traits as important to be an effective leader:

- above average intelligence,
- initiative,
- self-assurance,
- determination,
- enthusiasm,
- imagination,
- integrity,
- sociability, and
- faith.

According to Robins (2001), the search for personality, social, physical or intellectual attributes that would describe leaders and differentiate them from non-leaders started in the 1930s. The media was specifically termed as a believer in trait theories of leadership for their

use terms such as charismatic, enthusiastic and courageous to describe prominent leaders. However, research efforts at isolating leadership traits resulted in a number of dead ends. The trait theories have faced difficulties in that traits are difficult to isolate and measure limiting the values of a trait and rendering it as an intangible concept. Thus the current trend is to try to identify traits that are desirable for a leader in particular situation and define the characteristic of a leader using both traits and the situation.

### 2.2.2 Style theories

The trait research tried to provide the basis for selecting the 'right person' to assume formal positions in groups and organizations that require leadership. In contrast, style theories, also called behavior theories, study the behavior of leaders in an attempt to identify critical behavioral determinants of leadership and thus train people to be effective leaders. The difference between trait and style theories, in terms of application, lies in their underlying assumptions. Trait theories claim "leaders are born", one either has leadership qualities or not, while Style theories claim "leaders are made", one can be trained to be an effective leader. Leadership style is the way in which a leader approaches the task to be done and the people that are under his/her direction. Usually this is a continuum and people will be somewhere in the middle of the continuum. Figure 2.8 below shows some continuums that are formed by two extreme behaviors.

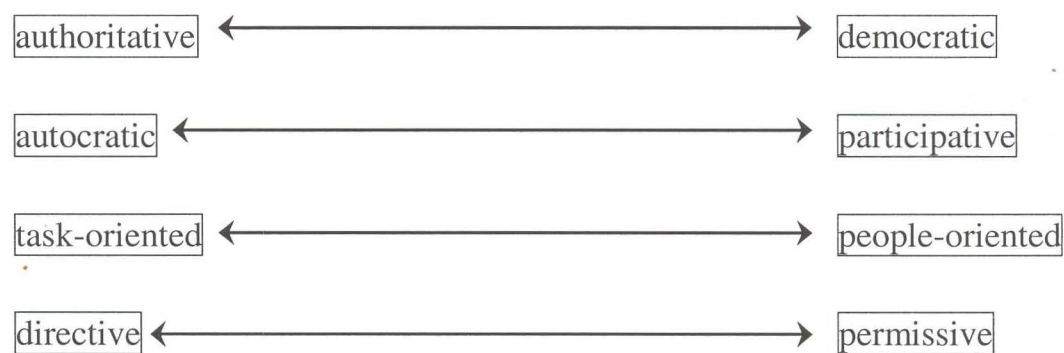


Figure 2.2 Styles of leadership

Hancock and Newcombe (1996) states the general underlying assumption is that democratic, people-oriented styles of leadership are likely to elicit better performance from subordinates than autocratic, task-oriented styles. There are three models which illustrate the range of

styles available to leaders. These models are the Tannenbaum/Schmidt model, the Grid model and the Life cycle model. These models are given in Appendix B-1, Appendix B-2 and Appendix B-3 respectively.

### 2.2.3 Contingency theories

Both trait and style theories of leadership concentrate on specific variables and situations and hence fail to establish a link between leadership behavior and successful performance. Thus trait and style theories are relevant on certain occasions but cannot be held true as a universal truth. Contingency theories take more specific account of the other variables involved in any leadership situation. The factors that contingency theory usually consider include:

|                          |                                                                                                                       |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------|
| <i>The leader:</i>       | Maturity, values, attitudes, personality, power base, 'natural preferred style, motivation                            |
| <i>The task:</i>         | Type (routine, pioneering, creative), technical, complexity, time scale, urgency, risk involved                       |
| <i>The led:</i>          | Competence, self-confidence, need for direction, commitment, motivation, interest, expectations, zone of indifference |
| <i>The organization:</i> | Dominant culture, attitudes to change: rigid, flexible                                                                |
| <i>Other leaders:</i>    | Values, attitudes, dominant style, power base and strength                                                            |

Fiedler's leadership model is a contingency theory model that describes the distance between leaders of effective groups. This model is given in Appendix B-4.

### 2.2.4 Construction-related Leadership studies

Leadership is a very essential element to be possessed by many employees so as to influence others to work toward objectives. Typical positions that require high degree of leadership skills include the 'labor foreman', 'construction foreman', the 'site engineer' and the 'project manager'.

Bresnen *et al* (cited in Hancock and Newcombe, 1996) studied site managers in England and found out that there was a positive association between the site manager's leadership



orientation and project performance across wide range of situations. The researchers used the following questions in conducting their study:

- ✓ What is the range of patterns of observable leader behavior found among site managers?  
Is this in anyway affected either by characteristics of the individual concerned or by characteristics of the situation in which they operate?
- ✓ To what extent, and in what ways, do the approaches of site managers to managing work on site affect performance?
- ✓ To what extent do characteristics of the situation facing site managers influence or moderate the approaches that they adopt and their effects?

The positive association that was observed between 'leadership orientation' and good performance in the above research signified that an emphasis placed on people in contrast to task/production orientation in recruitment, selection and training practices paid off. However, this positive association was contingent up on the three variables of project size, project duration and composition of labor force. The association was found to be strong on longer, larger projects where the use of direct labor was more extensive.

Lansely *et al* (1974) (cited in Hancock and Newcombe 1996) studied leadership at a corporate level, looking how far a company's management structure and style of management influence performance. The researchers tried to compare 50 small printing firms and building firms and found out that:

- a printing firm has short production cycles, sequential tasks and machinations; they are characterized by bureaucratic structures and a task-oriented management style;
- a construction firm usually has a long production cycle, simultaneous and sequential tasks performed by craftsmen using traditional skills, and some degree of mechanization. High performing firms also have a more organic structure and use a people-oriented management style.

Rowlinson *et al* (cited in Hancock and Newcombe, 1996) also explored issues of leadership style in construction projects in Hong Kong. According to the researchers, a major factor of leadership in Hong Kong is the Chinese culture, with its dominant characteristics of family

values, loyalty, respect, obedience, punctuality etc, and these characteristics indicate a more mechanistic organizational structure, theory X management and directive leadership.

Rowlinson *et al* have however included a wide range of style in their sample and they observed “ Different leadership styles are employed by the same project leaders and these may be attributed to the different situations in which they find themselves. In general project leaders tend to use supportive style in the feasibility study and pre-contract stages at works, and a directive style in the post-contract stages of works. As far as site staff are concerned, participative and directive are common while supportive and achievement-oriented styles are used as secondary styles. Hong Kong construction managers are more relationship oriented than their western counterparts.”

## 2.3 Groups in Organizations

One of the main characteristics of an organization is that people work in groups. While groups are ubiquitous in all kinds of social settings, organizations have keen interests on work groups that form a central part of their organizational life. Functional groups are created by an organization's structure which is clearly depicted in an organizational chart. Groups, such as Design & Consultancy, Contracts & Specification, Drilling and Construction, are for example, typical for a Water Drilling enterprise. Typically these groups are formed to fulfill particular organizational and/or departmental objectives where an individual could not achieve the objective alone and/or a range of skills are required.

The term 'group' is not only designated to people working to perform the functional duties of the organization. A group is any gathering of individuals in an organization to complete a task or enhance personal interests and friendships. Those groups that operate to foster interests of and friendships among individual members are called Informal groups. On the other hand, the reasons for the existence of Formal groups may be to perform functional duties or to complete a task. Some of the reasons why groups are formed include need satisfaction, proximity, attraction, goals and economics.

Robbins (2001) states that in recent times, management has found teams to be more flexible and responsive to changing events than traditional departments or other forms of permanent

groupings. Teams have the capability to quickly assemble, deploy, refocus and disband. Thus as organizations restructure themselves to compete more effectively and efficiently, they have turned to teams as a way to better utilize employee talents.

Although both work groups and work teams are terms used to designate gathering of individuals and seem to be used interchangeably, there are distinguishing features observed between them. According to Robbins (2001), the following distinctions can be observed:

- ✓ *Work group*: is a group that interacts primarily to share information and make decisions to help each group member perform within his/her duty of responsibility.
- ✓ *Work team*: is a group whose individual efforts result in a performance that is greater than the sum of the individual inputs.

The interdependence between group members is higher in work teams where the close knit amongst members positively impacts performance. A good example of work teams is a space shuttle crew. It has diverse skills and personalities but members depend on one another and work to achieve a common objective.

### 2.3.1 Characteristics of Groups

The general awareness of group characteristics fosters better understanding of group behavior. These group characteristics are also important in describing group dynamics where the various stages of group development exhibit certain characteristics.

Robbins (2001) lists the following as some of the more important group characteristics: composition, status hierarchy, roles, norms, leadership and cohesiveness. These characteristics are described in some detail below.

1. *Compositions*: Group composition relates to the extent to which group members are alike. Members of a homogenous group share a number of similar characteristics. Characteristics may be demographic (race, gender, socioeconomic background, education, age or culture origin), personality, skills and abilities or work experience.



2. *Status Hierarchy*: The status assigned to a certain position is a consequence of certain characteristics that differentiate one position from other positions. A person may be given status because of such factors as job seniority, age or assignment.
3. *Roles*: Each position in a group structure has an associated role that consists of the behaviors expected of the occupant of that position.
4. *Norms*: Norms are standards shared by members of a group with certain significance for the group. Norms may be written or verbal and are developed for regulating many different aspects of their members' behavior. They may apply to every group member, or to only some group members while the acceptance of norms by members varies in degree among group members to whom the norm applies.
5. *Leadership*: Leadership is an extremely crucial characteristic of groups as the leader of the group exerts influence over the other members of the group. In formal groups, the leader can reward or punish members who don't comply with orders or rules by exercising a legitimately sanctioned power. In the case of informal groups, the leader is a highly respected person who embodies the values of the group, aids the group in accomplishing its goals and enables members to satisfy their needs.
6. *Cohesiveness*: Cohesion refers to the forces between group members to remain part of the group. Cohesiveness is an important characteristic because cohesive groups tend to be motivate individual members together, increase the level of conformity to group norms, with a possible positive or negative impact on performance. The relationship between group cohesiveness and performance is given in C-1.

### 2.3.2 Group Conflict

Groups or teams work under competitive pressure in their effort to achieve objectives. In this process certain effects are observed. The attitude to other groups or individuals are also different and predictable. Group conflict has the following effects on the group's internal structure:

- The group becomes more close knit and demand greater loyalty from its members
- There is a shift of emphasis from social functions to task functions required to demonstrate the group's effectiveness
- The leadership style often changes from democratic to directive or autocratic, a change which the group is prepared to tolerate in the situation
- The relationship between members will become more structured and less organic

- Greater effort may be demanded from group members

On the other hand the attitude to other groups or individuals during conflict will be:

- The other group or individual will be seen as the enemy
- A distortion of perception about the other group will develop
- Hostility will increase as communication and interaction between the groups decreases
- If the groups are forced to work together, then the group's own representative will be supported and the other group's representative will be criticized

### 2.3.3 Making Effective Groups – Team Building

Many researches have focused their effort at trying to identify factors and group characteristics that are related to team effectiveness. Robins (2001) gives the model shown below where he lists the most important group characteristics that contribute for effective team building.

#### A Team Effectiveness Model

##### *Work design*

- Authority
- Skill variety
- Task identity
- Task significance

##### *Context*

- Adequate resources
- Leadership
- Performance evaluation & rewards

##### *Composition*

- Ability
- Personality
- Roles and diversity
- Size
- Flexibility
- Preference for Teamwork

##### *Process*

- Common purpose
- Specific goals
- Team efficacy
- Conflict
- Social loafing

Figure 2.3 A Team Effectiveness Model

According to Robbins (2001), while composition, norms, leadership are group characteristics that influence the effectiveness of groups in general, there are other factors that are important when it comes to developing teams. These are training, communication, empowerment and rewards. *Training* is important because it can help developing problem-solving, creative thinking and interpersonal skills. Even though individual skills and abilities are vital for team performances, team members could face difficulty in knowing how to function effectively as a team without proper training. *Communication* allows the proper channeling of information and clarification of objectives. *Empowerment* is giving teams the authority to make decisions and act autonomously. *Rewards* in teams apply as a reward system that factors out and allocates team rewards in addition to rewards to individuals who make contributions.

Another challenge in making groups effective is ensuring everyone has a chance to contribute and participate. Corporate accomplishments could be regarded as the results of a combined creative and decision-making talents of all participants. One very important element of promoting participative management practices is through meetings. For many managers, meetings could take up a large portion of their working day. However, meeting can help in resolving group or team conflicts in addition to their traditional purposes of planning, monitoring and controlling activities.



### 3. Evaluating Human Resource Management Effectiveness

#### 3.1 The Human Resource Management Audit

Evaluation of the Human resource function, also called a Humane Resource Audit, is a systematic analysis and evaluation of the human resource management function. It is designed to measure the costs and benefits of the total HRM program and to compare its efficiency and effectiveness with the organization's past performance, the performance of comparable effective enterprises and the enterprise's objectives. Evaluation of the activities and programs of the HRM unit is performed for the following purposes :-

- to help HRM do its part in achieving the organizational objectives
- to justify HRM's existence and budget
- to improve the HRM function by providing a means to decide when to drop activities and when to add them and
- to provide feedback from employees and operating managers on the HRM effectiveness

The feedback provided by the Evaluation of the Human Resource Function can also be used by both management and a Human Resource Specialists to value the contribution of the Human resource function to the organization's Strategic business objectives. The Human Resource Audit process depicting this cyclical activities is shown in Appendix D-1.

The conduct of the evaluation of the Human Resource is influenced by various factors. Major factors include leaders attitude and style, and economic condition that aim to justify the cost effectiveness of such a function. A complete list of these factors is given in Appendix D-2.

The evaluation of the effectiveness of the HRM programs is needed to determine how healthy the overall organization is in accomplishing its mission and goals. Evaluation serves as a unifying force in that it focuses attention on crucial factors such as performance, satisfaction, turnover and absenteeism. Without an evaluation philosophy and theme, the various HRM programs are treated in a fragmented fashion. Staffing experts focus on securing the best new hires, the compensation specialist's concern is having a competitive pay system and the training expert works to create a learning and development atmosphere. Each of these areas is important for the well being of the organization, but there is often little effort at integrating

the various activities. The attempt to evaluate each of the HRM programs separately and together as a collective set of what the HRM is doing fosters a unifying spirit. The success or failure of HRM is considered in terms of the unit, and not as an individual activity.

## 3.2 Human Resource Management Climate

### 3.2.1 Job Satisfaction

Job Satisfaction is a general attitude towards one's job and can be defined as the difference between the amount of reward workers receive and the amount they should receive. A person with high level of job satisfaction holds positive attitudes towards the job, while a person who is dissatisfied with his or her job holds negative attitudes about the job. In practice, individuals use the term 'employee attitude' when they refer to 'job satisfaction' and the two terms are frequently used interchangeably (Robbins, 2001).

Job satisfaction is a key component of depicting the Human Resource Climate because of the belief that satisfied employees are more productive than dissatisfied employees has been a basic tenet among managers for years. Robbins (2001) reports that studies conducted in developed countries have consistently shown that workers are satisfied with their jobs. This is applicable over time, across national boundaries, through economic recessions as well as prosperous times. Apart from the explanation that people seem to be getting whatever it is they want from their jobs, there are other points for people being satisfied with their job. These are:

1. People don't select jobs randomly; they tend to gravitate toward jobs that are compatible with their interests, values and abilities; thus, since people tend to seek jobs that provide a good person-job fit, reports of high satisfaction shouldn't be surprising; and
2. Employees are expected to resolve inconsistencies between dissatisfaction with their jobs and their staying with those jobs by not reporting the dissatisfaction. Hence the positive findings of satisfaction might be tainted by efforts to reduce dissonance.

The measurement of job satisfaction can be undertaken in a number of ways. One widely used approach is the conduction of an "employee attitude survey", also called a "summation of job facets", attempts to identify key elements in a job and ask for employee's feeling about each. Respondents then reply by rating their agreement to each question posed by circling a number



between 1 and 5 that corresponds to answers from “highly satisfied” to “highly dissatisfied”. Typical factors that will be included are nature of the work, supervision, present pay, promotion opportunities and relations with co-workers. These factors are rated on a standard scale (e.g. Likert scale) and then added up to create an overall job satisfaction score.

The effect of job satisfaction on employee performance and the ways in which employees express their job dissatisfaction have significant implications to human resource managers. Various studies have been conducted to establishing positive & negative correlations between Job Satisfaction and other variables such as productivity, absenteeism and turnover.

### 3.2.2 Employee Turnover

Turnover refers to the process of employees leaving an organization and having to be replaced. High labor turnover involves increased costs in recruitment, selection, orientation and training. It may also lead to disruptions of production, problems in quality control, poorer communications and inability to develop teamwork and morale.

Standard methods of computing employee turnover are:

$$\text{Separation rate} = \frac{\text{Number of Separations during the month}}{\text{Total Number of Employees at mid-month}} \times 100$$

$$\text{Avoidable turnover} = \frac{\text{Number of Separations} - \text{Unavoidable Separations}}{\text{Total Number of Employees at mid-month}} \times 100$$

Unavoidable separations include terminations of temporary employment, promotions, transfers and separations due to illness, death or retirement. Avoidable turnover gives an excellent measure of the HR climate as it directs attention to that part of employee turnover that can be avoided. It also represents the portion of labor turnover that management has the most capacity to influence by better HR management (via improved recruitment, selection, orientation, training, working conditions, compensation and benefits and opportunities for advancement). Nevertheless, low turnover (associated with good management and organizational health) may be worse than high turnover if top performers are not being retained. Turnover quality as opposed to turn over quantity must be considered.



*Exit Interviews:* Exit interviews are conducted with employees who are separating from the organization to ascertain what they think and feel about the organization. Exit interviews have the following two goals:

- (1) to maintain good public relations with the departing employee; and
- (2) to discover the employee's reason for leaving.

Properly handled, the exit interview can yield much revealing information about the HR climate. A good exit interview process can thus help the HR manager diagnose an organization's weakness and confirm its strengths.

*Post-Exit Interviews:* Post-Exit interviews are another method of obtaining information about why employee left an organization. It is often conducted through telephone and post exit questionnaire that are mailed to separating employees shortly after they leave the organization. The approach may get a more honest explanations, especially if confidentiality is guaranteed.

*Costs of Turnover:* The costs of labor turnover is very high. These costs include costs of recruiting, selecting (interviewing, testing, reference checking), orientation, training, disruption of production, problems in quality control, poorer communication and inability to develop teamwork and morale.

*Causes of Turnover:* The two variables most related to labor turnover are job dissatisfaction and economic conditions. In the former case, organizations with poor working conditions, undesirable jobs, wage and salary inequities and restricted opportunities for advancement can predict a high level of labor turnover. In the latter case, an inverse relationship is revealed between the state of the economy and the rate of employee turnover. When the economy is depressed, for example, turnover in most organizations goes down.

### 3.2.3 Employee Absenteeism

Absenteeism is any failure to report to work as scheduled, regardless of reason. It doesn't include planned absences such as annual leave, public holidays or rostered days off.

Unauthorized or unscheduled absenteeism is a major social problem with costs for the individual worker, the economy and the general community. Unfortunately, there is a misconception in many companies that some absences are excusable. From a business stand point, all unscheduled absences cost money. Experience shows that better attendance equates with better quality, lower costs and greater productivity.

*Costs of Absenteeism:* The cost of employee absenteeism stem from three main sources i.e.

- Costs associated with absentees themselves (e.g. Pay and benefits)
- Costs associated with managing problems of absenteeism (e.g. Pay and benefits to supervisors for counseling absentees, completing necessary reports, recruiting and training substitute employees)
- Costs not associated either with absentees or with managing absenteeism problems (for example, machine down-time, extra-scrap and wasted materials, over time costs for replacement workers)

Absenteeism is so routine that employees budget around it make over time allowances for it, and hire more workers than they need to take up the slack it causes.

#### *Computing Absenteeism Rates*

Methods of computing absenteeism rates (As recommended by the Productivity council of Australia) are given as follows:

$$\text{Frequency Rate} = \frac{\text{Total Number of Separate Absentees}}{\text{Average Strength of the Workforce}}$$

This only considers only the number of absences and ignores the length of absences. Thus,

$$\text{Absence Rate} = \frac{\text{Total Labor Hours Lost through Absences}}{\text{Total Labor Hours Rostered}} \times 100$$

*Causes of Absenteeism:* In considering the reasons why employees could be absent, both the ability to attend and motivation to attend are key factors. Variables such as transportation which affects the employee's ability to attend work are generally beyond the organization's

control. However, the employee's motivation to attend work is affected by variables such as job satisfaction and attendance incentives, which are very much subject to the organization's control. Studies have identified a relationship between absence and such factors as job boredom, poor interpersonal communication and poor management-employee relationship.

### 3.2.4 Occupational Injuries and Illness

Some organizations maintain records on occupational injuries and illnesses which can be used to measure health and safety performances and costs. Expenses associated with workplace accidents include administrative expenses, medical care costs, workers' compensation insurance payments and loss of productivity. The approach used to measure the costs of absenteeism is also valid for injuries and illnesses.

$$\text{Frequency Rate} = \frac{\text{Total Number of Accidents}}{\text{Average Strength of the Workforce}}$$

This only considers only the number of accidents and ignores the length of accidents. Thus,

$$\text{Absence Rate} = \frac{\text{Total Labor Hours Lost through Accidents} \times 100}{\text{Total Labor Hours Rostered}}$$

Statistical records of occupational injuries and illnesses can also be used to compute a lost-time injury incidence rate for a particular organization. The standard formula for computing the incidence rate is:

$$\text{Lost-time injury incidence Rate} = \frac{\text{Number of lost-time injuries}}{\text{Number of employees}}$$

Incidence rates enable comparisons of safety records to be made both amongst different employers and across different industries. These rates are also useful in comparing the safety records of particular work groups and departments within the one organization.



## 4. The Human Side of Construction Management in Ethiopia: A Survey Analysis

### 4.1 Human Resource Conversion Processes in Ethiopian Construction and Consulting firms

Before 1960, construction in Ethiopia was an exclusive opportunity for expatriates. Small and medium sized civil and building projects were generally constructed by Italian contractors while large size projects were generally constructed by international contractors through International Competitive Bidding (ICB). This situation started to change when few Ethiopian civil engineers established construction companies and started participating in the sector. By 1982, local contractors in the country have built up their capabilities progressively to the extent of executing ICB level projects successfully. In 1982, however, the *Derg* Regime reversed this trend of encouraging the development of local private contractors by opting for to promote government owned construction units and enterprises. Presently, the number of licensed contractors is on the rise yet most have limitations in finance and equipment as well as lack training and experience of managing construction projects (Abate,1999).

Currently there are 1045 domestic contractors who registered at the Ministry of Infrastructure. These contractors are given category levels based on their human, financial and equipment resources. The categories range from category 9 (lowest) to category 1 (highest). Each contractor is engaged in a specified type of construction such as Building, Road, General and Specialty. General contractors are those contractors that can under take both road and building constructions while Specialty contractors are those involved in water drilling and related constructions. Table 4.1 on the next page shows the number of contractors that are to be found under different categories and classes.

Local consulting engineers made their appearance in the Ethiopian construction arena in the 1970s. These consulting offices were few in number and provided services only in the building sector. During the *Derg* Regime, the development of private businesses was discouraged and there was difficulty for professionals to get release from government offices to go out and establish consulting offices. The number of consulting offices leaped when the present government started to release many senior professionals from government services.

The management of the consulting engineers' offices face two major challenges: securing jobs and maintaining a adequate number of permanent staff (Amha,1999).

Table 4.1 Registered Contractors by Categories in Ethiopia – 2002.

| No    | Category | Number of Companies | Limit of Capacity in Birr | Type       |
|-------|----------|---------------------|---------------------------|------------|
| 1     | 1        | 14                  | 20 million and above      | BC, GC     |
| 2     | 2        | 1                   | Up to 20 million          | BC         |
| 3     | 3        | 16                  | Up to 15 million          | BC, GC     |
| 4     | 4        | 43                  | Up to 10 million          | BC, GC     |
| 5     | 5        | 96                  | Up to 5 million           | BC, RC, GC |
| 6     | 6        | 406                 | Up to 2.5 million         | BC, GC     |
| 7     | 7        | 305                 | Up to 1 million           | BC, GC     |
| 8     | 8        | 108                 | Up to 0.5 million         | BC, GC     |
| 9     | 9        | 45                  | Up to 0.25 million        | BC, GC     |
| 10    | -        | 11                  | -                         | SC         |
| Total |          | 1045                |                           |            |

Source: Ministry of Infrastructure

Note: BC Building Contractor      RC Road Contractor  
       SC Specialty Contractor      GC General Contractor

Ministry of Works and Urban Development (MoWUD) (Cited in Amha,1999) reported that there were 46 domestic consultants who have renewed their 1998 registration. This number included Consulting Architects. The different categories of these consultants along with their capital and limit of capacity is shown in Table 4.2 below.

Table 4.2 Registered Consultants by Categories in Ethiopia – 1996.

| No    | Category | Number of Companies | Limit of Capacity in Birr | Capital in Birr |
|-------|----------|---------------------|---------------------------|-----------------|
| 1     | I        | 1                   | 20 million and above      | 1,000,000.-     |
| 2     | II       | -                   | Up to 25 million          | 400,000.-       |
| 3     | III      | 7                   | Up to 15 million          | 200,000.-       |
| 4     | IV       | 9                   | Up to 10 million          | 100,000.-       |
| 5     | V        | 16                  | Up to 3 million           | 20,000.-        |
| 6     | PP       | 6                   |                           |                 |
| 7     | P        | 7                   |                           |                 |
| Total |          | 46                  |                           |                 |

Source: Ethiopian Association of Civil Engineers

Note: PP Practicing Professional  
       P Practitioner

#### 4.1.1 Construction Personnel Needs

The lower level needs, physiological and safety needs, have been modeled in this research using variables “pay” and “job-security”. Higher-level needs on the other end are self-esteem and self-actualization needs and for this research work two additional variables were used to depict the latter need: “challenging job” and “freedom to work”. The objective here is to compare if lower or higher-level needs of employee are being addressed by companies in the industry. The predominant values obtained from the attitude survey of employees is believed to be the manifestation of HR policies and practices of the companies.

##### 4.1.1.1 Architectural and Engineering Consulting Firms

###### *Pay Vs Job Security*

In investigating the hierarchy of needs in AE consulting firms of the sample population, first the relationship between the lower-level needs was explored. Hence the cross-tabulation of “pay” and “job security” gave the results shown in Appendix G-3.

The highest proportion of employees (33.3%) responded that they perceived that they are paid a fair amount to some extent and that they equally perceived that they had a fair degree of job security at the same time more than half of the remaining employees (33.4%) reported that they perceived they had a fair pay and /or more than a fair degree of job security at the same time . Thus it can be concluded that the basic level-needs of AE consulting employees have fairly satisfied their basic needs.

###### *Pay Vs Interesting job*

In an attempt to find out whether “high-level order” needs are being fulfilled better than “lower level order” needs; a cross tabulation between the variables “pay” and “Interesting job” was made. The results of the cross tabulation is shown in Appendix G-2 ( where “pay” is a physiological need and “interesting job” is a self-actualization need).



From the table it can be shown that the highest portion of the respondents (44%) reported that they perceived that they are paid a fair amount to some extent and they enjoyed their jobs to a great extent at the same time. This shows that the employees were able to derive satisfaction from their jobs even when they perceived they were just paid a fair amount. Hence it can be concluded for employees in the AE construction firms, high-level needs are more important than lower-level needs.

#### *Pay Vs Freedom to perform work*

In investigating the relationship between another self-actualization need, “freedom to work” and a physiological need “pay”, the results are shown in Appendix G-1.

The cross tabulation of the two variables revealed 89.2% of the respondents perceived that they have freedom to perform their work to some extent or higher. In the same population, 61.2% of the respondents perceived that they were paid a fair amount to some extent or lower. Thus it can be inferred that the majority of the respondents were dissatisfied with the pay they received while at the same time they perceived that they have freedom to perform their work. Hence, for AE consulting firms in the Ethiopian Construction industry, self-actualization needs are observed to be of paramount importance.

#### 4.1.1.2 Construction Companies

##### *Pay Vs Job Security*

Upon investigating construction companies for the relationship between “pay” and “job security” a cross tabulation shown in Appendix G-8 has been obtained.

In this case, the highest portion of the employees (13.7%) reported that they perceived they are paid a fair amount to some extent and that they perceived they had a fair degree of job security to a great extent at the same time. An equally highest portion of (13.7%) of the employees reported that they perceived they are paid a fair amount to a great extent and they perceived they had a fair degree of job security to a great extent at the same time. Although this sum up to only 27.4% of the employees in the sample, another 37.2% of the employees in

the sample reported that they had more than a fair pay and/or more than a fair degree of job security at the same time. Hence it can be concluded that construction companies' have fairly satisfied their employees basic needs.

### *Pay Vs Interesting job*

In investigating to find out the relative importance given to "lower order " and "higher order" needs of employees by the companies, a very diverse set of opinion has been obtained. The results of the association between "pay" and "interesting job" has been cross tabulated as shown in Appendix G -7.

Of the many diverse responses, there were two highest proportions with 17.6%. The first such response reported that they perceived that they are paid a fair amount to a very little extent but also perceived that they enjoyed their tasks to some extent at the same time. The other group of respondents with equal proportion reported that they perceived they are paid a fair amount to a great extent and they also enjoyed their tasks to a great extent at the same time. A further analysis of the cross tabulation of the results reveals that some of the respondents perceived they enjoyed their jobs to no extent and to a very great extent. On the other hand, one person (2.0%) reported he/she perceived that he/she was paid a fair amount to no extent and 13 persons (25.4%) reported they perceived that they were paid a fair amount to a very little extent. Thus, one satisfaction that the employees in the construction companies derive from the job itself is high irrespective of the pay they received.

### *Pay Vs Freedom to perform work*

A diverse set of opinions have also been obtained in investigating the relationship between "self-actualization " and "physiological" needs in the Ethiopian Construction companies. The results of the association between the variables is cross tabulated in Appendix G-6.

Respondents perceived that they are 'paid' a fair amount from 'no extent at all' to 'a great extent' while they perceived that they have 'freedom to perform their work from 'some extent' to a 'very great extent'. While 100% of the respondents have received that they have freedom to perform their work to some extent or better, only 35.3% of the respondents

perceived that they are paid fair amount to some extent or better. Hence for construction companies also, self-actualization needs are observed to be of paramount importance.

#### 4.1.2 Observed Leadership Styles

Two major aspects of leadership styles have been explored in the research study. These are:

1. whether 'autocratic' or 'democratic' leadership styles are prevalent; and
2. whether the selected companies tend to be 'task-oriented' or 'people-oriented'.

For investigating these issues the variable chosen were perceived level of freedom to perform tasks, perceived levels of stress at work and existence of incentive packages which cater to individual and family needs.

##### 4.1.2.1 Management Styles

For investigating the prevalence of management style in AE companies, the degree of freedom in performing tasks has been used. The investigation has been done by reducing the 5 point Likert scale into two categories respondents that rated the question "Do you have freedom to perform your work ?" from a scale of 'to no extent at all' to 'to some extent' are categorized as having 'low freedom' while those respondents rating the same question from a scale of 'to a great extent' to 'to a very great extent' were categorized as having 'high freedom'. The summary of results obtained for both subgroups of the population are cross-tabulated on Table 4.3 on the following page.



Table 4.3 Cross Tabulation of Type of Respondents Vs Freedom to Work

## Type of Respondent \* Freedom to work Crosstabulation

|                    |                             |                             | Freedom to work |             | Total  |
|--------------------|-----------------------------|-----------------------------|-----------------|-------------|--------|
|                    |                             |                             | High Freedom    | Low Freedom |        |
| Type of Respondent | Consultants                 | Count                       | 11              | 7           | 18     |
|                    |                             | % within Type of Respondent | 61.1%           | 38.9%       | 100.0% |
|                    |                             | % within Freedom to work    | 25.6%           | 26.9%       | 26.1%  |
|                    |                             | % of Total                  | 15.9%           | 10.1%       | 26.1%  |
|                    | Contractors                 | Count                       | 32              | 19          | 51     |
|                    |                             | % within Type of Respondent | 62.7%           | 37.3%       | 100.0% |
|                    |                             | % within Freedom to work    | 74.4%           | 73.1%       | 73.9%  |
|                    |                             | % of Total                  | 46.4%           | 27.5%       | 73.9%  |
| Total              | Count                       |                             | 43              | 26          | 69     |
|                    | % within Type of Respondent |                             | 62.3%           | 37.7%       | 100.0% |
|                    | % within Freedom to work    |                             | 100.0%          | 100.0%      | 100.0% |
|                    | % of Total                  |                             | 62.3%           | 37.7%       | 100.0% |

From the table it can be seen that 61.1% of the employees of AE consulting firms and 62.3% of employees of construction companies reported 'high freedom' in their respective domain. Thus it can be observed that companies in the Ethiopian construction industry predominately practice a lassie-faire type of management style.

#### 4.1.2.2 People-orientation

##### *In Architectural and Engineering Consulting firms*

In an attempt to see whether a 'hard project management style' that emphasizes on tasks or a 'soft project management style' that emphasizes on people is prevalent, job stress level has been centrally used. The results obtained in relating job stress with incentive packages and job stress with proper indication and orientation have been respectively cross tabulated in Appendix G-4 and G-5.

The level of perceived job stress has been fairly high with 22.2% of respondents in this subgroup reporting that they perceived high levels of job stress at their work to a very great extent and 66.7% and 56% of the respondents perceiving high levels of stress to some extent and to a great extent respectively. In analyzing the views of the same population subgroups on

corresponding issues of 'incentives catering to personal and family need' and 'conduct of proper inductions and orientations' it can generally be observed that they are given less emphasis on. Only 11.2% of the respondents think their companies offer them incentives packages that cater to their personal and family needs to a great extent or a very great extent. A larger percentage of the respondents, 44.5%, thought they got proper induction and orientation given to new employees to a great extent or a very great extent. Even in this case, the remaining majority 55.5% of the respondents believed their companies don't give proper inductions and orientation to new employees. From the above results it can be inferred that AE Consulting companies are more 'task-oriented' than 'people-oriented'.

### *Construction Companies in Ethiopia*

The results obtained in relating job stress with incentive packages and proper induction and orientation in employees of construction companies are shown in Appendices G-9 and G-10.

The perceived levels of job stress for employees of construction companies was high with 58.8% of the respondents reporting high levels to a great extent or a very great extent. In analyzing the respondents' view on corresponding issues, we find only 23.5% of them perceive they have incentive packages that cater to their family's need as well as their own.

In regarding the conduction of proper inductions and orientations to new employees, only 17.8% of the respondents perceived their companies provided those programs. Analysis of responses given to the question "Are there healthy outlets which are provided by the organization to help employees deal with stresses?", most respondents did not answer the question while those who responded stated that there are such outlets to a very little extent or no extent at all. Thus it can be observed that construction companies give less importance to "people-issues" and have a "task-oriented" management style.

### 4.1.3 Participative Decision Making Practices

#### *Existence of Team Atmosphere*

When it is evident that AE consulting firms' personnel work in teams such as 'structural' design teams' and 'architectural design teams', the existence of a team atmosphere or absence

of it is an issue worth an investigation. The existence of team atmosphere has been analyzed by grouping the respondents of the question “Do you perceive that Team-Atmosphere exists at your work place?” in to two categories. Responses categorized as “Low Team Atmosphere” answered the above question from “to no extent at all” to “to some extent” while those in “High Team Atmosphere” chose responses of “to a great extent” and “to a very great extent”. The summary of the grouping of these responses for both AE consulting firms and construction companies is shown in Table 4.4 below.

Table 4.4 - Cross Tabulation of Type of Respondents Vs Team Atmosphere

Type of Respondent \* Team Atmosphere Crosstabulation

|                    |             |                             | Team Atmosphere     |                      | Total  |
|--------------------|-------------|-----------------------------|---------------------|----------------------|--------|
|                    |             |                             | Low Team Atmosphere | Good Team Atmosphere |        |
| Type of Respondent | Consultants | Count                       | 13                  | 5                    | 18     |
|                    |             | % within Type of Respondent | 72.2%               | 27.8%                | 100.0% |
|                    |             | % within Team Atmosphere    | 27.7%               | 22.7%                | 26.1%  |
|                    |             | % of Total                  | 18.8%               | 7.2%                 | 26.1%  |
|                    | Contractors | Count                       | 34                  | 17                   | 51     |
|                    |             | % within Type of Respondent | 66.7%               | 33.3%                | 100.0% |
|                    |             | % within Team Atmosphere    | 72.3%               | 77.3%                | 73.9%  |
|                    |             | % of Total                  | 49.3%               | 24.6%                | 73.9%  |
| Total              |             | Count                       | 47                  | 22                   | 69     |
|                    |             | % within Type of Respondent | 68.1%               | 31.9%                | 100.0% |
|                    |             | % within Team Atmosphere    | 100.0%              | 100.0%               | 100.0% |
|                    |             | % of Total                  | 68.1%               | 31.9%                | 100.0% |

It can be seen that 72.2% of the respondents from AE consulting firms and 66.7% of respondents from construction companies perceived that a low team atmosphere prevailed in their work places. It can also be observed that 68.1% of the respondents from the entire population perceived that there is ‘low team atmosphere’ in their companies which indicates team atmosphere is generally low amongst the construction industry.

### *Participatory Meeting*

Meetings facilitate the solving of many problems both with in a company or with other stakeholders in its environment. The part meetings play in managing change and working



closely in the tripartite relationship of client-consultant-contractor is paramount. The respondents were asked whether they hold participatory meetings regularly and their responses are summarized in table 4.5 below.

Table 4.5 - Cross Tabulation of Type of Respondents Vs Participatory Meetings

**Type of Respondent \* Participatory Meeting Crosstabulation**

|                    |                                |                                | Participatory Meeting          |                         | Total  |
|--------------------|--------------------------------|--------------------------------|--------------------------------|-------------------------|--------|
|                    |                                |                                | Do not hold Meetings Regularly | Hold Meetings Regularly |        |
| Type of Respondent | Consultants                    | Count                          | 15                             | 3                       | 18     |
|                    |                                | % within Type of Respondent    | 83.3%                          | 16.7%                   | 100.0% |
|                    |                                | % within Participatory Meeting | 31.9%                          | 13.6%                   | 26.1%  |
|                    |                                | % of Total                     | 21.7%                          | 4.3%                    | 26.1%  |
|                    | Contractors                    | Count                          | 32                             | 19                      | 51     |
|                    |                                | % within Type of Respondent    | 62.7%                          | 37.3%                   | 100.0% |
|                    |                                | % within Participatory Meeting | 68.1%                          | 86.4%                   | 73.9%  |
|                    |                                | % of Total                     | 46.4%                          | 27.5%                   | 73.9%  |
| Total              | Count                          |                                | 47                             | 22                      | 69     |
|                    | % within Type of Respondent    |                                | 68.1%                          | 31.9%                   | 100.0% |
|                    | % within Participatory Meeting |                                | 100.0%                         | 100.0%                  | 100.0% |
|                    | % of Total                     |                                | 68.1%                          | 31.9%                   | 100.0% |

Responses of the respondents ranging from “to no extent at all” to “to some extent” were designated as ‘did not hold participative meetings’ while those ranging from “to a great extent” to “to a very great extent” were designated as ‘hold participative meetings’. It can be seen that 83.3% of the respondents from AE consulting firms and 62.7% of respondents from construction companies reported they didn’t hold participatory meetings regularly. From the entire population 68.1% of the respondents reported that they didn’t hold participatory meetings regularly. This can be used to characterize the industry as not holding participatory meetings regularly.

## Participatory Decision Making

While participatory meetings help in enhancing communication, for brainstorming ideas and improving performance, participatory decision making decentralizes power in decision making and increases employees stake in the company. Participatory decision making also helps in resolving conflicts. The responses of the respondents on whether participatory type of decision-making was practiced or not gave the results shown in table 4.6 below.

Table 4.6 - Cross Tabulation of Type of Respondents Vs Participatory Decision Making

Type of Respondent \* Participatory Decision Making Crosstabulation

|                    |             |                                        | Participatory Decision Making       |                              | Total  |
|--------------------|-------------|----------------------------------------|-------------------------------------|------------------------------|--------|
|                    |             |                                        | Do not make participatory decisions | Make participative decisions |        |
| Type of Respondent | Consultants | Count                                  | 12                                  | 6                            | 18     |
|                    |             | % within Type of Respondent            | 66.7%                               | 33.3%                        | 100.0% |
|                    |             | % within Participatory Decision Making | 24.0%                               | 31.6%                        | 26.1%  |
|                    |             | % of Total                             | 17.4%                               | 8.7%                         | 26.1%  |
|                    | Contractors | Count                                  | 38                                  | 13                           | 51     |
|                    |             | % within Type of Respondent            | 74.5%                               | 25.5%                        | 100.0% |
|                    |             | % within Participatory Decision Making | 76.0%                               | 68.4%                        | 73.9%  |
|                    |             | % of Total                             | 55.1%                               | 18.8%                        | 73.9%  |
|                    | Total       | Count                                  | 50                                  | 19                           | 69     |
|                    |             | % within Type of Respondent            | 72.5%                               | 27.5%                        | 100.0% |
|                    |             | % within Participatory Decision Making | 100.0%                              | 100.0%                       | 100.0% |
|                    |             | % of Total                             | 72.5%                               | 27.5%                        | 100.0% |

Responses of the respondents ranging from “to no extent at all” to “to some extent” were designated as ‘did not hold participative meetings’ while those ranging from “to a great extent” to “to a very great extent” were designated as ‘hold participative meetings’.

It can be seen that 83.3% of the respondents from AE consulting firms and 62.7% of respondents from construction companies reported they didn’t hold participatory meetings regularly. From the entire population 68.1% of the respondents reported that they didn’t hold

participatory meetings regularly. This can be used to characterize the industry as not holding participatory meetings regularly.

## 4.2 The Human Resource Climate in the Ethiopian Construction Industry

In order to assess the "Human Resource Climate" in the Ethiopian Construction Industry four criteria were used. These were Job Satisfaction, Employee Turnover, Absenteeism and Lateness, and Accident rates. Each of these points are described in detail below.

### 4.2.1 Job Satisfaction in the Ethiopian Construction Sector

An "Employee Attitude Survey" was conducted in 23 companies in the Ethiopian Construction Industry and 69 professionals gave their opinions pertaining to their job and their satisfaction with it. A sample of the questionnaire used in conducting the attitude survey is shown in Appendix F-1. Amharic translation of the questionnaire was prepared for those respondents that would prefer questions phrased in Amharic. The Amharic questionnaire is shown in Appendix F-2.

Rating scale items were used in the questionnaires where a respondent expressed the strength of his or her agreement or disagreement with an item, by placing a mark on some point on a scale which runs from "Agree to a Very Great Extent" to "Agree to No Extent at All". The scale was presented by a set of five boxes. Analysis was done by tallying the responses to each item across the whole group (N=69) and subgroups (Consultants, N=18 and Contractors, N= 51) to see how many of the respondents have high or low opinion of overall job satisfaction. In order to get an indication of the strength of feelings among the group or subgroup, the average score for each item was calculated and used to classify respondents in the group. The analysis of the group of respondents revealed the results shown on Table 4.7 on the following page.



Table 4.7 Job Satisfaction results in the Ethiopian Construction industry

| <i>Very Satisfied</i> | <i>Satisfied</i> | <i>Dissatisfied</i> | <i>Very Dissatisfied</i> |
|-----------------------|------------------|---------------------|--------------------------|
| 6                     | 37               | 25                  | 1                        |

*Over all Job Satisfaction*

*Index (N=69)*

|      |       |       |      |
|------|-------|-------|------|
| 8.7% | 53.6% | 36.2% | 1.4% |
|------|-------|-------|------|

From the above table, we can observe that the five scale Likert responses are categorized in to four groups. Hence average responses of 1-2 designate 'very dissatisfied', 2-3 'dissatisfied', 3-4 'satisfied' and 4-5 'very satisfied'. It can thus be seen from these grouping that 8.7% of the respondents are 'very satisfied' while a majority 53.6% of them responded 'satisfied'. This it can be concluded that construction personnel in the Ethiopian construction industry have a fairly good job satisfaction. The bar chart below contrasts the relative job satisfactions observed in the sample population.

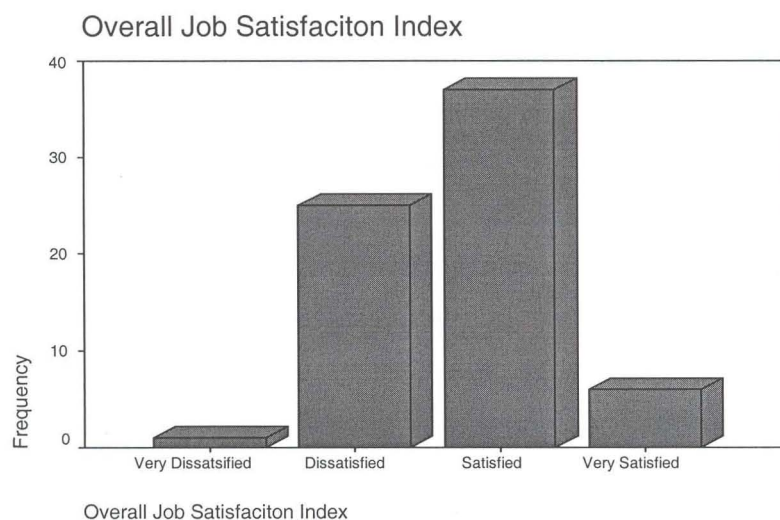


Figure 2.4 – Overall Job Satisfaction Index of employees in the Ethiopian Construction Industry

#### 4.2.1.1 Job Satisfaction in AE Consulting Firms

Construction personnel in Architectural and Engineering firms are usually engaged in design and construction supervision activities. The analysis of the responses of these subgroups of respondents revealed the following results: -

Table 4.8 Job Satisfaction results in the Ethiopian AE Consulting firms

|                                  | <i>Very Satisfied</i> | <i>Satisfied</i> | <i>Dissatisfied</i> | <i>Very Dissatisfied</i> |
|----------------------------------|-----------------------|------------------|---------------------|--------------------------|
| <i>Over all Job Satisfaction</i> | 2                     | 8                | 8                   | 0%                       |
| <i>Index (N=18)</i>              | 11.1%                 | 44.4%            | 44.4%               | 0%                       |

The analysis of responses from AE consulting firms' person revealed that 11.1% and 44.4% of the respondents in the subgroup have asserted to be 'very satisfied' and 'satisfied respectively'. It can be thus observed that 55.5% of the respondents in AE consulting firms have a fairly good job satisfaction.

#### 4.2.1.2 Job Satisfaction in Ethiopian Construction Companies

Construction personnel in construction contracting companies may hold a variety of positions. Office personnel could be involved in tender & cost estimation, contract administration and activity scheduling while personnel at site could be involved in site supervision and implementation of project management. The analysis of the responses of these subgroups of respondents revealed the following results: -

Table 4.9 Job Satisfaction results in the Ethiopian Construction companies

|                                  | <i>Very Satisfied</i> | <i>Satisfied</i> | <i>Dissatisfied</i> | <i>Very Dissatisfied</i> |
|----------------------------------|-----------------------|------------------|---------------------|--------------------------|
| <i>Over all Job Satisfaction</i> | 4                     | 29               | 17                  | 1                        |
| <i>Index (N=51)</i>              | 7.8%                  | 56.9%            | 33.3%               | 2.0%                     |

The analysis of responses from construction personnel on the other hand revealed that 7.8% and 56.9% of the respondents in the subgroup have asserted to be 'very satisfied' and 'satisfied respectively'. It can be thus observed that 64.7% of the respondents in construction companies have a fairly good job satisfaction. In comparing AE consulting firms and construction companies, higher percentage of personnel in AE consulting firms reported they were 'very satisfied' as compared to their counterparts in construction companies, while the latter's overall 'satisfaction' with their jobs were superior.

#### 4.2.2 Employee Turnover the Ethiopian Construction Sector

The 23 companies that were selected for the conduction of "employee attitude survey" were examined again to explore the extents of employee turnover, absenteeism, lateness and work-related accident rates. The interview format that was used for conducting the interview is shown in Appendix F-3.

The interview questions were designed to capture qualitative and quantitative data regarding employee turnover. Standard methods of computing turnover exist and these quantitative methods are especially helpful in distinguishing between the total separation rate and the avoidable turnover part of it. While the researcher has been able to gather some quantitative data on employee turnover, absenteeism, lateness and accident rates, he opted not to employ quantitative methods of analysis in relation to these items for the following major reasons:

- Construction projects are temporary undertakings which disband once a project has been completed. There is an inconsistent flow of projects and highly unstable and unpredictable ventures exist. The owner of a construction company or that of a consulting firm can keep personnel on his/her payroll so long as employees are productive (or at times idle not loose them) and this is contingent up on the availability of projects. The construction industry has many "hirings" and "Lay off"s because of its inherent nature.
- The human resource requirement of construction projects is highly variable with in the life span of the projects. There are diverse activities with varying start times and finish times as well as diverse skill requirements. If a project manager of a construction site were asked how many people he/she had on his/her site , the probable answer we get



would be a question of – “At what time – at peak demand, on average, during hand over” and the like.

- The Construction Industry is highly sensitive to business cycle fluctuations. Thus, at times of economic booms, many construction projects are available for construction companies and correspondingly employment opportunities flourish for construction personnel. At the other end of the picture, the construction sector is usually the first sector to be hit at times of economic recession and during such times mobility of personnel is restricted with job security needs getting paramount attention.
- Although it can generally be stated that all stakeholders in the construction process have an interest to see projects completed on schedule; however, there are or could be parties that benefit when projects are extended. Examples are construction companies that await additional civil works contracts around the completion of a project at hand and daily laborers and craftspeople that await lay offs once the project is completed. These parties can exert enormous pressure and uncertainty to the management of people.
- There is a general lack of culture of keeping records. Many construction companies, for example, keep track of crew members' absenteeism and lateness records through their “time keepers” for the purpose of payroll but these information is usually not consolidated at a company or even project level to portray bigger images.
- There is a general reluctance to reveal information about these items from the part of HR specialists of all the companies surveyed. This could be from fear of projecting a negative image about their companies.
- There is also a deliberate attempt to report lower figures again for fear of revealing a dark side of the company.
- Finally, the human resource requirement of many companies is fulfilled by means of part-time and freelance employees. This is typical of AE consulting firms. The use of personnel other than the permanent staff of a firm can have an impact on employee turnover.

#### 4.2.2.1 Employee Turnover in Architectural and Eng. Consulting Firms

Almost all AE consulting firms reported very low permanent employee turnover. This could be attributed to the following reasons: 1) The nature of the business, 2) High job satisfaction indicating conducive organizational climate and 3) The labor market – the pull for certain

skills from the outside with a competitive offer can at times be low resulting in the absence of temptations for employees to leave their present jobs. The AE consulting business employs permanent, contractual and freelance workers. The payment schemes normally employed constitute: -

- ✓ Permanent Staff – employed on a permanent basis
- ✓ Project-Base Staff – employed on Contractual basis for longer periods (30 months)
- ✓ Monthly-Base Staff – employed on Contractual basis for 1 to 3 months
- ✓ Output-Base Staff – employed on Contractual basis for submitting a ‘deliverable’

The above payment schemes shows that there are different categories of staff. The total number of staff is a function of the number of projects at hand and quite often staff other than permanent staff leave their jobs until they are recalled for other similar assignments.

#### 4.2.2.2 Employee Turnover in Ethiopian Construction Companies

In almost all the construction companies included in the study, the reported level of permanent employee turnover is very low. This is with the exception of one construction company who reported a separation rate of 3.17% and an avoidable turnover rate of 1.67%.

The rosy turnover picture changes drastically if contract employees were to be included in employee turnover computations. Many construction companies attempt to retain contractual employees by shifting them from one site in to another. This practice helps to keep employees productive and thus cut labor costs for the companies. Another innovative approach observed in few construction companies to retain key personnel is an arrangement known as “Temporary Lay off”. This is an arrangement where by an employee voluntarily agrees to discontinue work with a construction company, salaries/wages and engage in temporary freelance activities while retaining his/her employment with and compensation benefits from the company. This situation continues till the contractor gets a project and recalls the employee to work. This is a mutually advantageous arrangement for both parties as the contractor has a skilled craftsman handy for deployment while the employee enjoys a continuing compensation benefit and a promise of preferred future employment. Construction companies usually consider three factors when they implement a “Temporary lay off” scheme; these are: Salary/wage paid, indispensability and business prospects.



In addition to “temporary layoff” schemes, construction companies also employ other strategies to retain their workforce during slack times. Some construction companies reported that they would usually undertake projects with breakeven profit volumes for the mere purpose of retaining their workforce. This situation is usually important when businesses activities are low, when is a rainy season and the number of works that can be undertaken are few, and when there is a special and indispensable crew that the company would like to maintain, for example an asphalt crew.

Almost all construction companies conducted a form of “exit interview” when key personnel announce their intended resignation. This selective approach to deter the attrition of only selected few personnel shows a non-consistent and non-structured approach to the process of employees leaving the company and can even project a “ differential treatment” amongst employees of equal status. Only some 10% of the construction companies reported they conduct exit interviews for the purpose of diagnosing problems of their companies’ organizational climate.

In the majority of the turnover cases (about 80% of all respondents), the main reason for leaving the job has been “in search of better opportunities else where” rather than “having been dissatisfied” with the job and/or the company”. In the remaining cases, reasons have been “having been dissatisfied with the job and/or the company” and specific reasons include disagreements with supervisors and high lateral movement opportunities in the labor market.

The effect of work ethics and culture on the general behavior of employees was observed to show a remarkable variation. It has been reported that employees attitude toward work discipline while undertaking construction projects in different locations the country has forced some companies to adopt flexible management styles.

#### 4.2.3 Absenteeism and Lateness in the Ethiopian Construction Sector

When it comes to absenteeism and lateness in organizations, the construction industry has its own peculiarities. These peculiarities of the industry present both simplifications and challenges to human resource specialists and business managers. These peculiarities are presented separately for both AE Consulting firms and Construction companies below.



#### 4.2.3.1 Absenteeism and Lateness in Ethiopian Consulting Firms

Architectural and Engineering Consulting firms can be paralleled with Research and Development units in that individuals of intelligence and independence work on challenging problems. The pattern of absenteeism and lateness processes observed in almost all AE consulting firms in the sample show that the companies attempt to cater to the strong needs of self-actualization of their individuals.

Regarding absenteeism, employees have an appreciable degree of freedom to be absent from work during lenient times while they could be expected to work on evenings and weekends at times of peak loads. Even during normal times, employees can work from their homes or compensate the part of the work they should have done during weekdays on weekends. The "Psychological Contract", in which the employees expend their energies and talents in return to the satisfaction of some of their needs, is observed to work positively for both employees and the company management. One reason that can be attributed for the relaxed work arrangement regarding absenteeism is the fact that output levels can be predicted by managers and fair judgments can be made regarding what a "fair day's job" is.

A similar observation can be made regarding lateness. Employees in AE consulting office are usually observed to report late to work but also tend to extend their quitting times in the afternoon by an approximately equal amounts. The explanation here again is that it is out put volume that will be governing and not the "number of hours" that the employee has worked.

#### 4.2.3.2 Absenteeism and Lateness in Ethiopian Construction Companies

Construction companies have their own different set of peculiarities that are different from that of AE consulting firms. Construction companies have the greater portion of their workforce deployed at construction site that are often out of urban environments. A construction site usually provides its workforce with site office, lodging and canteen facilities. This gives little reason or room for being absent or late from work. Apart from these facilitations at the work site, construction companies have generally stringent attendance policies and can take severe disciplinary measures for those employees violating those

policies. This practice is highly adhered to especially by crafts people and daily laborers where pay deductions and job security needs are paramount.

Despite the stringent absenteeism and lateness policies and practices in construction companies, employees can sometimes enjoy extended vacations since there could be difficulties in securing projects, the work cycles of the companies usually undulates with the budgetary cycle of governmental institutions and the inability to perform certain activities during the rainy season. During all these slack times, there is always a need to carry a certain level of 'unproductive force' and company management may see no harm in putting up relaxed attendance policies during those few times.

While construction companies recruit their permanent and contract employees mainly at their head offices, the recruitments for the bulk of their workforce is done at the construction site itself. This could amount to employing a large number of craftspeople and daily laborers temporarily in the various parts of the country. In analyzing absenteeism and lateness of employees, the work culture and values of the workforce prevalent in the particular region at hand impacts on the working norms and practices of all employees of the construction company irrespective of its policies, values and practices. It can thus be observed that construction companies adopt flexible policies regarding workforce management in undertaking construction projects in the various parts of the country.

#### 4.2.4 Accident rates & Safety Practices in the Ethiopian Construction Sector

From the responses of human resource specialists, most companies in the Ethiopian construction sector do not have properly articulated safety policies and/or procedures. In addition to this only a handful of the companies have 'separate' accidents recording system. Most records of accidents can only be inferred from data and information compiled for the purpose of processing insurance payments. It can however be noted that increasing number of accidents are being reported necessitating due attention to the issue. Unlike issues of absenteeism and lateness, no generalization can not be made about accidents while a qualitative analysis of the issue can help in giving insight to the current situation.



#### 4.2.4.1 Accident rates & Safety Practice in Ethiopian AE Consulting Firms

The majority of AE consulting firms are located in Addis Ababa and few have branches in the regions. The greater portion of the companies' employees work in offices located in urban areas and there are literally no perceivable additional accident threats than can be found in an 'office' work-setting. Yet, certain number of professionals travel frequently to remote construction sites for construction supervision purposes and vehicle accidents are reported from time to time. These apparently cause loss of life and property and hence precaution and safety measures should be instituted.

#### 4.2.4.2 Accident rates & Safety Practice in Ethiopian Construction Companies

A wide variety of construction accidents have been reported by many of the construction companies though only very few keep formal records of accidents. The accidents range from light injuries to heavy injuries and death. Light injuries are those like sustaining hand and foot injuries resulting from nails piercing in to the skins up on walking or falling and injuries sustained while falling from slab to slab. Such injuries have very high frequency of incidence in almost all construction sites and all companies seem to have some procedures for dealing with them; for example tetanus injections for body parts pierced by nails at the site or a near by health clinic and a day or two off from work or treatments for a ruptured limb.

Accidents at construction sites are generally specific to the type of construction activity. Most high rise buildings and bridge constructions, for example, are more likely to be plagued by accidents related to falling down from high scaffoldings and a certain percentage of these accidents result in deaths. Some deep soil excavations that are done manually cause "soil caving-in" accidents and these can also result in fatalities. Water construction and Road construction projects reported a large portion of their fatalities resulted not from accidents but from illnesses in relation to harsh climatic conditions prevailing at construction sites. These are important because they are considered as "project-related deaths". Road construction and water well drilling activities involve high degree of mobility in rough terrain that can cause fatal car accidents. A large number of accidents on road construction projects reported construction equipment-related and vehicle-related accidents. These accidents were primarily attributed to lack of awareness and recklessness on either the victims of the accidents or their



co-workers. Such type of accidents that were reported include persons falling off from fast traveling dump tracks and being hit by a loader, roller and excavator. In the majority of construction equipment related accidents that were reported, death has resulted.

Accidents and work related injuries at construction sites can significantly improve if awareness about safety measures were to increase and safety procedures were to be followed. Construction projects that were awarded through International Competitive Bidding (ICB) and constructed by local contractors show small numbers of accidents. This achievement can be credited to the stringent safety requirements and procedures that had to be adhered to. To put in place a sound safety system in construction sites, ICB calls for the assignment of a qualified safety engineer at the construction site. Recommended safety measures applicable to construction sites include putting on helmets, speed limits and safety belts for vehicles and intolerance of reckless behavior. Few construction companies have put safety measures and procedures and attempt to communicate this to all employees. This practice has a two fold advantage; on one hand it helps minimize accident related downtimes and expenses and on another it helps prevent abusive insurance claims.

## SUMMARY OF FINDINGS

The findings indicate that companies in the Ethiopian Construction industry face certain human resources conversion processes. Employees in these companies have fulfilled higher-order needs of self-actualization through freedom to perform tasks and challenging tasks while their basic needs of pay has not been fulfilled. The predominant leadership style observed was a *lasses-faire* type which allowed high degree of freedom on the job. Nevertheless managers tended to be more 'task-oriented' typically ignoring holistic family concerns and the conduction of proper induction and orientation programs that cater to the socialization needs of employees. Participatory decision making practices in the selected companies was found to be very low with respondents reporting low team atmosphere, low conduction of participatory meetings and low participatory decision making.

The human resource climate in the Ethiopian construction industry was found to be fairly good. The majority of the respondents, (63.3%) reported they have job satisfaction and the general state of employee turnover was found to be low. Absenteeism and lateness are highly industry specific variables but the various arrangements with in the companies seem to work positively for both employers and employees. A variety of accidents have been reported and these ranged from minor daily incidents to fatal accidents resulting in loss of life. The majority of the fatal accidents reported are reported to have been caused due to lack of awareness and/or recklessness.

## CONCLUSIONS AND RECOMMENDATIONS

The majority of the respondents of this research study reported they are satisfied or very satisfied with their jobs. This overall job satisfaction can be attributed to the satisfaction of the self-actualization needs of employees through challenging task and freedom to perform tasks. The greater freedom to perform task can in turn be credited to the democratic leadership style prevalent in the companies' management. These attributes in the work-settings positively influence the motivation of employees. On the other hand, the majority of respondents perceived they are not paid a fair amount and their socialization needs are not well catered for. The leadership is thus observed to be 'task-oriented'. Participatory decision making practices are observed to be very low. Respondents reported low team atmosphere, low conduction of participatory meetings and low participatory decision making. The absence of a team spirit is alarming as it is a fundamental prerequisite for effectiveness in the construction industry.

To better address human resource conversion process in the Ethiopian construction sector the following points are recommended:

1. Most construction companies are owned and run by business people with limited education and training in the management of construction projects. This has fostered the pursuing of profit maximization goals and task-oriented leadership styles that ignore sustainable benefit to the company by emphasizing on efficiency and management. It is recommended that the ownership and management of construction companies be separated. The companies should be run by professional leaders that pursue wealth maximizing goals with longer range of planning horizon, the ability to make wise business decisions and effectively utilize the company's human resources. This helps the company to perpetuate for the benefit of owners, employees and the sustainable development of the country's economy.
2. Construction company leaders shouldn't make decisions to upgrade current performance of the company at the expense of the long-term survival of the firm. This translates to properly balancing the maintenance of the productive capacities of employees with the output production of employees. Employees should be trained, developed, rewarded as much as performance of tasks are expected of them.



3. Employers should give more attention toward an appropriate pay scale. This is a basic need that they should cater to for they can reap the benefits by means of increased productivity. Basic salary can provide job security and serve as a hygiene factor for most employees in the sector. Further the remuneration of employees can be made to constitute several parts some of which could be used to tie performance with remuneration. Companies should also employ innovative ways to overcome difficulties of having a sustained flow projects and cope up with downtimes. Examples could be “Temporary lay offs” and excellent project management that allows shifting of workforce.
4. Companies should devise a reward and recognition scheme for outstanding performance, timely execution and generation of innovative ideas. They should acquaint themselves with the state of art technology and contemporary practices in the sector. They should develop their employees by strategically providing training through workshops, seminars and conferences. This capacity building practice can help them to increase their future competitiveness and be ready for joint ventures with foreign companies.
5. Companies should have ‘people-orientation’ and foster a sense of belongingness amongst employees. They could accomplish this by conducting proper employee induction and orientation programs, providing healthy outlets for job stress, showing holistic concern for employees and preparing career development paths.
6. Companies should create a healthy working environment that allows performance. They should encourage ethical practices free from nepotism and favoritism whereby rewards and promotions are based solely on merit. The conduction of exit interviews needs to be practiced as a means of checking the organizational human resource ambience and general health of the business.
7. Companies should provide schemes for both developing the skills of their employees as well as training the to acquire additional skills to become multi-skilled. This has many advantages including enhanced flexibility, increased job satisfaction, lowered downtimes as well as decreased layoffs.
8. Companies should enhance the team atmosphere in their organizations. They should hold participative meetings regularly and use them as a plat form to resolve conflicts, make

decisions and enhance better communication. They can encourage the healthy flow of ideas through the constructive use of feedbacks.

9. Companies should increase the awareness of employees regarding accidents and put in place appropriate safety measures to safeguard the loss of material and life. Employees have negative effects on employees' morale, loss of trained manpower, cost implications through damaged property, production downtimes and increased insurance premiums and tarnished company image. For this purpose, they should device a safety policy and follow up its implementation.

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## APPENDIX A-1

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### Theory X

1. The average man is by nature indolent – he works as little as possible.
2. He lacks ambition, dislikes responsibility, prefers to be led.
3. He is inherently self-centered, indifferent to organizational needs.
4. He is by nature resistant to change.
5. He is gullible, not very bright, the ready dupe of the charlatan and the demagogue.

The implications for management are:

1. Management is responsible for organizing the elements of productive enterprise – money, materials, equipment, people – in the interest of economic ends.
2. With respect to people, this is a process of directing their efforts, motivating them, controlling their actions, modifying their behavior to the needs of the organization.
3. People must be persuaded, rewarded, punished, controlled, their activities must be directed.

### Theory Y

1. People are not by nature passive or resistant to organizational needs. They have become so as a result of experience in organizations.
2. The motivation, the potential development, the capacity to assume responsibility, the readiness to direct behavior towards organizational goals, are all present in people. It is a responsibility of management to make it possible for people to reorganize and develop human characteristics for themselves.
3. Management is responsible for organizing the elements of productive enterprise in the interest of economic ends, but their essential task is to arrange the conditions and methods of operation so that people can achieve their own goals best by directing their own efforts towards organizational objectives.

Box A-1: McGregor's Theory X and Theory Y (McGregor, 1960)



## APPENDIX A-2

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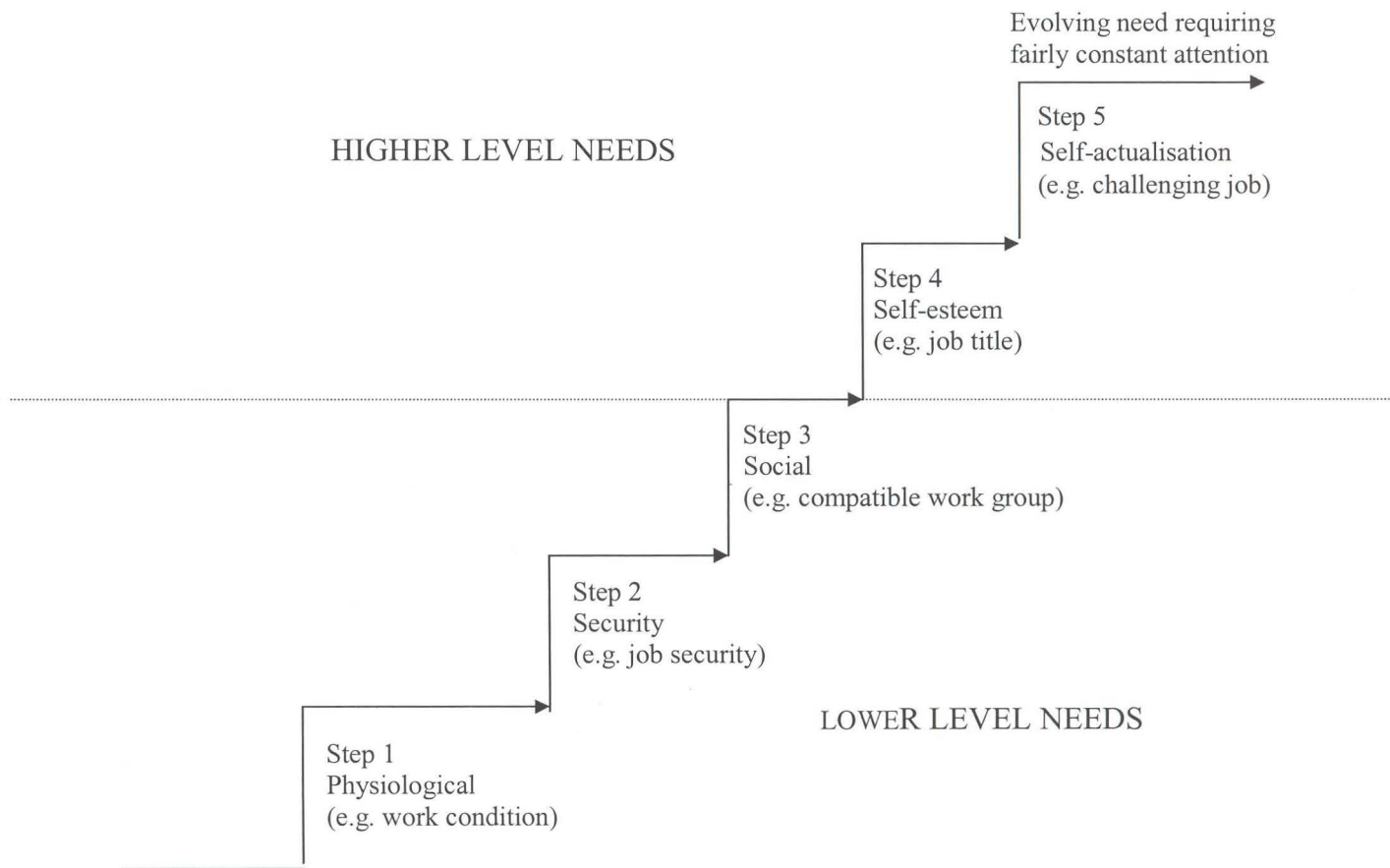


Figure A-2: Maslow's hierarchy of needs (Hancock and Newcombe, 1996)

## APPENDIX A-3

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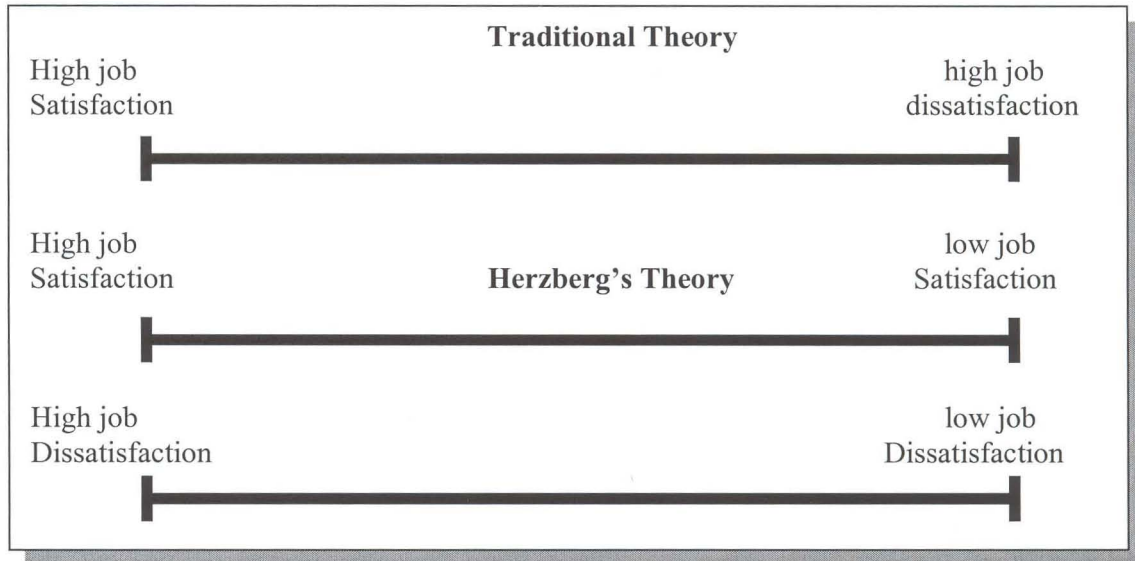


Figure A-3: Traditional Versus Herzberg View of Job Satisfaction  
(Glueck and Ivancevich, 1999)

## APPENDIX A- 4

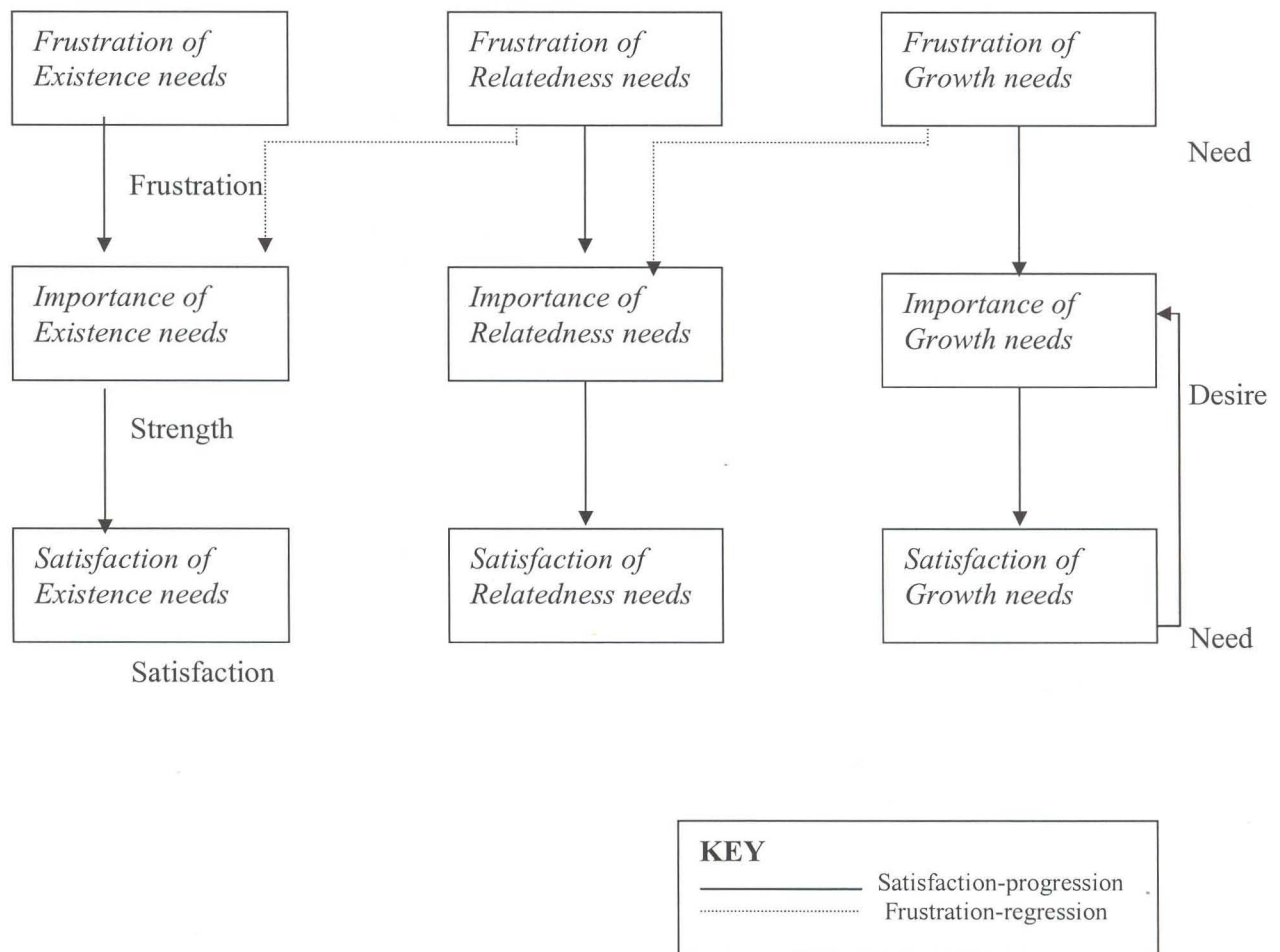


Figure A-4: Alderfer's ERG theory of needs (Hancock and Newcombe, 1996)



## APPENDIX A-5

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McClelland's theory of needs focuses on three needs: achievement, power and affiliation. McClelland defined them as:

- ☐ Need for achievement: The drive to excel, to achieve in relation to a set of standards, to strive to succeed
- ☐ Need for power: The need to make others behave in the way that they would not have behaved otherwise
- ☐ Need for affiliation: The desire for friendly and close interpersonal relationships

Figure A-5: McClelland's theory of needs ( Robbins,2002)

## APPENDIX A-6

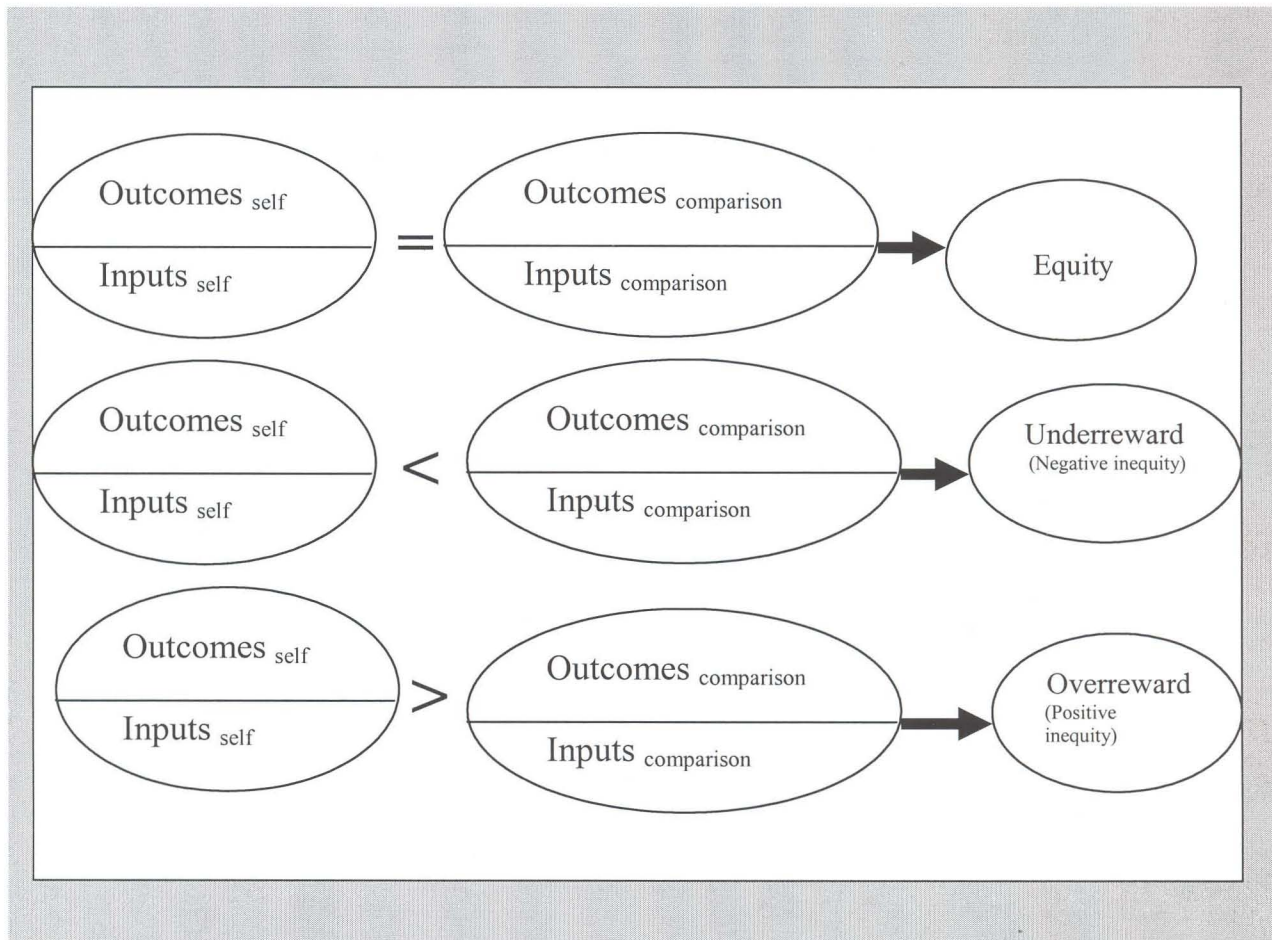


Figure A-6: Equity Theory: Determining Equity (P.M Wright and R A Noe, 1996)

## APPENDIX A-7

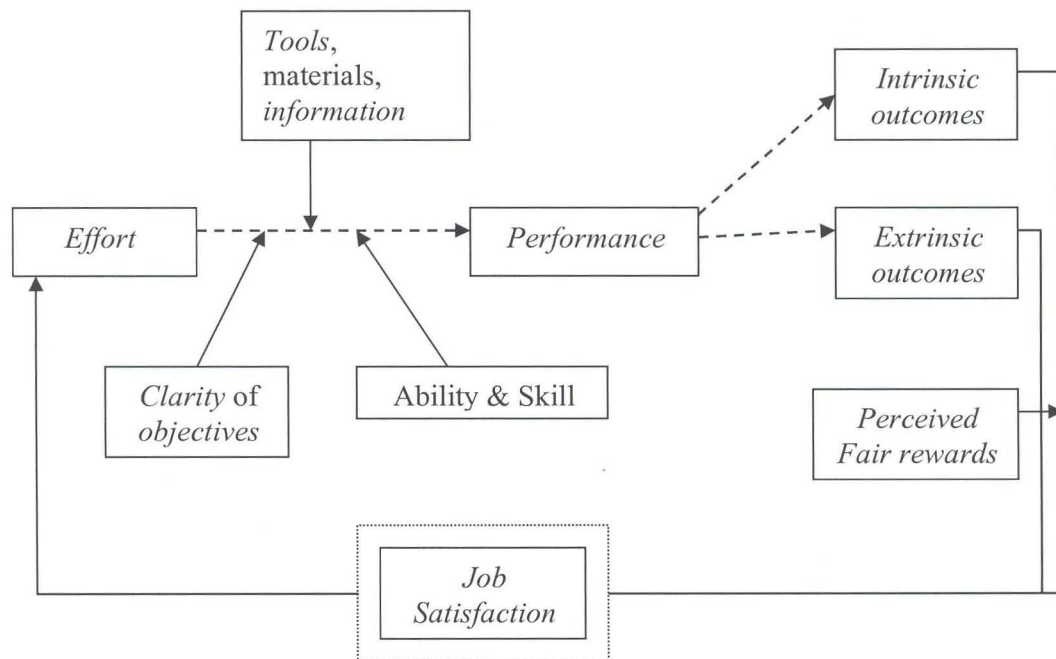


Figure A-7: A Model of Expectancy Theory (Hancock and Newcombe, 1996)



## APPENDIX A-8

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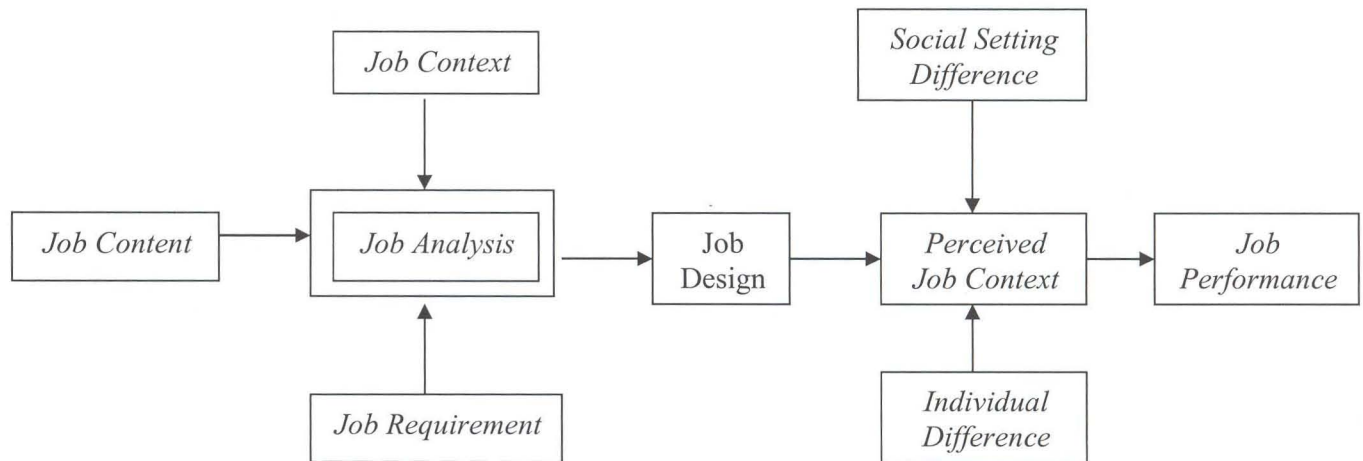


Figure A-8: A Conceptual Model of Job Design (Glueck and Ivancevich, 1999)

## APPENDIX B-1

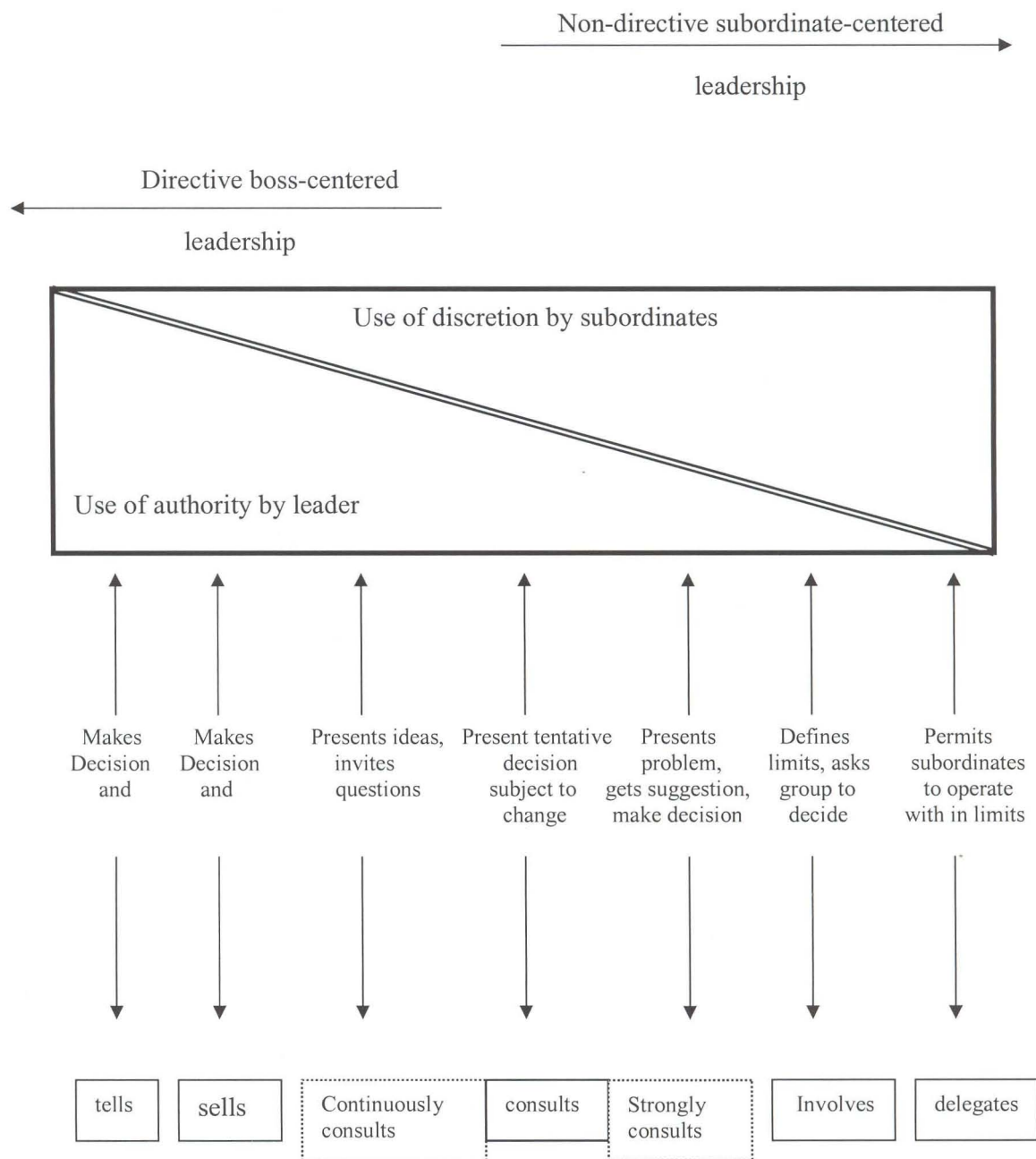


Figure B-1: Tannenbaum/Schmidt Model (Hancock and Newcombe, 1996)

## APPENDIX B-2

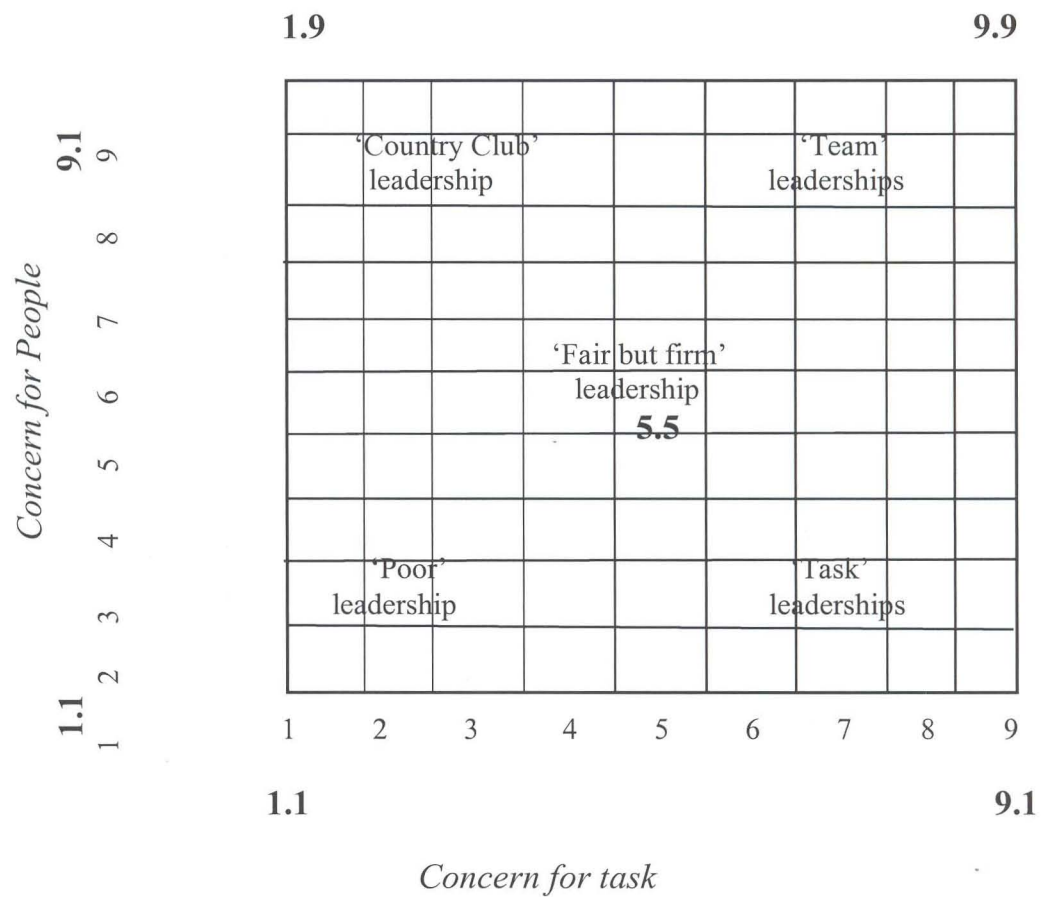


Figure B-2: The Managerial Grid Model (Hancock and Newcombe, 1996)



## APPENDIX B-3

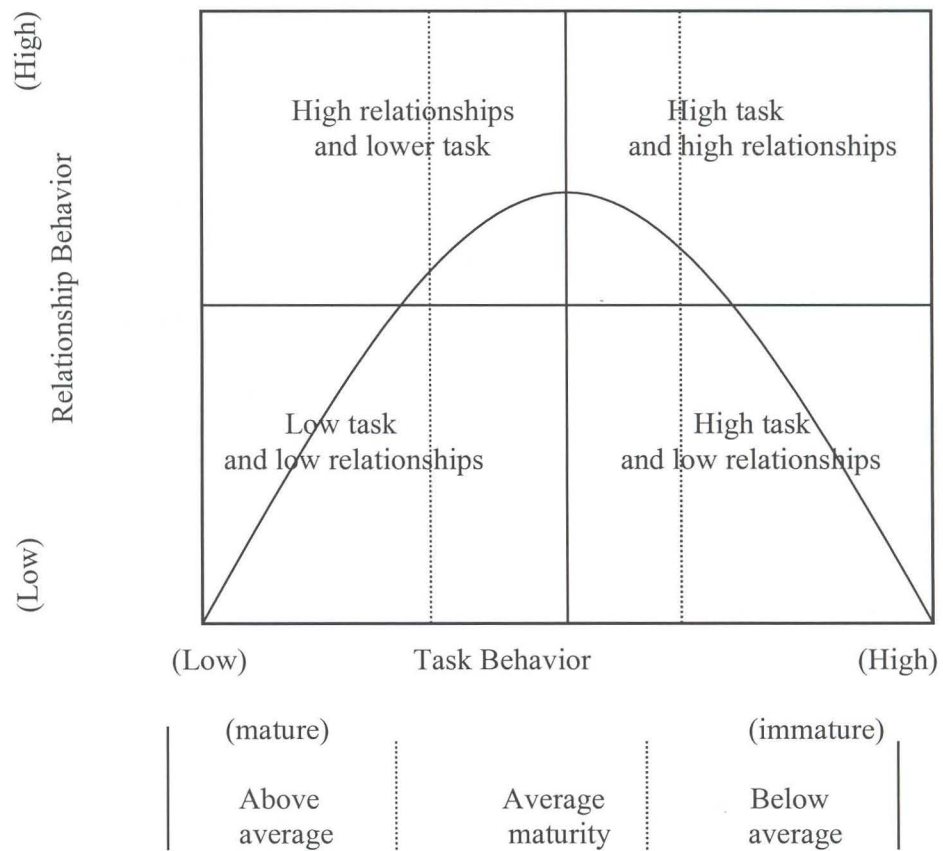


Figure B-3: The Life Cycle Model (Hancock and Newcombe, 1996)

## APPENDIX B-4

|                                                      |             |      |        |      |              |      |        |      |
|------------------------------------------------------|-------------|------|--------|------|--------------|------|--------|------|
| <i>Leader-member relationship</i>                    | <b>Good</b> |      |        |      | <b>Power</b> |      |        |      |
| <i>Task structure</i>                                | High        |      | Low    |      | High         |      | Low    |      |
| <i>Position power</i>                                | Strong      | Weak | Strong | Weak | Strong       | Weak | Strong | Weak |
| <b>Situations</b>                                    | I           | II   | III    | IV   | V            | VI   | VII    | VIII |
| <b>Very favorable</b> ←————→ <b>Very unfavorable</b> |             |      |        |      |              |      |        |      |

Figure B-4A: Model Fiedler's Classification of Managerial Situations (H.J. Arnold and D.C. Feldman, 1986)

|                                  |             | <b>Very favorable</b>        | <b>Moderately favorable</b>  | <b>Very unfavorable</b>      |
|----------------------------------|-------------|------------------------------|------------------------------|------------------------------|
| <b>Performance effectiveness</b> | <b>High</b> | Task oriented leader         | Relationship oriented leader | Task oriented leader         |
|                                  | <b>Low</b>  | Relationship oriented leader | Task oriented leader         | Relationship oriented leader |

Figure B-4: Fiedler's Contingency Model of Leadership (H.J. Arnold and D.C. Feldman, 1986)

## APPENDIX C-1

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|                   |      | Cohesiveness      |                              |
|-------------------|------|-------------------|------------------------------|
| Performance Norms | High | High productivity | Moderate productivity        |
|                   | Low  | Low productivity  | Moderate to low productivity |
|                   |      | High              | Low                          |

Relationship between Group Cohesiveness, Performance Norms and Productivity

Figure C-1: Group Cohesiveness & Performance Model (Robbins,2002)



## APPENDIX D-1

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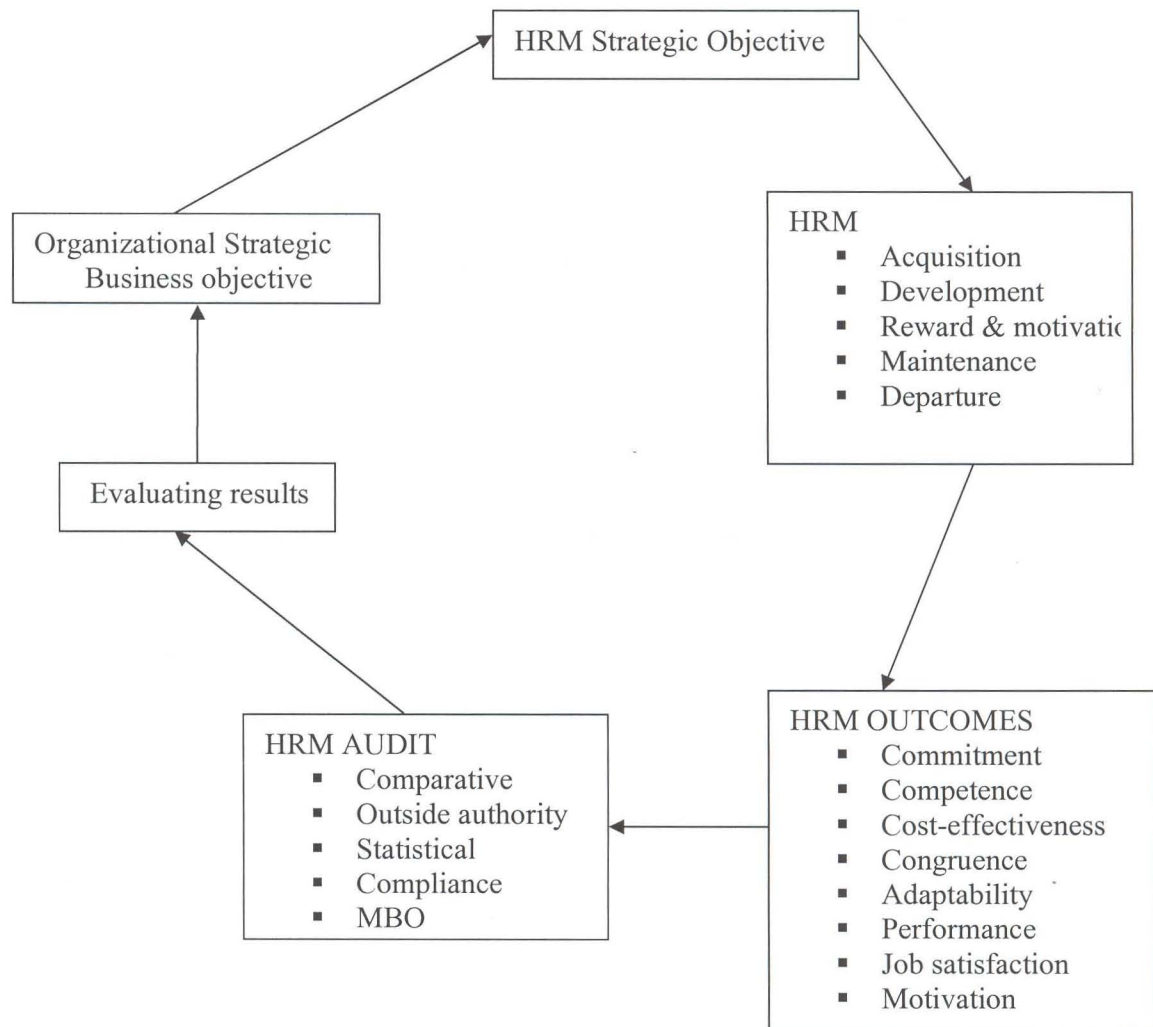


Figure D-1: The Human Resource Audit Process (Stone, 1998)

## APPENDIX D-2

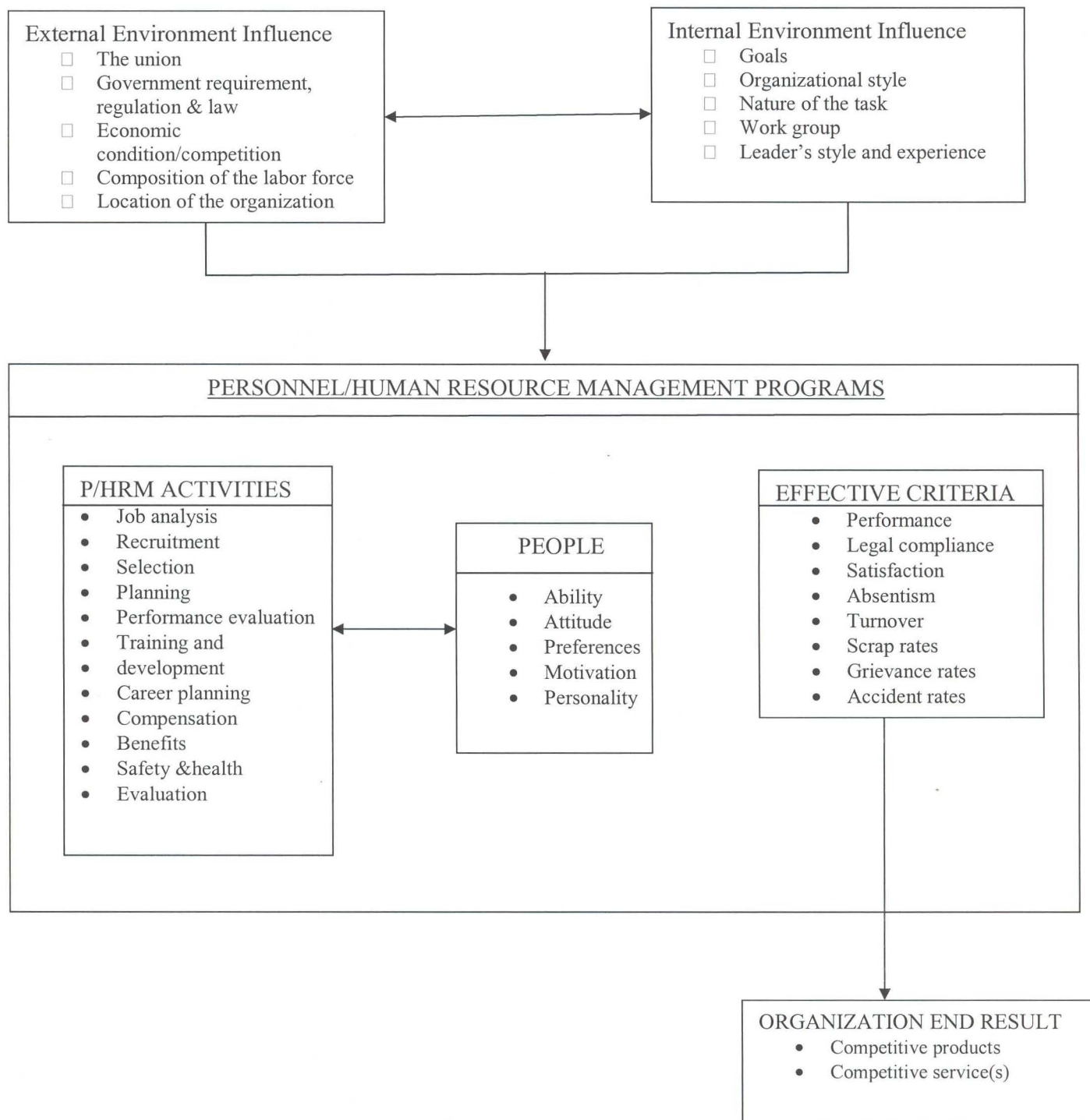


Figure D-2: A Diagnostic Model for Personnel/HR Management (Ivancevich, 1989)

## APPENDIX E-1

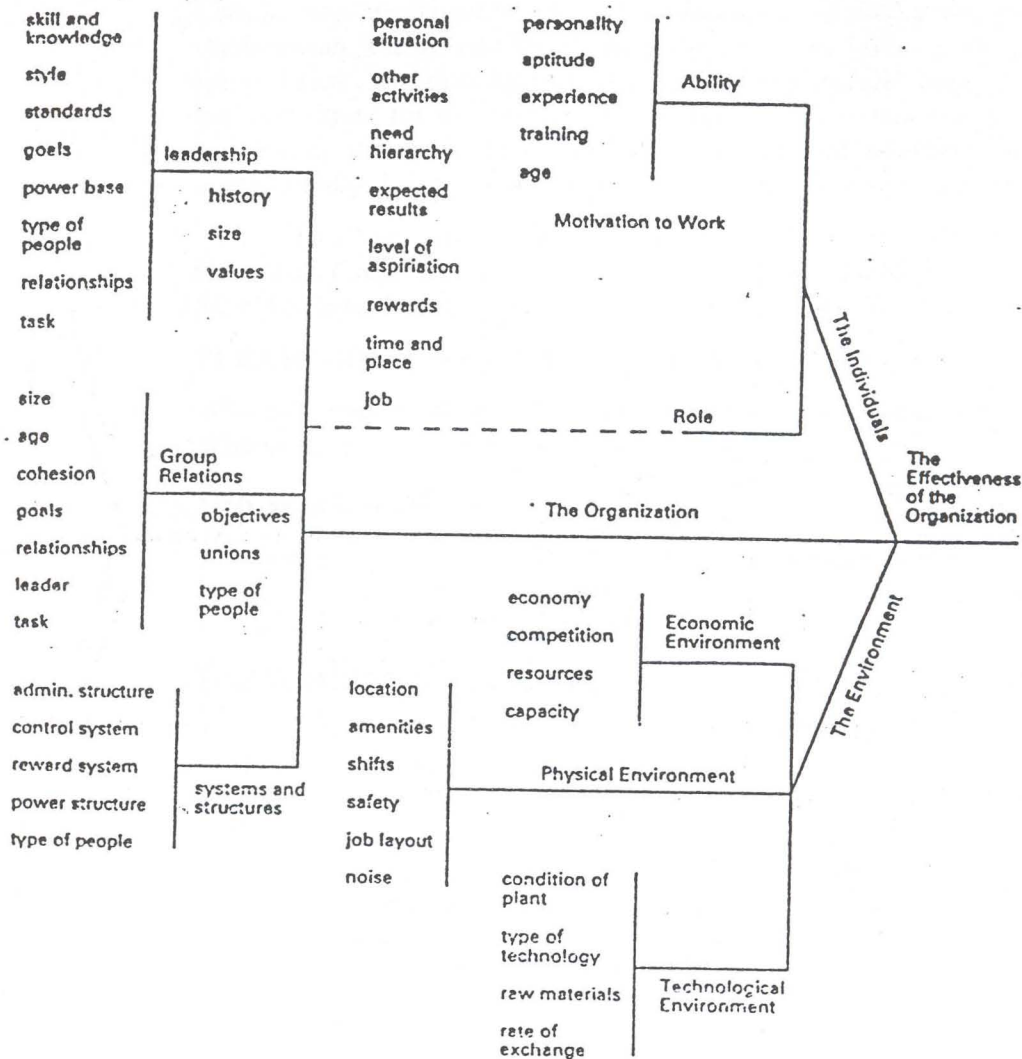


Figure E-1: Ishikawa Diagram for Organizational Effectiveness (Handy, 1999)



## APPENDIX F-1

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### Employee Attitude Survey in the Construction Industry

Listed below are statement which describe aspects of the human resource environment in your organization. Please rate the stated propositions by circling the appropriate coded category shown below. The questionnaire is to be used in a research being conducted to identify factors that contribute for the performance of the human resource function and for organizational success in the construction industry. All the information you submit will be treated confidentially. I sincerely thank you for your earnest cooperation in advance.

VGE = To a Very Great Extent

VLE = To a Very Little Extent

GE = To a Great Extent

NEA = To No Extent at All

SE = To Some Extent

#### PLEASE DON'T WRITE YOUR NAME.

What is the main business of your organization? 1. Design 2. Construction 3. Design-Build

What is your Occupation/Profession \_\_\_\_\_

#### The Work Itself

- |                                                                     |     |    |    |     |     |
|---------------------------------------------------------------------|-----|----|----|-----|-----|
| 1. Do you find your tasks to be enjoyable, diverse and interesting? | VGE | GE | SE | VLE | NEA |
| 2. Are your tasks important to the organization?                    | VGE | GE | SE | VLE | NEA |
| 3. Is there freedom for you as you perform your work?               | VGE | GE | SE | VLE | NEA |

#### The Working Conditions

- |                                                                    |     |    |    |     |     |
|--------------------------------------------------------------------|-----|----|----|-----|-----|
| 4. Is the work-setting at your work place pleasing and attractive? | VGE | GE | SE | VLE | NEA |
| 5. Is your work place well-equipped?                               | VGE | GE | SE | VLE | NEA |

#### Stress

- |                                                                                                                |     |    |    |     |     |
|----------------------------------------------------------------------------------------------------------------|-----|----|----|-----|-----|
| 6. Do you perceive high levels of job stress at your work?                                                     | VGE | GE | SE | VLE | NEA |
| 7. Do these stresses have an impact on your health & productivity?                                             | VGE | GE | SE | VLE | NEA |
| 8. Are there healthy outlets to help employees deal with stresses?<br>(These are provided by the organization) | VGE | GE | SE | VLE | NEA |

#### Diversity

- |                                                                                           |     |    |    |     |     |
|-------------------------------------------------------------------------------------------|-----|----|----|-----|-----|
| 9. Is there diversity in your organization such as religions and races?                   | VGE | GE | SE | VLE | NEA |
| 10. Do all groups have equal opportunities for advancement and promotion in your company? | VGE | GE | SE | VLE | NEA |

#### Ethics

- |                                                                         |     |    |    |     |     |
|-------------------------------------------------------------------------|-----|----|----|-----|-----|
| 11. Do you perceive that your organization as ethical at all levels?    | VGE | GE | SE | VLE | NEA |
| 12. Are high ethical standards expected in all situations in your firm? | VGE | GE | SE | VLE | NEA |

#### Job Security

- |                                                                    |     |    |    |     |     |
|--------------------------------------------------------------------|-----|----|----|-----|-----|
| 13. Do you perceive that your company has control over the future? | VGE | GE | SE | VLE | NEA |
| 14. Do external changes threaten your job?                         | VGE | GE | SE | VLE | NEA |

## Pay

- |                                                                |     |    |    |     |     |
|----------------------------------------------------------------|-----|----|----|-----|-----|
| 15. Do you perceive that you are paid a fair amount?           | VGE | GE | SE | VLE | NEA |
| 16. Is the pay that you get directly related to productivity?  | VGE | GE | SE | VLE | NEA |
| 17. Does the pay you get compare favorably to other companies? | VGE | GE | SE | VLE | NEA |

## Incentives

- |                                                                                                  |     |    |    |     |     |
|--------------------------------------------------------------------------------------------------|-----|----|----|-----|-----|
| 18. Do incentives packages such as bonuses exist in your company?                                | VGE | GE | SE | VLE | NEA |
| 19. Do the incentives provided by the company cater to your personal<br>And your family's needs? | VGE | GE | SE | VLE | NEA |

## Promotions

- |                                                                                             |     |    |    |     |     |
|---------------------------------------------------------------------------------------------|-----|----|----|-----|-----|
| 20. Do you have advancement opportunities and promotions<br>at your company?                | VGE | GE | SE | VLE | NEA |
| 21. Are advancement opportunities fairly decided and equitably<br>distributed in your firm? | VGE | GE | SE | VLE | NEA |

## Career Development

- |                                                                                                |     |    |    |     |     |
|------------------------------------------------------------------------------------------------|-----|----|----|-----|-----|
| 22. Is training given your firm that enable you to develop necessary<br>competencies?          | VGE | GE | SE | VLE | NEA |
| 23. Are proper inductions and orientations given to a new employee<br>joining your company?    | VGE | GE | SE | VLE | NEA |
| 24. Do you have mentors in your company that help you develop<br>your skills and competencies? | VGE | GE | SE | VLE | NEA |

## Supervision

- |                                                                                      |     |    |    |     |     |
|--------------------------------------------------------------------------------------|-----|----|----|-----|-----|
| 25. Do you perceive your Supervisor to be fair?                                      | VGE | GE | SE | VLE | NEA |
| 26. Do you perceive that your Supervisor is sufficiently skilled<br>and experienced? | VGE | GE | SE | VLE | NEA |

## Top Leadership

- |                                                                               |     |    |    |     |     |
|-------------------------------------------------------------------------------|-----|----|----|-----|-----|
| 27. Do the top leaders in your company appear to be effective<br>and dynamic? | VGE | GE | SE | VLE | NEA |
| 28. Do the top leaders in your company have a Vision for the future?          | VGE | GE | SE | VLE | NEA |
| 29. Do the top leaders in your company generate pride in their<br>leadership? | VGE | GE | SE | VLE | NEA |

## Planning

- |                                                                                        |     |    |    |     |     |
|----------------------------------------------------------------------------------------|-----|----|----|-----|-----|
| 30. Does your company have definite goals to aim at and practical<br>goals to achieve? | VGE | GE | SE | VLE | NEA |
| 31. Do policies that serve as guidelines to decision-making exist in<br>your company?  | VGE | GE | SE | VLE | NEA |
| 32. Are plans clearly communicated to employees and followed?                          | VGE | GE | SE | VLE | NEA |

## Feedback

- |                                                                                                                                         |     |    |    |     |     |
|-----------------------------------------------------------------------------------------------------------------------------------------|-----|----|----|-----|-----|
| 33. Do you obtain accurate and constructive performance appraisal<br>reports of your job performances?                                  | VGE | GE | SE | VLE | NEA |
| 34. Are workers well-informed about what is going on the workplace<br>including on the progress and profits that the company is making? | VGE | GE | SE | VLE | NEA |
| 35. Do communication channels exist in your company and are<br>efforts being made to overcome barriers in communication?                | VGE | GE | SE | VLE | NEA |

## Team Building

36. Do you have a healthy relationship with your co-workers? VGE GE SE VLE NEA  
37. Do you give & get support from your co-workers at your workplace? VGE GE SE VLE NEA  
38. Do you perceive that Team-Atmosphere exist at your workplace? VGE GE SE VLE NEA  
39. Do you hold continuous, participative and regular meetings aimed  
at improving performance? VGE GE SE VLE NEA

## Conflict Resolution

40. Does your company make participatory type of decision-making? VGE GE SE VLE NEA  
41. Does your company handle employee-disputes in a calm  
and procedural manner? VGE GE SE VLE NEA  
42. Does your company allow/ encourage practices of Labor unions? VGE GE SE VLE NEA

## Innovation

43. Are new ideas welcomed and nurtured in your company? VGE GE SE VLE NEA  
44. Do you feel that you have the freedom to try new methods  
and approaches? VGE GE SE VLE NEA  
45. Does your company give importance to the quality of products,  
services and work process? VGE GE SE VLE NEA

## General Contentment [ use ✓ sign to answer this last question]

46. Are you satisfied to be working in your company?  
5. Very Satisfied ☐ 4. Satisfied ☐ 3. Neither Satisfied nor dissatisfied ☐ 2. Dissatisfied ☐ 1.  
Very Dissatisfied ☐



# APPENDIX F-2

## በኮንስትራክሽን መስክ ላይ የተሠማሩ ሠራተኞች አመለካከት ለመገንዘብ የተዘጋጀ መጠይቅ

ይህ መጠይቅ ለምርምር ሥራ የተዘጋጀ ሲሆን በኮንስትራክሽን ዘርፍ ውስጥ ለውጠታማ የሠው ኃይል አስተዳደር ብሎም ለጠቅላላ ድርጅታዊ ስኬት አስተዋፅኦ የሚያደርጉትን እሴቶች ለይቶ ለማውጣት ይሞክራል። ከዚህ በመቀጠል በመሥሪያ ቦታው ውስጥ ስላለው የሠው ኃይል አስተዳደር ሁኔታ የሚገልፁ አረፍተ ነገሮች ተቀምጠዋል። ስለሆነም ለተጠቀሱት ዐረፍተ ነገሮች ለእያንዳንዳቸው ተስማሚ ነው የሚሉትን ምላሽ በምህፃረ ቃል ከተቀመጡት መልሶች መካከል መርጠው በማክበብ እንዲመልሱ በትህትና እጠይቃለሁ። በዚህ መጠይቅ ላይ የሚሞላው መረጃ በሙሉ በሚስጥር እንደሚያዝ ላረጋግጥልዎ እወዳለሁ። ለሚያደርጉልኝ ቀና ትብብር በቅድሚያ ክልብ አመሰግናለሁ።

እበእ = እጅግ በጣም እስማማለሁ

እ = እስማማለሁ

አ = አልስማማም

በአ = በጣም አልስማማም

### እባክዎን ስምዎን አይፃፉ

የመሥሪያ ቤትዎ ዋና የሥራ መስክ ምንድን ነው? 1. ዲዛይን 2. ኮንስትራክሽን 3. ዲዛይን-ኮንስትራክሽን  
የሥራ ድርሻዎ/ሙያዎ ምንድን ነው? \_\_\_\_\_

### ሥራዎን በተመለከተ

1. የሚያከናውኗቸውን ተግባሮች አስደሳች፣ ሠፊ እና አነሳሽ ናቸው ይላሉ

እበእ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

2. የሚያከናውኗቸውን ተግባሮች ለመስሪያ ቦታው አስፈላጊ ናቸው

እበእ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

3. ሥራዎን በሚያከናውኑበት ጊዜ ነፃነት አለዎት

እበእ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

**ሥራዎን ለመሥራት ያለዎን ሁኔታ በተመለከተ**

4. የሥራ አካባቢዎ የሚያስደስትና የሚስብ ነው

እበኔ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

5. የሥራ ቦታዎ አስፈላጊ በሆነ መሳሪያዎችና ቁሳቁሶች የተሟላ ነው

እበኔ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

**የሥራ ሚናን በተመለከተ**

6. በሥራዎ ላይ ከፍተኛ ያለ የስራ ጫና አለብህ ያምናሉ

እበኔ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

7. በሥራ ቦታዎ ላይ የሚፈጠረው የሥራ ጫና በጠናዎና በምርታማነትዎ ላይ ተፅዕኖ ያሳድራል

እበኔ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

8. የሥራን ጫናን ለመቀነስ የሚረዱ ቦታዎች በመ/ቤቱ ይገኛሉ

እበኔ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

**ስብከትን በተመለከተ**

9. በመስሪያ ቦታዎ ውስጥ ዘር፣ ሃይማኖትና በመሳሰሉት ገፅታዎች ስብከት አለ

እበኔ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

10. ሁሉም አካሎች በመስሪያ ቦታ ውስጥ የመሻሻልና የማደግ እድላቸው እኩል ነው

እበኔ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

**ሥነምግባርን በተመለከተ**

11. መሥሪያ ቦታዎ በሁሉም የተዋረድ ደረጃ ላይ ሥነምግባር አለው ብለው ያምናሉ

እበኔ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

12. በሁሉም ሁኔታዎችና አጋጣሚዎች ላይ ድርጅትዎ ከፍተኛ ሥነምግባር ይጠብቃል

እበኔ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

**የሥራ ዋስትናን በተመለከተ**

13. ተቋሙ መጨረሻ ሁኔታዎችን መቆጣጠር ይችላል ብለው ያምናሉ

እበኔ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

14. ከመሥሪያ በቱ ውጭ ያሉ ተፅዕኖዎች የርስዎን ስራ አደጋ ላይ ይጥሉታል ብለው ይስጋሉ

እበኔ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

## ክፍያን በተመለከተ

15. ተገቢ የሆነ ክፍያ ይከፈላል ብለው ያምናሉ

እስከ ☐ ከ ☐ ከ ☐ ከ ☐ ከ ☐

16. የሚከፈለው ክፍያ ከምርታማነትም ጋር የተገናኘበት ተመጣጣኝ ነው ይላሉ

እስከ ☐ ከ ☐ ከ ☐ ከ ☐ ከ ☐

17. የሚከፈለው ክፍያ ሌሎች መሥሪያ በቶች ውስጥ ከሚከፈለው ጋር ሲገፃፀር በተሻለ

መልኩ ተወዳዳሪ ነው ይላሉ

እስከ ☐ ከ ☐ ከ ☐ ከ ☐ ከ ☐

## ማህረታቸውንና ጥቅማ ጥቅሞች

18. በመሥሪያ በትውልድ የሚሰጡ ማህረታቸውንና ጥቅማ ጥቅሞች አሉ

እስከ ☐ ከ ☐ ከ ☐ ከ ☐ ከ ☐

19. በመሰሪያ በትውልድ የሚሰጡ ማህረታቸውንና ጥቅማ ጥቅሞች የሚልወጥሩ የበተሰጠውን

ፍላጎት ያሟላሉ

እስከ ☐ ከ ☐ ከ ☐ ከ ☐ ከ ☐

## እድገትን በተመለከተ

20. በመሥሪያ በትውልድ የሚገኙት የእድገትና የመሻሻል እድሎች ይገኛሉ

እስከ ☐ ከ ☐ ከ ☐ ከ ☐ ከ ☐

21. በመሥሪያ በትውልድ የሚገኙት የእድገትና የመሻሻል እድሎች ፍታዊ በሆነ መልኩ ይወሰናሉ

እስከ ☐ ከ ☐ ከ ☐ ከ ☐ ከ ☐

## መያዝ መለሰሰን በተመለከተ

22. በመሥሪያ በትውልድ የሚገኙት የእድገትና የመሻሻል እድሎች ይሰጣሉ

እስከ ☐ ከ ☐ ከ ☐ ከ ☐ ከ ☐

23. በመሥሪያ በትውልድ የሚገኙት የእድገትና የመሻሻል እድሎች በቂ አቀጣጠል ትውልድ

መግለጫ ይደረግላቸዋል

እስከ ☐ ከ ☐ ከ ☐ ከ ☐ ከ ☐

24. በመሥሪያ በትውልድ የሚገኙት የእድገትና የመሻሻል እድሎች በሙሉ የሚገኙት አሉ

እስከ ☐ ከ ☐ ከ ☐ ከ ☐ ከ ☐



ቁጥጥርን በተመለከተ

25. ተቆጣጣሪዎ ያላድሎ ሥራቸውን ያከናውናል፡

እበእ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

26. ተቆጣጣሪዎ በቂ የሆነ እውቀትና ችሎታ አላቸው ብለው ያምናሉ፡

እበእ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

27. በከፍተኛ አመራር ላይ የሚገኙ የድርጅቱ ኃላፊዎች ብቁና ውጤታማ ናቸው፡

እበእ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

28. በከፍተኛ አመራር ላይ የሚገኙ የድርጅቱ ኃላፊዎች ራዕይ አላቸው፡

እበእ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

29. በከፍተኛ አመራር ላይ የሚገኙ የድርጅቱ ኃላፊዎች በሚሠጡት አመራር በሠራተኛው ላይ የኩራት መንፈስ ይፈጥራል፡

እበእ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

30. ድርጅቱ በግልፅ የተቀመጡ ግቦች የሚያልምና እነዚሁንም ግቦች የሚተገብር ነው፡

እበእ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

31. በድርጅቱ የሚገኙ ፖሊሲዎች ውሳኔን ለመስጠት ያግዛሉ፡

እበእ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

32. አቅዶችን ለሠራተኛው ግልፅ በሆነ መንገድ ይገለጻሉ? ተገባራዊስ ይሆናሉ፡

እበእ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

ምላሻዊ ዘገባ (ፌድ ባክ)

33. በሥራዎ ላይ ሰለሚያደርጉት እንቅስቃሴ ትክክለኛና ገንቢ የሆነ ዘገባ ያገኛሉ፡

እበእ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

34. በመሥሪያ በቱ ውስጥ ስለሚካሄዱ እንቅስቃሴዎች ትርፋማነትንና እድገትንም

ጨምሮ ሠራተኛው ከመሥሪያ ከቤቱ መግለጫ ያገኛል፡

እበእ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

35. በመሥሪያ በቱ ውስጥ የመገናኛ ዘዴዎችና በቂ የሆነ የመረጃ ልውውጥ ይደረጋልን

ስለዚህ ልውውጥ እንቅፋት የሚሆኑ ነገሮችን ለማስወገድ ጥረት ይደረጋልን

እበእ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

ቡድን ምስረታን በተመለከተ

36. ከሥራ ባልደረባዎቻቸው ጋር ጤናማ የሆነ ግንኙነት አለዎት

እበእ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

37. በሥራዎ ቦታ ላይ ለሎች ሠዎች ድጋፍን ይሠጣሉ? እርስዎስ ይቀበላሉ፡

እበእ ☐ በእ ☐ እ ☐ አ ☐ በአ ☐

38. በሥራ ቦታው ላይ የቡድን መጓጸብ ይገፀባቸዋል ብለው ያምናሉ

እስከ ☐ ነ ☐ ነ ☐ ነ ☐ ነ ☐ ነ

39. ተከታታይነት ያላቸው ሁሉንም ሠራተኛ ያሳተፉ እና ውጤታማነት ለማሻሻል የሚያስችሉ ስብሰባዎች

በሥራዎች ቦታ ይካሄዳሉ  
እስከ ☐ ነ ☐ ነ ☐ ነ ☐ ነ ☐ ነ

ግጭቶችን መፍታትን በተመለከተ

40. ድርጅቱ ውስጥ የሚወሰኑ ውሳኔዎች በሠራተኛነት የሚወሰኑ ናቸው

እስከ ☐ ነ ☐ ነ ☐ ነ ☐ ነ ☐ ነ

41. ድርጅቱ የሠራተኛ ማህበራት እንዲጠናከሩ ወይም እንዲገባቸው ይፈቅዳል

እስከ ☐ ነ ☐ ነ ☐ ነ ☐ ነ ☐ ነ

ፈጠራን በተመለከተ

43. አዳዲስ ሃሳቦች በድርጅቱ ውስጥ ይበረታታሉ

እስከ ☐ ነ ☐ ነ ☐ ነ ☐ ነ ☐ ነ

44. አዳዲስ አሠራሮችን አካሄዶችን ለመመሻሻል ነፃነቱ አለው

እስከ ☐ ነ ☐ ነ ☐ ነ ☐ ነ ☐ ነ

45. መሥሪያ ቦታው ጥራት ላላቸው ሥራዎች ግልጽ ሆኖ ትኩረት ይሠጣል

እስከ ☐ ነ ☐ ነ ☐ ነ ☐ ነ ☐ ነ

አጠቃላይ መግለጫ

46. ለመሥሪያ ቦታው በመሥራትዎ ይስተኛ ነው

5. እጅግ ይስተኛ ነኝ ☐ 4. ይስተኛ ነኝ ☐ 3. ይስተኛም የተከፈሉም አይደሉም ☐

2. ይስተኛ አይደሉም ☐ 5. እጅግ ይስተኛ አይደሉም ☐

## APPENDIX F-3

### Interview with HR managers/ Administrators / General Managers.

Business of the firm: Construction ☐ Design/Consultancy ☐ Design-Construct ☐ Others ☐

Size of Company: Number of Employees = \_\_\_\_\_  
Number of Professionals = \_\_\_\_\_  
Number of Support Staff = \_\_\_\_\_  
Number of Contract Employees = \_\_\_\_\_

1. What has been the number of permanent employees working in your organization at the mid of the following months?
  - In September \_\_\_\_\_
  - In October \_\_\_\_\_
  - In November \_\_\_\_\_
2. How many of your permanent employees were separated from your organization during the following months?
  - In September \_\_\_\_\_
  - In October \_\_\_\_\_
  - In November \_\_\_\_\_
3. How many of these permanent employees that left your organization had been separated because of unavoidable reasons? (promotion, transfer, leaving the country, illness, death etc)
  - In September \_\_\_\_\_
  - In October \_\_\_\_\_
  - In November \_\_\_\_\_
4. Do your organization conduct exit interviews for employees who are separating from the organization? 2. Yes ☐ 1. No ☐
5. Do your organization conduct post-exit interviews for employees who are separating from the organization? 2. Yes ☐ 1. No ☐
6. Does your organization incur costs of recruiting, selecting (interviewing, testing, reference checking), orientation and training as a result of employees separating from the organization? [ mark your answer with a ✓]  
5. To a very great extent ☐ 4. To a great extent ☐ 3. To some extent ☐ 2. To a very little extent ☐ 1. To no extent at all ☐
7. Does your organization incur such costs resulting from the disruption of production, problems in quality control, poorer communication and inability to develop teamwork and morale as a result of employees separating from the organization? [ mark your answer with a ✓]  
5. To a very great extent ☐ 4. To a great extent ☐ 3. To some extent ☐ 2. To a very little extent ☐ 1. To no extent at all ☐
8. In analyzing the causes of avoidable separations of employees from your organizations, would you agree that the employees left your company because the general state of the economy was better? [ mark your answer with a ✓]



2. Yes ☐ 1. No ☐
9. What has been the number of unscheduled absentees in your organization during the following months? (Don't include Annual leaves, Public holidays and Days off).
- In September \_\_\_\_\_
  - In October \_\_\_\_\_
  - In November \_\_\_\_\_
10. What has been the reason for their absenteeism? [ Use the ✓ sign when applicable]
- Transportation \_\_\_\_\_
  - Ill health \_\_\_\_\_
  - Lack of attendance incentives \_\_\_\_\_
11. Has there been effects on the productivity of your organization as a result of absenteeism? [ Use the ✓ sign when applicable]
5. To a very great extent ☐ 4. To a great extent ☐ 3. To some extent ☐ 2. To a very little extent ☐ 1. To no extent at all ☐
12. What has been the extent of employees' lateness in your organization during the following months?
- In September \_\_\_\_\_
  - In October \_\_\_\_\_
  - In November \_\_\_\_\_
13. What has been the reason for their lateness? [ Use the ✓ sign when applicable]
- Transportation \_\_\_\_\_
  - Ill health \_\_\_\_\_
  - Not explainable \_\_\_\_\_
14. Has there been effects on the productivity of your organization as a result of lateness? [ Use the ✓ sign when applicable]
5. To a very great extent ☐ 4. To a great extent ☐ 3. To some extent ☐ 2. To a very little extent ☐ 1. To no extent at all ☐
15. What has been the number of accidents resulting in occupational injuries and illnesses in your organization during the following months?
- In September \_\_\_\_\_
  - In October \_\_\_\_\_
  - In November \_\_\_\_\_
16. What has been the resulting time loss due to the accidents, occupational injuries and illnesses during the following months?
- In September \_\_\_\_\_
  - In October \_\_\_\_\_
  - In November \_\_\_\_\_
17. Has there been effects on the following items as a result of the accidents, occupational injuries and illnesses? [ Use the ✓ sign when applicable]
- In Medical Care Costs \_\_\_\_\_
  - In Worker's compensation insurance payments \_\_\_\_\_
  - In Administrative expenses \_\_\_\_\_
  - In Loss of Productivity \_\_\_\_\_

Perceive that you are paid a fair amount \* Freedom to perform work Crosstabulation

|                                          |                         |                                                   | Freedom to perform work |                |                   |                        | Total  |
|------------------------------------------|-------------------------|---------------------------------------------------|-------------------------|----------------|-------------------|------------------------|--------|
|                                          |                         |                                                   | To a very little extent | To some extent | To a great extent | To a very great extent |        |
| Perceive that you are paid a fair amount | To a very little extent | Count                                             | 1                       | 1              |                   |                        | 2      |
|                                          |                         | % within Perceive that you are paid a fair amount | 50.0%                   | 50.0%          |                   |                        | 100.0% |
|                                          |                         | % within Freedom to perform work                  | 100.0%                  | 16.7%          |                   |                        | 11.1%  |
|                                          |                         | % of Total                                        | 5.6%                    | 5.6%           |                   |                        | 11.1%  |
|                                          | To some extent          | Count                                             |                         | 4              | 2                 | 3                      | 9      |
|                                          |                         | % within Perceive that you are paid a fair amount |                         | 44.4%          | 22.2%             | 33.3%                  | 100.0% |
|                                          |                         | % within Freedom to perform work                  |                         | 66.7%          | 66.7%             | 37.5%                  | 50.0%  |
|                                          |                         | % of Total                                        |                         | 22.2%          | 11.1%             | 16.7%                  | 50.0%  |
|                                          | To a great extent       | Count                                             |                         | 1              | 1                 | 5                      | 7      |
|                                          |                         | % within Perceive that you are paid a fair amount |                         | 14.3%          | 14.3%             | 71.4%                  | 100.0% |
|                                          |                         | % within Freedom to perform work                  |                         | 16.7%          | 33.3%             | 62.5%                  | 38.9%  |
|                                          |                         | % of Total                                        |                         | 5.6%           | 5.6%              | 27.8%                  | 38.9%  |
| Total                                    |                         | Count                                             | 1                       | 6              | 3                 | 8                      | 18     |
|                                          |                         | % within Perceive that you are paid a fair amount | 5.6%                    | 33.3%          | 16.7%             | 44.4%                  | 100.0% |
|                                          |                         | % within Freedom to perform work                  | 100.0%                  | 100.0%         | 100.0%            | 100.0%                 | 100.0% |
|                                          |                         | % of Total                                        | 5.6%                    | 33.3%          | 16.7%             | 44.4%                  | 100.0% |

Appendix G-1: Cross Tabulation of "Pay" and "Freedom to Work" - Consultants

Perceive that you are paid a fair amount \* Tasks to be enjoyable, diverse & interesting Crosstabulation

|                                          |                                                       |                                                       | Tasks to be enjoyable, diverse & interesting |                   |                        | Total  |
|------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|----------------------------------------------|-------------------|------------------------|--------|
|                                          |                                                       |                                                       | To some extent                               | To a great extent | To a very great extent |        |
| Perceive that you are paid a fair amount | To a very little extent                               | Count                                                 | 2                                            |                   |                        | 2      |
|                                          |                                                       | % within Perceive that you are paid a fair amount     | 100.0%                                       |                   |                        | 100.0% |
|                                          |                                                       | % within Tasks to be enjoyable, diverse & interesting | 50.0%                                        |                   |                        | 11.1%  |
|                                          |                                                       | % of Total                                            | 11.1%                                        |                   |                        | 11.1%  |
|                                          | To some extent                                        | Count                                                 |                                              | 8                 | 1                      | 9      |
|                                          |                                                       | % within Perceive that you are paid a fair amount     |                                              | 88.9%             | 11.1%                  | 100.0% |
|                                          |                                                       | % within Tasks to be enjoyable, diverse & interesting |                                              | 80.0%             | 25.0%                  | 50.0%  |
|                                          |                                                       | % of Total                                            |                                              | 44.4%             | 5.6%                   | 50.0%  |
|                                          | To a great extent                                     | Count                                                 | 2                                            | 2                 | 3                      | 7      |
|                                          |                                                       | % within Perceive that you are paid a fair amount     | 28.6%                                        | 28.6%             | 42.9%                  | 100.0% |
|                                          |                                                       | % within Tasks to be enjoyable, diverse & interesting | 50.0%                                        | 20.0%             | 75.0%                  | 38.9%  |
|                                          |                                                       | % of Total                                            | 11.1%                                        | 11.1%             | 16.7%                  | 38.9%  |
| Total                                    | Count                                                 | 4                                                     | 10                                           | 4                 | 18                     |        |
|                                          | % within Perceive that you are paid a fair amount     | 22.2%                                                 | 55.6%                                        | 22.2%             | 100.0%                 |        |
|                                          | % within Tasks to be enjoyable, diverse & interesting | 100.0%                                                | 100.0%                                       | 100.0%            | 100.0%                 |        |
|                                          | % of Total                                            | 22.2%                                                 | 55.6%                                        | 22.2%             | 100.0%                 |        |

Appendix G-2: Cross Tabulation of "Pay" and "Interesting Work" - Consultants



Perceive that you are paid a fair amount \* Perceive that your firm has control of the future Crosstabulation

|                                          |                                                            |                                                            | Perceive that your firm has control of the future |                |                   |                        | Total  |
|------------------------------------------|------------------------------------------------------------|------------------------------------------------------------|---------------------------------------------------|----------------|-------------------|------------------------|--------|
|                                          |                                                            |                                                            | To a very little extent                           | To some extent | To a great extent | To a very great extent |        |
| Perceive that you are paid a fair amount | To a very little extent                                    | Count                                                      | 1                                                 | 1              |                   |                        | 2      |
|                                          |                                                            | % within Perceive that you are paid a fair amount          | 50.0%                                             | 50.0%          |                   |                        | 100.0% |
|                                          |                                                            | % within Perceive that your firm has control of the future | 25.0%                                             | 12.5%          |                   |                        | 11.1%  |
|                                          |                                                            | % of Total                                                 | 5.6%                                              | 5.6%           |                   |                        | 11.1%  |
|                                          | To some extent                                             | Count                                                      | 3                                                 | 6              |                   |                        | 9      |
|                                          |                                                            | % within Perceive that you are paid a fair amount          | 33.3%                                             | 66.7%          |                   |                        | 100.0% |
|                                          |                                                            | % within Perceive that your firm has control of the future | 75.0%                                             | 75.0%          |                   |                        | 50.0%  |
|                                          |                                                            | % of Total                                                 | 16.7%                                             | 33.3%          |                   |                        | 50.0%  |
|                                          | To a great extent                                          | Count                                                      |                                                   | 1              | 3                 | 3                      | 7      |
|                                          |                                                            | % within Perceive that you are paid a fair amount          |                                                   | 14.3%          | 42.9%             | 42.9%                  | 100.0% |
|                                          |                                                            | % within Perceive that your firm has control of the future |                                                   | 12.5%          | 100.0%            | 100.0%                 | 38.9%  |
|                                          |                                                            | % of Total                                                 |                                                   | 5.6%           | 16.7%             | 16.7%                  | 38.9%  |
| Total                                    | Count                                                      |                                                            | 4                                                 | 8              | 3                 | 3                      | 18     |
|                                          | % within Perceive that you are paid a fair amount          |                                                            | 22.2%                                             | 44.4%          | 16.7%             | 16.7%                  | 100.0% |
|                                          | % within Perceive that your firm has control of the future |                                                            | 100.0%                                            | 100.0%         | 100.0%            | 100.0%                 | 100.0% |
|                                          | % of Total                                                 |                                                            | 22.2%                                             | 44.4%          | 16.7%             | 16.7%                  | 100.0% |

Appendix G-3: Cross Tabulation of "Pay" and "Job Security" - Consultants

**Perceive high levels of job stress at your work \* Incentives cater to your family's needs as well Crosstabulation**

|                                                 |                                                          |                                                          | Incentives cater to your family's needs as well |                         |                |                   |                        | Total  |
|-------------------------------------------------|----------------------------------------------------------|----------------------------------------------------------|-------------------------------------------------|-------------------------|----------------|-------------------|------------------------|--------|
|                                                 |                                                          |                                                          | To no extent at all                             | To a very little extent | To some extent | To a great extent | To a very great extent |        |
| Perceive high levels of job stress at your work | To no extent at all                                      | Count                                                    | 1                                               |                         |                |                   |                        | 1      |
|                                                 |                                                          | % within Perceive high levels of job stress at your work | 100.0%                                          |                         |                |                   |                        | 100.0% |
|                                                 |                                                          | % within Incentives cater to your family's needs as well | 14.3%                                           |                         |                |                   |                        | 5.6%   |
|                                                 |                                                          | % of Total                                               | 5.6%                                            |                         |                |                   |                        | 5.6%   |
|                                                 | To some extent                                           | Count                                                    | 5                                               | 4                       | 2              | 1                 |                        | 12     |
|                                                 |                                                          | % within Perceive high levels of job stress at your work | 41.7%                                           | 33.3%                   | 16.7%          | 8.3%              |                        | 100.0% |
|                                                 |                                                          | % within Incentives cater to your family's needs as well | 71.4%                                           | 66.7%                   | 66.7%          | 100.0%            |                        | 66.7%  |
|                                                 |                                                          | % of Total                                               | 27.8%                                           | 22.2%                   | 11.1%          | 5.6%              |                        | 66.7%  |
|                                                 | To a great extent                                        | Count                                                    |                                                 | 1                       |                |                   |                        | 1      |
|                                                 |                                                          | % within Perceive high levels of job stress at your work |                                                 | 100.0%                  |                |                   |                        | 100.0% |
|                                                 |                                                          | % within Incentives cater to your family's needs as well |                                                 | 16.7%                   |                |                   |                        | 5.6%   |
|                                                 |                                                          | % of Total                                               |                                                 | 5.6%                    |                |                   |                        | 5.6%   |
|                                                 | To a very great extent                                   | Count                                                    | 1                                               | 1                       | 1              |                   | 1                      | 4      |
|                                                 |                                                          | % within Perceive high levels of job stress at your work | 25.0%                                           | 25.0%                   | 25.0%          |                   | 25.0%                  | 100.0% |
|                                                 |                                                          | % within Incentives cater to your family's needs as well | 14.3%                                           | 16.7%                   | 33.3%          |                   | 100.0%                 | 22.2%  |
|                                                 |                                                          | % of Total                                               | 5.6%                                            | 5.6%                    | 5.6%           |                   | 5.6%                   | 22.2%  |
| Total                                           | Count                                                    |                                                          | 7                                               | 6                       | 3              | 1                 | 1                      | 18     |
|                                                 | % within Perceive high levels of job stress at your work |                                                          | 38.9%                                           | 33.3%                   | 16.7%          | 5.6%              | 5.6%                   | 100.0% |
|                                                 | % within Incentives cater to your family's needs as well |                                                          | 100.0%                                          | 100.0%                  | 100.0%         | 100.0%            | 100.0%                 | 100.0% |
|                                                 | % of Total                                               |                                                          | 38.9%                                           | 33.3%                   | 16.7%          | 5.6%              | 5.6%                   | 100.0% |

Appendix G-4: Cross Tabulation of "Job Stress" and "Incentives catering to family's needs" - Consultants

Perceive high levels of job stress at your work \* Proper induction & orientation given to new employees Crosstabulation

|                                                 |                        |                                                                | Proper induction & orientation given to new employees |                         |                |                   |                        | Total  |
|-------------------------------------------------|------------------------|----------------------------------------------------------------|-------------------------------------------------------|-------------------------|----------------|-------------------|------------------------|--------|
|                                                 |                        |                                                                | To no extent at all                                   | To a very little extent | To some extent | To a great extent | To a very great extent |        |
| Perceive high levels of job stress at your work | To no extent at all    | Count                                                          |                                                       |                         | 1              |                   |                        | 1      |
|                                                 |                        | % within Perceive high levels of job stress at your work       |                                                       |                         | 100.0%         |                   |                        | 100.0% |
|                                                 |                        | % within Proper induction & orientation given to new employees |                                                       |                         | 25.0%          |                   |                        | 5.6%   |
|                                                 |                        | % of Total                                                     |                                                       |                         | 5.6%           |                   |                        | 5.6%   |
|                                                 | To some extent         | Count                                                          | 1                                                     | 4                       | 2              | 4                 | 1                      | 12     |
|                                                 |                        | % within Perceive high levels of job stress at your work       | 8.3%                                                  | 33.3%                   | 16.7%          | 33.3%             | 8.3%                   | 100.0% |
|                                                 |                        | % within Proper induction & orientation given to new employees | 100.0%                                                | 80.0%                   | 50.0%          | 57.1%             | 100.0%                 | 66.7%  |
|                                                 |                        | % of Total                                                     | 5.6%                                                  | 22.2%                   | 11.1%          | 22.2%             | 5.6%                   | 66.7%  |
|                                                 | To a great extent      | Count                                                          |                                                       | 1                       |                |                   |                        | 1      |
|                                                 |                        | % within Perceive high levels of job stress at your work       |                                                       | 100.0%                  |                |                   |                        | 100.0% |
|                                                 |                        | % within Proper induction & orientation given to new employees |                                                       | 20.0%                   |                |                   |                        | 5.6%   |
|                                                 |                        | % of Total                                                     |                                                       | 5.6%                    |                |                   |                        | 5.6%   |
|                                                 | To a very great extent | Count                                                          |                                                       |                         | 1              | 3                 |                        | 4      |
|                                                 |                        | % within Perceive high levels of job stress at your work       |                                                       |                         | 25.0%          | 75.0%             |                        | 100.0% |
|                                                 |                        | % within Proper induction & orientation given to new employees |                                                       |                         | 25.0%          | 42.9%             |                        | 22.2%  |
|                                                 |                        | % of Total                                                     |                                                       |                         | 5.6%           | 16.7%             |                        | 22.2%  |
| Total                                           |                        | Count                                                          | 1                                                     | 5                       | 4              | 7                 | 1                      | 18     |
|                                                 |                        | % within Perceive high levels of job stress at your work       | 5.6%                                                  | 27.8%                   | 22.2%          | 38.9%             | 5.6%                   | 100.0% |
|                                                 |                        | % within Proper induction & orientation given to new employees | 100.0%                                                | 100.0%                  | 100.0%         | 100.0%            | 100.0%                 | 100.0% |
|                                                 |                        | % of Total                                                     | 5.6%                                                  | 27.8%                   | 22.2%          | 38.9%             | 5.6%                   | 100.0% |



Perceive that you are paid a fair amount \* Freedom to perform work Crosstabulation

|                                          |                         |                                                   | Freedom to perform work |                   |                        | Total  |
|------------------------------------------|-------------------------|---------------------------------------------------|-------------------------|-------------------|------------------------|--------|
|                                          |                         |                                                   | To some extent          | To a great extent | To a very great extent |        |
| Perceive that you are paid a fair amount | To no extent at all     | Count                                             | 1                       |                   |                        | 1      |
|                                          |                         | % within Perceive that you are paid a fair amount | 100.0%                  |                   |                        | 100.0% |
|                                          |                         | % within Freedom to perform work                  | 5.3%                    |                   |                        | 2.0%   |
|                                          |                         | % of Total                                        | 2.0%                    |                   |                        | 2.0%   |
|                                          | To a very little extent | Count                                             | 10                      | 3                 |                        | 13     |
|                                          |                         | % within Perceive that you are paid a fair amount | 76.9%                   | 23.1%             |                        | 100.0% |
|                                          |                         | % within Freedom to perform work                  | 52.6%                   | 16.7%             |                        | 25.5%  |
|                                          |                         | % of Total                                        | 19.6%                   | 5.9%              |                        | 25.5%  |
|                                          | To some extent          | Count                                             | 4                       | 8                 | 7                      | 19     |
|                                          |                         | % within Perceive that you are paid a fair amount | 21.1%                   | 42.1%             | 36.8%                  | 100.0% |
|                                          |                         | % within Freedom to perform work                  | 21.1%                   | 44.4%             | 50.0%                  | 37.3%  |
|                                          |                         | % of Total                                        | 7.8%                    | 15.7%             | 13.7%                  | 37.3%  |
|                                          | To a great extent       | Count                                             | 3                       | 6                 | 5                      | 14     |
|                                          |                         | % within Perceive that you are paid a fair amount | 21.4%                   | 42.9%             | 35.7%                  | 100.0% |
|                                          |                         | % within Freedom to perform work                  | 15.8%                   | 33.3%             | 35.7%                  | 27.5%  |
|                                          |                         | % of Total                                        | 5.9%                    | 11.8%             | 9.8%                   | 27.5%  |
|                                          | To a very great extent  | Count                                             | 1                       | 1                 | 2                      | 4      |
|                                          |                         | % within Perceive that you are paid a fair amount | 25.0%                   | 25.0%             | 50.0%                  | 100.0% |
|                                          |                         | % within Freedom to perform work                  | 5.3%                    | 5.6%              | 14.3%                  | 7.8%   |
|                                          |                         | % of Total                                        | 2.0%                    | 2.0%              | 3.9%                   | 7.8%   |
| Total                                    |                         | Count                                             | 19                      | 18                | 14                     | 51     |
|                                          |                         | % within Perceive that you are paid a fair amount | 37.3%                   | 35.3%             | 27.5%                  | 100.0% |
|                                          |                         | % within Freedom to perform work                  | 100.0%                  | 100.0%            | 100.0%                 | 100.0% |
|                                          |                         | % of Total                                        | 37.3%                   | 35.3%             | 27.5%                  | 100.0% |

Appendix G-6: Cross Tabulation of "Pay" and "Freedom to Perform Work" - Contractors

Perceive that you are paid a fair amount \* Tasks to be enjoyable, diverse & interesting Crosstabulation

|                                          |                         |                                                       | Tasks to be enjoyable, diverse & interesting |                   |                        | Total  |
|------------------------------------------|-------------------------|-------------------------------------------------------|----------------------------------------------|-------------------|------------------------|--------|
|                                          |                         |                                                       | To some extent                               | To a great extent | To a very great extent |        |
| Perceive that you are paid a fair amount | To no extent at all     | Count                                                 |                                              | 1                 |                        | 1      |
|                                          |                         | % within Perceive that you are paid a fair amount     |                                              | 100.0%            |                        | 100.0% |
|                                          |                         | % within Tasks to be enjoyable, diverse & interesting |                                              | 4.5%              |                        | 2.0%   |
|                                          |                         | % of Total                                            |                                              | 2.0%              |                        | 2.0%   |
|                                          |                         |                                                       |                                              |                   |                        |        |
|                                          | To a very little extent | Count                                                 | 9                                            | 2                 | 2                      | 13     |
|                                          |                         | % within Perceive that you are paid a fair amount     | 69.2%                                        | 15.4%             | 15.4%                  | 100.0% |
|                                          |                         | % within Tasks to be enjoyable, diverse & interesting | 52.9%                                        | 9.1%              | 16.7%                  | 25.5%  |
|                                          |                         | % of Total                                            | 17.6%                                        | 3.9%              | 3.9%                   | 25.5%  |
|                                          |                         |                                                       |                                              |                   |                        |        |
|                                          | To some extent          | Count                                                 | 6                                            | 8                 | 5                      | 19     |
|                                          |                         | % within Perceive that you are paid a fair amount     | 31.6%                                        | 42.1%             | 26.3%                  | 100.0% |
|                                          |                         | % within Tasks to be enjoyable, diverse & interesting | 35.3%                                        | 36.4%             | 41.7%                  | 37.3%  |
|                                          |                         | % of Total                                            | 11.8%                                        | 15.7%             | 9.8%                   | 37.3%  |
|                                          |                         |                                                       |                                              |                   |                        |        |
|                                          | To a great extent       | Count                                                 | 1                                            | 9                 | 4                      | 14     |
|                                          |                         | % within Perceive that you are paid a fair amount     | 7.1%                                         | 64.3%             | 28.6%                  | 100.0% |
|                                          |                         | % within Tasks to be enjoyable, diverse & interesting | 5.9%                                         | 40.9%             | 33.3%                  | 27.5%  |
|                                          |                         | % of Total                                            | 2.0%                                         | 17.6%             | 7.8%                   | 27.5%  |
|                                          |                         |                                                       |                                              |                   |                        |        |
|                                          | To a very great extent  | Count                                                 | 1                                            | 2                 | 1                      | 4      |
|                                          |                         | % within Perceive that you are paid a fair amount     | 25.0%                                        | 50.0%             | 25.0%                  | 100.0% |
|                                          |                         | % within Tasks to be enjoyable, diverse & interesting | 5.9%                                         | 9.1%              | 8.3%                   | 7.8%   |
|                                          |                         | % of Total                                            | 2.0%                                         | 3.9%              | 2.0%                   | 7.8%   |
|                                          |                         |                                                       |                                              |                   |                        |        |
| Total                                    |                         | Count                                                 | 17                                           | 22                | 12                     | 51     |
|                                          |                         | % within Perceive that you are paid a fair amount     | 33.3%                                        | 43.1%             | 23.5%                  | 100.0% |
|                                          |                         | % within Tasks to be enjoyable, diverse & interesting | 100.0%                                       | 100.0%            | 100.0%                 | 100.0% |
|                                          |                         | % of Total                                            | 33.3%                                        | 43.1%             | 23.5%                  | 100.0% |
|                                          |                         |                                                       |                                              |                   |                        |        |

Perceive that you are paid a fair amount \* Perceive that your firm has control of the future Crosstabulation

|                                          |                         |                                                            | Perceive that your firm has control of the future |                         |                |                   |                        | Total  |
|------------------------------------------|-------------------------|------------------------------------------------------------|---------------------------------------------------|-------------------------|----------------|-------------------|------------------------|--------|
|                                          |                         |                                                            | To no extent at all                               | To a very little extent | To some extent | To a great extent | To a very great extent |        |
| Perceive that you are paid a fair amount | To no extent at all     | Count                                                      |                                                   |                         | 1              |                   |                        | 1      |
|                                          |                         | % within Perceive that you are paid a fair amount          |                                                   |                         | 100.0%         |                   |                        | 100.0% |
|                                          |                         | % within Perceive that your firm has control of the future |                                                   |                         | 5.3%           |                   |                        | 2.0%   |
|                                          |                         | % of Total                                                 |                                                   |                         | 2.0%           |                   |                        | 2.0%   |
|                                          | To a very little extent | Count                                                      | 1                                                 |                         | 9              | 3                 |                        | 13     |
|                                          |                         | % within Perceive that you are paid a fair amount          | 7.7%                                              |                         | 69.2%          | 23.1%             |                        | 100.0% |
|                                          |                         | % within Perceive that your firm has control of the future | 50.0%                                             |                         | 47.4%          | 15.8%             |                        | 25.5%  |
|                                          |                         | % of Total                                                 | 2.0%                                              |                         | 17.6%          | 5.9%              |                        | 25.5%  |
|                                          | To some extent          | Count                                                      |                                                   | 3                       | 5              | 7                 | 4                      | 19     |
|                                          |                         | % within Perceive that you are paid a fair amount          |                                                   | 15.8%                   | 26.3%          | 36.8%             | 21.1%                  | 100.0% |
|                                          |                         | % within Perceive that your firm has control of the future |                                                   | 100.0%                  | 26.3%          | 36.8%             | 50.0%                  | 37.3%  |
|                                          |                         | % of Total                                                 |                                                   | 5.9%                    | 9.8%           | 13.7%             | 7.8%                   | 37.3%  |
|                                          | To a great extent       | Count                                                      |                                                   |                         | 4              | 7                 | 3                      | 14     |
|                                          |                         | % within Perceive that you are paid a fair amount          |                                                   |                         | 28.6%          | 50.0%             | 21.4%                  | 100.0% |
|                                          |                         | % within Perceive that your firm has control of the future |                                                   |                         | 21.1%          | 36.8%             | 37.5%                  | 27.5%  |
|                                          |                         | % of Total                                                 |                                                   |                         | 7.8%           | 13.7%             | 5.9%                   | 27.5%  |
|                                          | To a very great extent  | Count                                                      | 1                                                 |                         |                | 2                 | 1                      | 4      |
|                                          |                         | % within Perceive that you are paid a fair amount          | 25.0%                                             |                         |                | 50.0%             | 25.0%                  | 100.0% |
|                                          |                         | % within Perceive that your firm has control of the future | 50.0%                                             |                         |                | 10.5%             | 12.5%                  | 7.8%   |
|                                          |                         | % of Total                                                 | 2.0%                                              |                         |                | 3.9%              | 2.0%                   | 7.8%   |
| Total                                    |                         | Count                                                      | 2                                                 | 3                       | 19             | 19                | 8                      | 51     |
|                                          |                         | % within Perceive that you are paid a fair amount          | 3.9%                                              | 5.9%                    | 37.3%          | 37.3%             | 15.7%                  | 100.0% |
|                                          |                         | % within Perceive that your firm has control of the future | 100.0%                                            | 100.0%                  | 100.0%         | 100.0%            | 100.0%                 | 100.0% |
|                                          |                         | % of Total                                                 | 3.9%                                              | 5.9%                    | 37.3%          | 37.3%             | 15.7%                  | 100.0% |
|                                          |                         |                                                            |                                                   |                         |                |                   |                        |        |



Perceive high levels of job stress at your work \* Incentives cater to your family's needs as well Crosstabulation

|                                                 |                         |                                                          | Incentives cater to your family's needs as well |                         |                |                   |                        | Total  |
|-------------------------------------------------|-------------------------|----------------------------------------------------------|-------------------------------------------------|-------------------------|----------------|-------------------|------------------------|--------|
|                                                 |                         |                                                          | To no extent at all                             | To a very little extent | To some extent | To a great extent | To a very great extent |        |
| Perceive high levels of job stress at your work | To no extent at all     | Count                                                    |                                                 | 1                       |                | 1                 |                        | 2      |
|                                                 |                         | % within Perceive high levels of job stress at your work |                                                 | 50.0%                   |                | 50.0%             |                        | 100.0% |
|                                                 |                         | % within Incentives cater to your family's needs as well |                                                 | 9.1%                    |                | 14.3%             |                        | 3.9%   |
|                                                 |                         | % of Total                                               |                                                 | 2.0%                    |                | 2.0%              |                        | 3.9%   |
|                                                 | To a very little extent | Count                                                    | 4                                               | 1                       | 2              |                   | 1                      | 8      |
|                                                 |                         | % within Perceive high levels of job stress at your work | 50.0%                                           | 12.5%                   | 25.0%          |                   | 12.5%                  | 100.0% |
|                                                 |                         | % within Incentives cater to your family's needs as well | 28.6%                                           | 9.1%                    | 14.3%          |                   | 20.0%                  | 15.7%  |
|                                                 |                         | % of Total                                               | 7.8%                                            | 2.0%                    | 3.9%           |                   | 2.0%                   | 15.7%  |
|                                                 | To some extent          | Count                                                    | 2                                               | 4                       | 3              | 2                 | 1                      | 12     |
|                                                 |                         | % within Perceive high levels of job stress at your work | 16.7%                                           | 33.3%                   | 25.0%          | 16.7%             | 8.3%                   | 100.0% |
|                                                 |                         | % within Incentives cater to your family's needs as well | 14.3%                                           | 36.4%                   | 21.4%          | 28.6%             | 20.0%                  | 23.5%  |
|                                                 |                         | % of Total                                               | 3.9%                                            | 7.8%                    | 5.9%           | 3.9%              | 2.0%                   | 23.5%  |
|                                                 | To a great extent       | Count                                                    | 4                                               | 2                       | 6              | 4                 | 1                      | 17     |
|                                                 |                         | % within Perceive high levels of job stress at your work | 23.5%                                           | 11.8%                   | 35.3%          | 23.5%             | 5.9%                   | 100.0% |
|                                                 |                         | % within Incentives cater to your family's needs as well | 28.6%                                           | 18.2%                   | 42.9%          | 57.1%             | 20.0%                  | 33.3%  |
|                                                 |                         | % of Total                                               | 7.8%                                            | 3.9%                    | 11.8%          | 7.8%              | 2.0%                   | 33.3%  |
|                                                 | To a very great extent  | Count                                                    | 4                                               | 3                       | 3              |                   | 2                      | 12     |
|                                                 |                         | % within Perceive high levels of job stress at your work | 33.3%                                           | 25.0%                   | 25.0%          |                   | 16.7%                  | 100.0% |
|                                                 |                         | % within Incentives cater to your family's needs as well | 28.6%                                           | 27.3%                   | 21.4%          |                   | 40.0%                  | 23.5%  |
|                                                 |                         | % of Total                                               | 7.8%                                            | 5.9%                    | 5.9%           |                   | 3.9%                   | 23.5%  |
| Total                                           |                         | Count                                                    | 14                                              | 11                      | 14             | 7                 | 5                      | 51     |
|                                                 |                         | % within Perceive high levels of job stress at your work | 27.5%                                           | 21.6%                   | 27.5%          | 13.7%             | 9.8%                   | 100.0% |
|                                                 |                         | % within Incentives cater to your family's needs as well | 100.0%                                          | 100.0%                  | 100.0%         | 100.0%            | 100.0%                 | 100.0% |
|                                                 |                         | % of Total                                               | 27.5%                                           | 21.6%                   | 27.5%          | 13.7%             | 9.8%                   | 100.0% |

Perceive high levels of job stress at your work \* Proper induction & orientation given to new employees Crosstabulation

|                                                 |                                                                |                                                                | Proper induction & orientation given to new employees |                         |                |                   |                        | Total  |
|-------------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------|-------------------------|----------------|-------------------|------------------------|--------|
|                                                 |                                                                |                                                                | To no extent at all                                   | To a very little extent | To some extent | To a great extent | To a very great extent |        |
| Perceive high levels of job stress at your work | To no extent at all                                            | Count                                                          | 1                                                     |                         |                | 1                 |                        | 2      |
|                                                 |                                                                | % within Perceive high levels of job stress at your work       | 50.0%                                                 |                         |                | 50.0%             |                        | 100.0% |
|                                                 |                                                                | % within Proper induction & orientation given to new employees | 14.3%                                                 |                         |                | 14.3%             |                        | 3.9%   |
|                                                 |                                                                | % of Total                                                     | 2.0%                                                  |                         |                | 2.0%              |                        | 3.9%   |
|                                                 | To a very little extent                                        | Count                                                          | 1                                                     | 2                       | 4              | 1                 |                        | 8      |
|                                                 |                                                                | % within Perceive high levels of job stress at your work       | 12.5%                                                 | 25.0%                   | 50.0%          | 12.5%             |                        | 100.0% |
|                                                 |                                                                | % within Proper induction & orientation given to new employees | 14.3%                                                 | 12.5%                   | 21.1%          | 14.3%             |                        | 15.7%  |
|                                                 |                                                                | % of Total                                                     | 2.0%                                                  | 3.9%                    | 7.8%           | 2.0%              |                        | 15.7%  |
|                                                 | To some extent                                                 | Count                                                          |                                                       | 5                       | 5              | 1                 | 1                      | 12     |
|                                                 |                                                                | % within Perceive high levels of job stress at your work       |                                                       | 41.7%                   | 41.7%          | 8.3%              | 8.3%                   | 100.0% |
|                                                 |                                                                | % within Proper induction & orientation given to new employees |                                                       | 31.3%                   | 26.3%          | 14.3%             | 50.0%                  | 23.5%  |
|                                                 |                                                                | % of Total                                                     |                                                       | 9.8%                    | 9.8%           | 2.0%              | 2.0%                   | 23.5%  |
|                                                 | To a great extent                                              | Count                                                          | 3                                                     | 6                       | 6              | 2                 |                        | 17     |
|                                                 |                                                                | % within Perceive high levels of job stress at your work       | 17.6%                                                 | 35.3%                   | 35.3%          | 11.8%             |                        | 100.0% |
|                                                 |                                                                | % within Proper induction & orientation given to new employees | 42.9%                                                 | 37.5%                   | 31.6%          | 28.6%             |                        | 33.3%  |
|                                                 |                                                                | % of Total                                                     | 5.9%                                                  | 11.8%                   | 11.8%          | 3.9%              |                        | 33.3%  |
|                                                 | To a very great extent                                         | Count                                                          | 2                                                     | 3                       | 4              | 2                 | 1                      | 12     |
|                                                 |                                                                | % within Perceive high levels of job stress at your work       | 16.7%                                                 | 25.0%                   | 33.3%          | 16.7%             | 8.3%                   | 100.0% |
|                                                 |                                                                | % within Proper induction & orientation given to new employees | 28.6%                                                 | 18.8%                   | 21.1%          | 28.6%             | 50.0%                  | 23.5%  |
|                                                 |                                                                | % of Total                                                     | 3.9%                                                  | 5.9%                    | 7.8%           | 3.9%              | 2.0%                   | 23.5%  |
| Total                                           | Count                                                          |                                                                | 7                                                     | 16                      | 19             | 7                 | 2                      | 51     |
|                                                 | % within Perceive high levels of job stress at your work       |                                                                | 13.7%                                                 | 31.4%                   | 37.3%          | 13.7%             | 3.9%                   | 100.0% |
|                                                 | % within Proper induction & orientation given to new employees |                                                                | 100.0%                                                | 100.0%                  | 100.0%         | 100.0%            | 100.0%                 | 100.0% |
|                                                 | % of Total                                                     |                                                                | 13.7%                                                 | 31.4%                   | 37.3%          | 13.7%             | 3.9%                   | 100.0% |
|                                                 |                                                                |                                                                |                                                       |                         |                |                   |                        |        |

## STATEMENT

Herewith I state that the project, my original work, has not been presented for a degree in any other university and that all sources of material used for the project have been duly acknowledged.

NEISANET TSEGAW

Name of Candidate

Addis Ababa, Feb. 21, 2003

Place and Date

Methene

Signature

Herewith I state that the project, an original work that I have supervised, has not been presented for a degree in any other university and that all sources of material used for the project have been duly acknowledged.

Meheret Ayene

Name of Research Supervisor

\_\_\_\_\_

Place and Date

Meheret Ayene

Signature