



Sudan University of Science and Technology
College of Graduate Studies



**Impact of the Job Satisfaction on Performance of Employees of the
Contraction Companies
(Case study of DAL for Design and Construction)**

**أثر الرضا الوظيفي في أداء الموظفين في شركات التشييد
(دراسة حالة شركة دال للتصميم و التشييد)**

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of Master of Civil Engineering in (Construction Management)*

By :

Mohamed kamal Mohamed Khair Salih

Supervised by :

DR. Awad Saad Hassan

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الآية

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قال تعالى :

"يرفع الله الذين آمنوا منكم والذين أوتوا العلم درجات"

صدق الله العظيم

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Dedication

I dedicate this work to my parents Kamal Mohamed khair and Entisar Babiker Ahmad for their invaluable encouragement and support throughout my life and I could not arrive to this level without them and their support.

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Table of Contents:

| | |
|--|----------|
| List of figure | vi |
| List of tables | III |
| Abstract in English | viii |
| Abstract in Arabic | III |
| CHAPTER 1 Introduction | 1 |
| 1.1 . General | 1 |
| 1.2. objective of the of research..... | 4 |
| 1.3. The Statement of the research :... .. | 4 |
| 1.4. Research questions: | 5 |
| 1.5. Research hypotheses:..... | 5 |
| 1.6. Research Methodology:..... | 6 |
| 1.7. Scope and limitation:..... | 6 |
| 1.8. Research Organization :..... | 7 |
| Chapter 2 Job Satisfaction Definition and Conception..... | 8 |
| 2. 1 Introduction..... | 8 |
| 2.2 Concepts of Job Satisfaction, Rewards and Performance | 10 |
| 2.3. Importance of job satisfaction..... | 12 |
| 2.3.1 Factors Affecting Job Satisfaction..... | 14 |
| 2.3.1.1 Personal Determinants:... .. | 15 |
| 2.3.1.2 Organizational factors | 16 |
| 2.4. Measuring Job satisfaction | 18 |
| 2.5 . Effect of the job satisfaction | 20 |
| 3.6. Job Characteristic Model:..... | 22 |
| 3.7 Job satisfaction as function of other people..... | 23 |
| 3.7.1 Direct influence by others..... | 24 |
| 3.7.2 Indirect influence by others :... .. | 24 |

| | |
|--|----|
| 3.8. Job satisfaction as function of personal dispositions..... | 24 |
| 3.8.1. Genetic or hereditary disposition..... | 24 |
| 3.8.2. Affective disposition..... | 25 |
| 3.8.3. Behaviour versus outcomes..... | 26 |
| 3.9 Job satisfaction as function of job features..... | 26 |
| 3.9.1 Two-Factor Theory..... | 26 |
| 3.9.2 Job Satisfaction and Motivation | 28 |
| 3.9.3 Maslows Need Hierarchy Theory (1943, 1954)..... | 28 |
| 3.9.4. Alderfer's ERG theory (1972) | 29 |
| 3.9.5. McClelland's Achievement Theory (1975)..... | 30 |
| 3.9.6. McGregor's Theory X and Theory Y..... | 30 |
| 3.9.6.1 Theory X..... | 31 |
| 3.9.6.2 Theory Y..... | 32 |
| 3.9.7. Expectancy theory..... | 33 |
| 3.9.8.. Equity theory | 35 |
| 3.9.9 Reinforcement theory..... | 36 |
| 3.10. Causes of Job Satisfaction: | 36 |
| 3.1 Introduction: what is the construction Industry..... | 37 |
| 3.2. Definition of Construction Industry..... | 38 |
| 3.2.1. The Labour Market and the Image of the Construction Industry..... | 40 |
| 3.2.2. Self-Employment in the Construction Industry..... | 43 |

Chapter 3: Job Satisfaction in the Construction.....37

| | |
|---|----|
| 3.3. Job Satisfaction in the Construction | 43 |
| 3.4 Job satisfaction and performance..... | 44 |
| 3.5. Approaches to job satisfaction..... | 46 |
| 3.6. Job satisfaction and commitment. | 46 |
| 3.7 Job Satisfaction and Worker Retention. | 48 |

| | |
|---|-----------|
| 3.8. Management Role:..... | 49 |
| 3.9. Work Environment and Workplace Facilities | 49 |
| 3.10. Human Relations and Worker Job Satisfaction. | 52 |
| 3.11. Supervision and Job Satisfaction. | 52 |
| Chapter 4: Research Methodology..... | 53 |
| 4.1. Introduction..... | 53 |
| 4.2. Data Collection..... | 54 |
| 4.3. Data Analysis:..... | 55 |
| 4.3.1. Job satisfaction analysis | 56 |
| 4.3.2. Performance analysis:..... | 66 |
| 4.4 . Results and Discussion..... | 74 |
| 4.4. Hypothesis test:..... | 76 |
| Chapter 5: Conclusion and recommendation..... | 78 |
| 4.5 . Conclusion:..... | 78 |
| 4.6. Suggestions and Recommendations..... | 79 |
| 4.7 . limitation and Further Research..... | 80 |
| 4.8 References: | 81 |
| The Appendix..... | 83 |

List of Figures:

| | |
|---|----|
| Figure 1.1. Christen, Layers and Soberman Model Of Job Satisfaction..... | 14 |
| Figure 1.2 – Lawler’s and Porter’s Model of Job Satisfaction..... | 14 |
| Figure 2.1 tradition and hezerberg’s view | 27 |
| Figure 2.2 Maslow’s Need Hierarchy..... | 29 |
| Figure 4.1 mean duration of work and occupation of which response to the questionnaire in DDC..... | 56 |
| Figure 4.2 duration of work and position in DDC..... | 57 |
| Figure 4.3 The general work condition and rate of job satisfaction | 58 |
| Figure 4.4 The pay and promotion and rate of job satisfaction | 59 |
| Figure 4.5 worker relation and rate of job satisfaction..... | 60 |
| Figure 4.6 use skills and abilities and rate of job satisfaction..... | 61 |
| Figure 4.7 employee job satisfaction | 62 |
| Figure 4.7 employee communication | 63 |
| Figure 4.8 Employee Job Satisfaction—Job Passion and Self-Evaluation..... | 64 |
| Figure 4.9 The probability of finish on scheduling date..... | 65 |
| Figure 4.10 The percent of coordination in DDC projects..... | 66 |
| Figure 4.11 The percent of overall safety programme in DDC.projects..... | 67 |
| Figure 4.12 The percent of BUDGET in DDC projects..... | 68 |
| Figure 4.13 The percent of turnover in DDC projects..... | 69 |
| Figure 4.14 The percent of Ability to overtime work in DDC projects..... | 70 |

List of Tables:

| | |
|---|----|
| Table 2.1: hygiene factor motivation and motivation | 27 |
| Table 4.1 The quantity of staff and the percent of the response to the questionnaire, 1994)..... | 55 |
| Table 4.2 The Statistics of occupation & duration of work in DDC..... | 55 |
| Table 4.3 The percent of occupation with response to the questionnaire in DDC..... | 57 |
| Table 4.7 Statistics of general work condition and rate of job satisfaction..... | 58 |
| Table 4.8 The Statistics of The pay and promotion and rate of job satisfaction | 59 |
| Table 4.9 The Statistics of worker relation and rate of job satisfaction of job satisfaction..... | 61 |
| Table 4.11 The Statistics of employee job satisfaction | 62 |
| Table 4.13 The Statistics employee communication..... | 63 |
| Table 4.14 Statistics of Employee Job Satisfaction—Job Passion and Self-Evaluation..... | 64 |
| Table 4.15 The Statistics of rate of coordination in DDC projects | 65 |
| Table 4.16 The Statistics of rate of OVERALL SAFETY PROGRAM in DDC projects..... | 66 |
| Table 4.17 The Statistics of rate of BUDGET in DDC projects..... | 67 |
| Table 4.18 The Statistics of rate of turnover in DDC projects..... | 68 |
| Table 4.19 The Statistics of rate Ability to overtime work in DDC projects.... | 69 |

ABSTRACT:

Different theories on Leadership styles, job satisfaction and organisational commitment have been explored as an important tools for the success of the organization. The limitations of the study are that it focuses on office employees because of time constraints and the level of education of the workforce on site. The study also evaluates the extent of various other factors influencing the job satisfaction and organisational commitment of employees.

The aim is to define the determinants for job satisfaction and to investigate the relationship between job satisfaction and job performance and the influence of job satisfaction on job performance. By taking Dal for Design and Constriction (D.D.C) as a case study.

Data is collected to find and to clarify the correspondence between job satisfaction and job Performance. . Data collected by using a questionnaire to evaluate the employee performance and their job satisfaction. After collecting the data analysis came to get results and then determine whether these results refers to the job satisfaction of the employee affects to his performance .

From the result the hypothesis were tested which it shows that their strong influence is found between leadership style, employees' job satisfaction and organisational commitment and the Employee's performance in the contractor companies.

المستخلص :

تعددت النظريات حول أساليب القيادة، حيث تم اكتشاف الرضا الوظيفي والالتزام التنظيمي من أهم أدوات نجاح المنظمة . ركز البحث على موظفي المكاتب بسبب ضيق الوقت ومستوى التعليم من القوى العاملة في الموقع. كما قيمت الدراسة مدى تغير العوامل المختلفة المؤثرة في الرضا الوظيفي والالتزام التنظيمي للموظفين. والهدف من ذلك هو تحديد المحددات للرضا الوظيفي والبحث في العلاقة بين الرضا الوظيفي والأداء الوظيفي وتأثير الرضا الوظيفي على الأداء الوظيفي. و ذلك بأخذ شركة دال للتصميم و التشييد كدراسة حالة .

اولا تم وضع فرضيات للبحث و بعد ذلك تم جمع البيانات لإيجاد وتوضيح الارتباطات بين الرضا الوظيفي والأداء الوظيفي.. يتم جمع البيانات عن طريق الاستبيان و من ثم بعد الجمع يتم تحليلها لاستخلاص النتائج و البحث اذا ما كانت هنالك علاقة بين الرضا الوظيفي للموظف و ادائه .

ومن النتائج المستخلصة تم اختبار فرضيات البحث حيث تم العثور على تأثير قوي بين أسلوب القيادة، والرضا الوظيفي للموظفين والالتزام التنظيمي وأداء الموظف في شركات المقاولات .

Chapter (1)

Introduction

CHAPTER 1

Introduction

1.1 Introduction:

In contemporary times psychology has come to play an important part in many aspects of human activities more and more emphasis is being put on mental well-being of people in order to enhance productivity.

Workers are the primary resource in construction projects, as the level of performance on construction sites is largely determined by workers' performance (Ghoddousi . 2014).

Against this backdrop, job satisfaction levels impact on a wide range of workers' attitudes towards their jobs (Marzuki, Permadi and Sunaryo 2012), which according to Costen (2012) could directly influence the profitability of organisations. Therefore, "it is important to understand what influences an employee's job satisfaction" (Costen 2012).

In this context, the issues pertaining to job satisfaction seem to be crucial for the Australian construction industry. According to Blanchflower and Oswald (2005) "Australia is near the bottom of the international league table on job satisfaction levels". This low ranking is worsened by the shortage of construction workers (Lingard and Francis 2004) exacerbated by high rates of staff turnovers within the Australian construction industry (Davies and Hassett 2006).

Conversely, review of literature detects the paucity of research on job satisfaction as acknowledged by Giritli, Sertyesilisik and Horman (2013). In addition, the available research on job satisfaction within the construction industry is presented in mixed and inconsistent findings (Chileshe and Haupt 2010; Onukwube 2012). In essence, as far as job satisfaction is concerned "little research has been undertaken regarding its application to the construction industry" as postulated by Onukwube (2012, p. 44). In view of the prevalence of problems with job satisfaction in Sudan as previously discussed, the level of knowledge regarding job satisfaction of workers in the Sudanese construction context is in its infancy. Therefore, conducting further studies to investigate major aspects of this topic in the Australian construction context becomes very relevant. This has been the driving force behind conducting this study.

According to Journal of Construction Economics and Building Hosseini M R, Chileshe N & Zillante G. 2014, 'Investigating the factors associated with job satisfaction of construction workers.

Nonetheless, research on job satisfaction has been, for the most part, focused on investigating the situational factors affecting job satisfaction of workers and has overlooked the individual-based features (Templer 2012), particularly age-related factors as pointed out by Kooij et al. (2008).

The success of any organization depends largely on the ability of managers to provide motivating environment for its employees. The challenge for most managers today is to keep the staff motivated in order to perform well at the workplace. Managers can understand what rewards to use to motivate and keep them satisfied. The study of job satisfaction in the construction industry is quite relevant since it can support employee retention and work performance (Schermerhorn, et al., 2005; Krietner, 2003 and Arnold, et al., 1983). Job satisfaction is proven as one of the key factors that contribute to productivity (Mustapha, 2013). Schermerhorn (2005) defines job satisfaction as the amount of positive feelings which an individual has towards a job. Job satisfaction may be improved via fulfilling issues such as self-esteem, respect, appreciation or recognition, the safety and security of the employee (Wright, 2001). The satisfaction of the employee can also affect several factors such as motivation. The study of job satisfaction among construction workers is key since awareness of factors influencing job satisfaction is crucial to increasing productivity (Okpara, Squillance and rondou, 2005, cited Mustapha, 2013).

Again, being aware of specific factors that influence satisfaction, particularly in the construction sector, could provide insights to management of organisations in terms of reducing alienation at work place, secure employee loyalty and to attract potential employee in order to increase productivity (Mustapha, 2013). In Sudan construction industry for instance, companies are currently applying various non-financial incentive schemes aimed at providing satisfaction to employees to improve operatives' productivity.

In order to replicate such increase in productivity in the construction supply chain as a way of contributing to economic growth in Sudan, it is important and worth the effort to undertake a study that investigates the level of employee's satisfaction in the construction sector. Findings would inform policy decision regarding employee motivation and

satisfaction in the construction supply chain and to boost productivity in Ghana. To this end, this paper seeks to find out factors influencing worker satisfaction and to determine the level of worker satisfaction in the construction industry.

The construction industry is closely linked to the economy of every country and contributes to the growth of that economy. If the construction sector and the economy of a country are so closely linked, then it makes sense to effectively manage the human resources within that industry (James, Braam & Kingma, 2012). Construction workers are exposed to risks that differ from general industry relative to occupational health and safety (OHS). They are exposed to a variety of health hazards, namely: noise, resulting in noise induced hearing loss (NIHL); skin diseases from close contact with irritant or sensitizing materials; respiratory irritation from dusts, fumes and gases; as well as developing more serious lung diseases related to exposure to asbestos and other fibrogenic materials (Smallwood & Ehrlich, 2001). In view of this, it is important for construction firms to provide the necessary work provision requirement for their workers to work and be satisfied with the job. Job satisfaction is important in everyday life to both employers and their workers. In the view of Spector (1997) organizations have significant effects on the people who work for them and some of those effects are reflected in how in Sudanese construction industry is an area that lacks empirically justified people feel about their work. This makes job satisfaction an issue of substantial importance for both employers and employees.

Workers' satisfaction regarding different dimensions of work provision requirement documentations. The construction industry workers have expectations and they are satisfied when these expectations are met.

By the researcher's observation there is a widespread dissatisfaction of work provision requirement in Sudan among building construction workers. As far as the researcher knows, no empirical study has been conducted to explore the dimensions of work provision requirement for which construction workers are satisfied or dissatisfied within Sudanese construction industry. There is, therefore, the need to empirically assess and analyse the phenomenon in order to provide direction for policy makers and managerial strategy.

1.2 Objective of the research:

In this research, the researcher is investigating whether there was a relationship between job satisfaction and performance of employees. However, this study is aimed to assess the validity of this relationship from Sudanese working environment therefore, the specific objective of this study are:

- To determine whether there is a positive relationship between the job satisfaction and performance of employee.
- To find out whether the employee derives job satisfaction from extrinsic job rewards or from intrinsic job rewards.
- To find out the most satisfying event of an employee in the job and why employees stay in the job and not leave the organization.
- To identify the influence of experience, the position and duration of work on job satisfaction of employees.
- To find out how to use Sudanese culture to increase the job satisfaction of the Sudanese workers.

1.3.The Statement of the research :

One of the main objectives in construction industry to achieve the goal of projects in appropriate time, cost and quality from initiated phase to closure phase by prepare an appropriate and while the most studies exploring the relationship between job satisfaction and performance have examined employees, few have explored this relationship across a variety of institute and occupation. This analysis contributes to the literature by examining the relationship between job satisfaction and employee performance on a Khartoum state sample workers, this research explores how satisfaction with organizational culture influence job satisfaction and its performance. The key to motivating employees is to know what motivate them and design a motivational programme based on those needs. Therefore the objective of this paper is to describe the importance of certain factors which motivate employees of the PVNC. Specifically, the paper seeks to describe the rank importance of some selected motivational factors, taking into consideration some theories of motivation.

The selected factors (indicators) are: career development opportunities; job security; Pay and Promotion; Good working conditions; Feelings of being in on things with personal problems; Feelings of being in on things with personal problems; Interesting works; Personal or company loyalty to employees; Tactful discipline; and Reputation of Institution

1.4 Research question:

The purpose of this research to find answers for the following questions:

- i. What are the main fundamental of the job satisfaction in the construction industry?
- ii. Is there a correlation between job satisfaction and job performance?
- iii. Does job satisfaction increase the level of job performance?
- iv. What are the main factor that influence in the job satisfaction?

1.5 Research hypotheses:

The study includes a number of hypotheses related to the direct aim of the study that have been identified to describe and understand the problem research topic, which are:

1. The job characteristic such as payment .bonus, training, influence the relationship between job satisfaction and employee performance.
2. The increase job satisfaction predict increase employee performance.
3. The increase job satisfaction predict decrease employee turnover.
4. The pay and promotion are good in the contractor company.

1.6. Research Methodology:

1. In this study the research conducted through several phases namely literature review, data collection, data analysis, discussion and conclusion. A literature review was conducted encompassing all various means available to obtain the widest range of the relevant information from books, papers and websites related to the job satisfaction in construction sites and impacts of the job satisfaction on the performance of the employee .

2. Interviews were held with experts in the Sudan construction industry. This provided a first impression of the situation in the practice, and use statistical method to review the role of job satisfaction.
3. The researcher took a contracting company as a case study.
4. the researcher data collection through the questionnaires

1.7. Scope and limitation:

Due to the nature of this topic it seemed impossible to obtain permission from any company to perform our own job satisfaction – job performance survey.

- The research can't overlook the most important theories regarding attitudes and behavior.
- Research tried to take a closer look at the elements contribution to job satisfaction and job performance separately eventually.
- The researcher receive the permission to use the results of a questionnaire about the satisfaction.

However , since in this company only measure the level of job satisfaction a among employees and not the level of job performance , so there is a limit of the primary research , additionally due to lack of cooperation from most of company worker .

1.8. Research Organization:

- 1- **Chapter 1** : Introduction
 - Introduction
 - Objective of the of research
 - The Statement of the research
 - Research question
 - Research hypothesis
 - Research Methodology
 - Scope and limitation
- 2- **Chapter 2** : literature review about job satisfaction concepts
- 3- **Chapter 3**: job satisfaction in construction industry.
- 4- **Chapter 4**: research methodology and data analysis.
- 5- **Chapter 5** : conclusions and recommendations

Chapter (2)

Literature Review

Chapter 2

LITERATURE REVIEW

Job Satisfaction Definition and Conception

2.1. Introduction:

Job satisfaction is more of a multifaceted concept, which can mean different things to different people. The definition of job satisfaction is the enjoyable and emotional state resulting from the evaluation of one's job (Danish & Usman, 2010) or job experiences; the employee feels fulfilment and pride in achieving the business's goals. Job satisfaction occurs when someone feels he/she has proficiency, value, and is worthy of recognition (Garcez, 2006). Therefore, job satisfaction is a worker's sense of achievement and is generally noted to be directly.

(Cranny, 1992) associated to improved efficiency as well as to personal welfare. Job satisfaction is the belief of the employee that he/she is doing a good job, enjoying the process, and being suitably rewarded for the effort. Job satisfaction is a measure of how happy workers are with their jobs and work environment. Keeping morale high among workers is of fabulous benefit to any company, as content workers will be more likely to produce more results, it is more of an attitude, an internal state. It could for example, be associated with a personal feeling of achieving to his targets.

(Mullins 2005). According to (Noe, Hollenbeck, (1996)), job satisfaction is a pleasurable feeling that results from the perception that one's job fulfills or allows the fulfillment of one's own job values. They continue by saying that job satisfaction has to do with what a person consciously or unconsciously desires to obtain. Bowen et al (2007) in citing Locke (1976) agree with this definition of job satisfaction when they write that job satisfaction may be viewed as the pleasurable or positive emotional experience resulting from the appraisal of one's job or job experience. Fogarty (1994) is of the view that job satisfaction refers to the extent to which persons gain enjoyment or satisfaction from their efforts at work. Writing on the feature of the conceptualization of career satisfaction and the role that need fulfillment plays in satisfaction, Dinham and Scott (1998) explain job satisfaction as an indicator of the Degree of need fulfillment

experienced by an individual. March and Simon as cited by Avi-Itzhak (1988) however give a different definition of job satisfaction by explaining job satisfaction in terms of the willingness of a worker to stay within an organisation despite inducement to leave. This definition is also adopted by Vroom cited in Avi-Itzhak (1988). Robbins, Water-Marsh, Cacioppe and Millet (1994) explain job satisfaction as the degree to which people like their jobs. They maintain that it is a general attitude towards the job, the difference between the amount of rewards employees receive and the amount they believe they should receive. According to them, a person with a high level of job satisfaction holds positive attitudes towards the job, while a person who is not satisfied with his or her job holds negative attitudes about the job. This idea is also supported by Bowen et al; (2008) as they state that positive attitude towards one's job are associated with high level of job satisfaction. Wilson and Rosenfield (1990) believe that the converse is also true. On his part Spector (1997) sees job satisfaction as one factor that is important for business effectiveness, good company reputation and low turnover. Begley and Czajka (1993) see job satisfaction as an indicator of emotional wellbeing or psychological health. There is some doubt whether job satisfaction consist of a single dimension or a number of separate dimensions (Mullins, 2005). He further stressed that some workers may be satisfied with certain aspects of their work and dissatisfied with other aspects with a positive correlation between satisfactions in different areas of work. Brunetto and Farr-Wharton (2002) are also of the view that job satisfaction is clearly multidimensional, comprising constructs such as the work itself, salary level, conditions of service, performance appraisal procedures, opportunities for advancement, the nature and extent of supervision, and relationships with co-workers. Grunberg (1979) suggest however that there seems that there is no comprehensive theory which explains job satisfaction. To sum up, job satisfaction is seen as the inner feeling that makes people like their work and remain in the work even though certain measures might be put in place by other to entice them.

Job satisfaction has been an important focal point for organizational and industrial psychology. In defining job satisfaction the reference is often made to Locke's (1976) description of job satisfaction as a "pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences" (Jex 2002). The appraisal involves various elements related to the job such as salary, working conditions, colleagues and boss, career prospects and, of course, the intrinsic aspects of the job itself (Arnold et a

1998). Job- satisfaction is connected to how our personal expectations of work are in congruence with the actual outcomes. And since job satisfaction is merely an employee's attitude towards their job, previously discussed theories about attitudes were applicable to job satisfaction. Consequently job satisfaction can be seen as containing three components: an affective component, a cognitive component and a behavioral component (Jex 2002). While the affective component refers to a feeling about a job, the cognitive component represents a belief in regard to a job. Often these two aspects are related. The behavioral component is an indicator for behavioral intentions towards a job such as getting to work in time, working hard, etc.

2.1 Concepts of Job Satisfaction, Rewards and Performance

It is the general understanding that job satisfaction is an attitude towards job. In other words job satisfaction is an affective or emotional response toward various facets of one's job. A person with a high level of job satisfaction holds positive attitudes towards his or her job, while a person who is dissatisfied with his or her job holds negative attitudes about the job.

Luthans1985 quotes a comprehensive definition given by Locke. A pleasurable or positive emotional state resulting from the appraisal of one's job or job experience. Job satisfaction is a result of employees' perception of how well their job provides those things which are viewed as important. Job satisfaction is also defined as reintegration of affect produced by individual's perception of fulfillment of his needs in relation to his work and the surrounding it (Saiyaden, 1993). Organ and Hammer (1991) pointed out that job satisfaction represents a complex assemblage of cognition, emotion and tendencies.

From the above definitions, it is clear that job satisfaction is an unobservable variable. Therefore, there is no definite way of measuring job satisfaction. But there are variety of ways can be identified from the current literature. A questionnaire can be used to measure job satisfaction. In the questionnaire method, it is measured the satisfaction with the different dimensions or facets of the job and sum of all satisfactions scores will be taken as the overall job satisfaction (JS).

Almost any job related factor can influence a person's level of job satisfaction or dissatisfaction. The major ones can be summarized by recalling the dimensions of job

satisfaction. They are pay, the work itself, promotions, supervision, workgroup, and working conditions (Luthans 1985). Further, job satisfaction has significant managerial implications.

If the job satisfaction is high, the employees will perform better. On the other hand if the job satisfaction is low, there will be performance problems. In examining in outcomes of job satisfaction, it is important to breakdown the analysis into a series of specific set of variables. They are productivity, turnover, absenteeism and other effects (accidents, grievances, physical and mental health). The main objective of reward programs to attract qualified people to join the organization to keep employees coming to work and to motivate employees to achieve high level of performance. Though the rewards are provided by the organization, they are evaluated by the individual. To the extent that the rewards are adequate and equitable, the individual achieves a level of satisfaction.

The rewards can be broadly categorized in to two groups, namely intrinsic rewards and extrinsic rewards. Intrinsic rewards are psychological rewards that are experienced directly by an individual. These are defined as rewards that are part of the job itself. (Gibson, et, 1991). It had also defined as psychological reward that is experienced directly by an employee (Stoner and Freeman, 1992). Extrinsic rewards are provided by an outside agent such as supervisor or work group. These rewards had been defined as rewards external to the job (Gibson et, 1991). Pay, promotions, interpersonal relationships, status and fringe benefits are some of the examples for extrinsic0 rewards. Responsibility, achievement, autonomy, personal growth, challenge, complete work and feedback characteristics of the job are some intrinsic rewards.

Performance very much depends on perception, values and attitudes. There appear to be so many variables influencing the job performance that is almost impossible to make sense of them. Performance is defined as a function of individual ability and skill and effort in a given situation (Porter and Lawler, 1974). In the short run, employee's skills and abilities are relatively stable. Therefore, for the purpose of the study, the researcher defines the performance in terms of effort extended to the job of an employee.

Effort is an internal force of a person which makes him or her to work willingly when employees are satisfied with their job and their needs are met, they develop an attachment to work or we say that they make an effort to perform better. Increased effort results in better performances.

2.3. IMPORTANCE OF JOB SATISFACTION

An employee who has no interest in his or her field, or the position in which he or she begins in a job, may initially put forth his or her best effort. However, this employee will often become bored with the work because there is no intrinsic motivation to succeed. Finding the daily job mundane reduces the individual's desire to show up to work and to do the job well. In this case, the employee may continue to come to work, but his or her efforts will be minimal. In contrast, an employee may be entirely too overwhelmed to handle the position; the responsibilities may prove to be too demanding. In an instance like this, the employee will search for another position that offers the financial security he or she needs with job characteristics that challenge them appropriately; thus increasing the initial company's turnover rate (Koslowsky & Krausz, 2002). It is generally perceived to be directly linked to productivity as well as to personal well-being. Job satisfaction implies doing a job one enjoys, doing it well and being rewarded for one's efforts. Job satisfaction further implies enthusiasm and happiness with one's work. Job satisfaction is the key ingredient that leads to recognition, income, promotion, and the achievement of other goals that lead to a feeling of fulfillment (Kaliski, 2007).

Job satisfaction can be defined also as the extent to which a worker is content with the rewards he or she gets out of his or her job, particularly in terms of intrinsic motivation (Statt, 2004). The term job satisfactions refers to the attitude and feelings people have about their work. Positive and favorable attitudes towards the job indicate job satisfaction. Negative and unfavorable attitudes towards the job indicate job dissatisfaction (Armstrong, 2006). Job satisfaction is the collection of feeling and beliefs that people have about their current job. People's levels of degrees of job satisfaction can range from extreme satisfaction to extreme dissatisfaction. In addition to having attitudes about their jobs as a whole. People also can have attitudes about various aspects of their jobs such as the kind of work they do, their coworkers, supervisors or subordinates and their pay (George et al., 2008).

Job satisfaction is a complex and multifaceted concept which can mean different things to different people. Job satisfaction is usually linked with motivation, but the nature of this relationship is not clear. Satisfaction is not the same as motivation. Job satisfaction is more of an attitude, an internal state. It could, for example, be associated with a personal feeling of achievement, either quantitative or qualitative (Mullins, 2005).

We consider that job satisfaction represents a feeling that appears as a result of the perception that the job enables the material and psychological needs (Aziri, 2008).

Job satisfaction can be considered as one of the main factors when it comes to efficiency and effectiveness of business organizations. In fact the new managerial paradigm which insists that employees should be treated and considered primarily as human beings that have their own wants, needs, personal desires is a very good

Indicator for the importance of job satisfaction in contemporary companies. When analyzing job satisfaction the logic that a satisfied employee is a happy employee and a happy employee is a successful employee. The importance of job satisfaction specially emerges to surface if had in mind the many negative consequences of job dissatisfaction such a lack of loyalty, increased absenteeism, increase number of accidents etc. Spector (1997) lists three important features of job satisfaction. First, organizations should be guided by human values. Such organizations will be oriented towards treating workers fairly and with respect. In such cases the assessment of job satisfaction may serve as a good indicator of employee effectiveness.

High levels of job satisfaction may be sign of a good emotional and mental state of employees. Second, the behavior of workers depending on their level of job satisfaction will affect the functioning and activities of the organization's business. From this it can be concluded that job satisfaction will result in positive behavior

and vice versa, dissatisfaction from the work will result in negative behavior of employees. job satisfaction may serve as indicators of organizational activities. Through Job satisfaction evaluation different levels of satisfaction in different organizational units can be defined.

Christen, Iyer and Soberman (2006) provide a model of job satisfaction presented in Figure 1 in which the following elements are included:

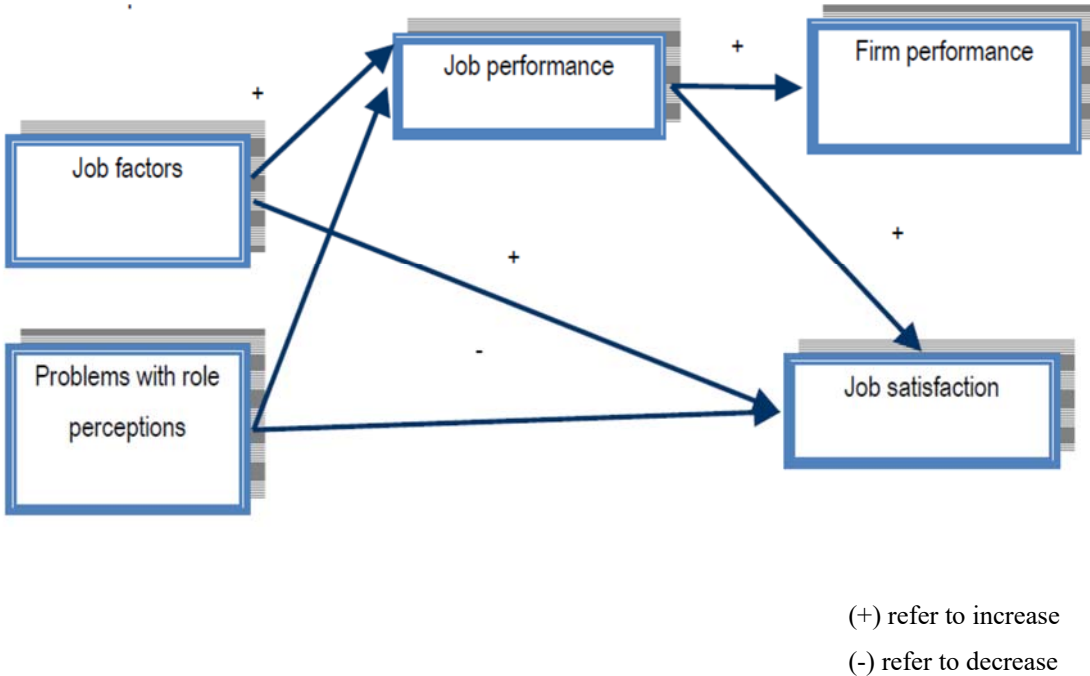


FIGURE 1.1. CHRISTEN, LYER AND SOBERMAN MODEL OF JOB SATISFACTION (CHRISTEN ET, 2006)

Lawler and Porter (1967) give their model of job satisfaction which unlike the Previous model places a special importance on the impact of rewards on job satisfaction, Figure 2.

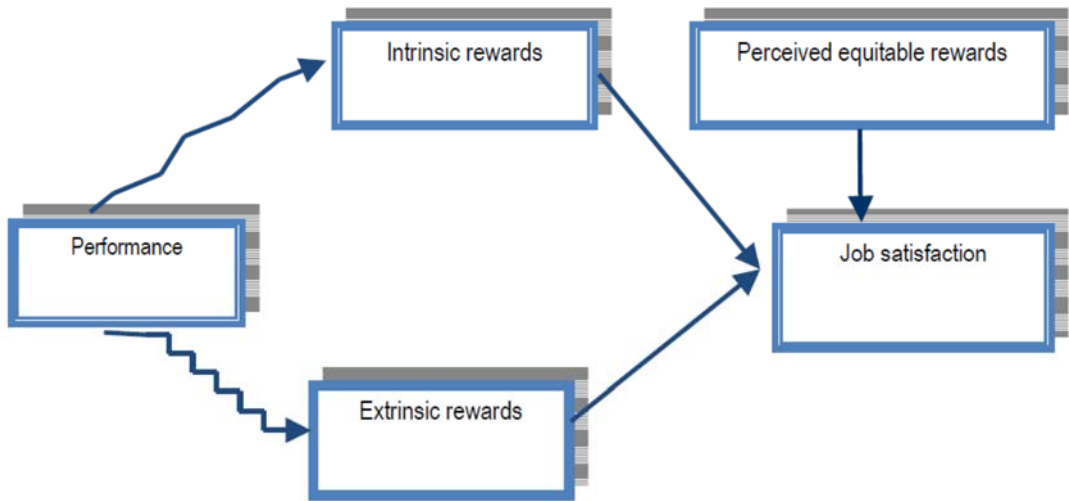


FIGURE 1.2 - LAWLER'S AND PORTER'S MODEL OF JOB SATISFACTION (LAWLER AND PORTER, 1967)

2.3.1 Factors Affecting Job Satisfaction

According to Arnold and Feldman (1996), there are a variety of factors that make people feel positive or negative about their job. These factors can be divided into two main areas, namely, personal determinants and organizational factors (Nel, 2004).

2.3.1.1 Personal Determinants:

Studies investigating job satisfaction indicate that personal determinants such as age, gender, educational level, and number of years on the job have impact on job satisfaction.

-Age:

Mixed evidence exists regarding the relationship between age and job satisfaction (Robbins and Odenaal, 2003). Greenberg and Baron (1995), delineate that, older employees are generally happier with their jobs than younger employees, while people who are more experienced in their jobs are more highly satisfied than those who are less experienced.

-Gender:

Murray and Atkinson (1981) investigated gender differences as determinants of job satisfaction. The reflection of the study revealed that females attach more importance to social factors, while their male counterparts place greater value on pay, advancement and other extrinsic aspects. In support, Tang and Talpad, 1999) maintain that there is a significant difference between males and females in terms of job dimensions impacting on job satisfaction.

-Educational level:

Employees in possession of an intermediate level of qualification reported higher levels of satisfaction in relation to those employees who have had higher levels of education.

KhMetle (2003) suggests that job satisfaction decreases in relation to an increase in the level of education as the expectations of employees are often not met by employers.

-Years and experience:

According to Bedeian, Ferris and Kacmar (1992) cited in Robbins et al. (2003), tenure and job satisfaction are positively related. Furthermore, he maintains that employee expectations are high at the time of appointment, but when these expectations are not met, the resultant effect leads to a drop in job satisfaction. As the employee becomes more mature and experienced, the initial expectations decline to a more realistic level

thereby making such expectations more attainable, coinciding with increased job satisfaction.

2.3.1.2 Organizational factors

From the perspective of content theory of motivation notably, Maslow hierarchy of needs and Herzberg 2-factor theories, the organizational factors impacting on job satisfaction include but not limited to, wage/pay, recognition, supervision, the work itself, security, supervision, work environment and co-workers.

-Pay (Wages):

Individuals view their remuneration as an indication of their value to the organization. From the lens of equity theory of motivation, employees compare their inputs to received outputs relevant to that of others (Nel et al., 2004). According to Boggie (2005), inequity in terms of lack of recognition and poor pay often contribute to problems with employee retention.

As indicated by Arnold and Feldman (1996), pay can have powerful effect in determining job satisfaction. Man has multiple needs and money provides the means to satisfy those needs, (Arnold and Feldman 1996). Chung (1977) also remarks that if salaries are not market related, it leads to dissatisfaction and discontent. It is very instrumental in fulfilling several important needs of the individual according to Lawler and Porter (1963) as cited in Feldman (1983). It facilitates the obtaining of food, shelter and clothing and provides the means to pursue valued leisure interests outside of work. Again, it serves as a symbol of achievement and a source of social Recognition. Employees see pay as a reflection of management's concern for them(Arnold, 1983).

-Recognition:

Recognition as a motivator factor, according to Herzberg (1959) means being recognized for the efforts and accomplishment of work by receiving a company reward, promotion, or salary increase. Bowen(1980) also posits that it is the acts of notice, praise, or blame supplied by one or more superiors, peers, colleagues, management persons, clients, and/or the general public is a factor for job satisfaction.

-The work/task itself and security:

Aspect of the work itself that are sources of job satisfaction include control over work method and work pace, use of skills and abilities and variety. People derive pleasure from coping successfully with their environments. Using valued skills and abilities provides

workers with a sense of self pride, competence and self-confidence. Specialization and repetitiveness lead consistency to job satisfaction. Moderate amount of stimulation gives worker the great satisfaction according to Hebb, (1949) as cited in Feldman (1983).

-Supervision and Promotion opportunities:

Supervision forms a pivotal role relating to job satisfaction in terms of the ability of the supervisor to provide emotional and technical support and guidance with work related tasks (Robbins et al., 2003). According to Ramsey (1997), supervisors contribute to high or low morale in the workplace.

The supervisor's attitude and behavior toward employees may also be a contributing factor to job-related complaints (Sherman & Blander, 1992).

In the construction sector, supervisors who establish supportive personal relationship with subordinates and take personal interest in them contribute to their employees' satisfaction (Halpine & Winer, 1957).

Promotional opportunities do affect job satisfaction. The desire to be promoted is strong, especially among business executives. According to Locke (1971), desire for promotion includes the desire for higher earnings, social status, psychological growth and desire for justice.

-Working Condition and Work Group:

The work group does serve as a source of satisfaction to individual employees particularly in construction firms. It provides group members with the opportunities for interaction with each other. Walker and Guest (1952) according to Feldman et al (1983) found that "isolated workers disliked their jobs and gave social isolation as the principle reason". The absence of such working conditions, amongst other things, can impact poorly on the worker's mental and physical well-being (Baron and Greenberg, 2003). Robbins (2001) advocates that working conditions influence job satisfaction, as employees are concerned with comfortable physical work environment. Consistently, there seem to be positive correlation between working conditions and job satisfaction according to Barnowe et al. (1972). Employees prefer pleasant working conditions because they facilitate getting the work done efficiently. Adequate tools and equipment help employees accomplish their work goals (Locke, 1976).

When talking about factors of job satisfaction the fact that they can also Cause job dissatisfaction must be kept in mind. Therefore the issue whether job satisfaction and job

dissatisfaction are two opposite and excludable phenomena? There is no consensus regarding this issue among authors.

2.4. MEASURING JOB SATISFACTION

Usually job satisfaction is measured by using general scientific research methods such as the questionnaire.

Some of the most commonly used techniques for measuring job satisfaction include:

- _ Minnesota satisfaction questionnaire and
- _ Job description index

The Minnesota Satisfaction Questionnaire is a paper-pencil type of a questionnaire and can be implemented both individually and in group, but it does not take sex differences into consideration. This questionnaire has One short form and two long forms that date from 1967 and 1977. In fact 20 work features in five levels are measured with this questionnaire. Responding to this questionnaire usually takes between 15-20 minutes.

The 1967 version of the Minnesota Satisfaction Questionnaire uses the following response categories:

- _ not satisfied,
- _ Somewhat satisfied,
- _ Satisfied,
- _ Very satisfied and
- _ extremely satisfied.

The 1977 version of the Minnesota Satisfaction Questionnaire uses the following response categories:

- _ Very satisfied,
- _ Satisfied,
- _ Neither satisfied nor dissatisfied,
- _ Dissatisfied and
- _ Very dissatisfied.

If compared it's obvious that in a way the 1977 version of this questionnaire is more balanced compared to the 1967 version. This questionnaire contains the following aspects of job:

- _ Co-workers
- _ Achievement
- _ Activity
- _ Advancement
- _ Authority
- _ Company Policies
- _ Compensation
- _ Moral Values
- _ Creativity
- _ Independence
- _ Security
- _ Social Service
- _ Social Status
- _ Recognition
- _ Responsibility
- _ Supervision-Human Relations
- _ Supervision-Technical
- _ Variety
- _ Working Conditions

The Job description index is one of the most widely used techniques for measuring job satisfaction. It is a simple and easily applicable method. The measurement of strength and weakness within each factor were assign as in which field improvement and changes are necessary. This questionnaire allows acquisition of information on all major aspects of work and takes sex differences into consideration. This questionnaire was first introduced in 1969 and it measures five major job satisfaction aspects with a total of over 70 potential job descriptions.

The factors considered by the job description index are:

- _ the nature of work,
- _ Compensation and benefits,
- _ Attitudes toward supervisors,
- _ Relations with co-workers and
- _ Opportunities for promotion.

Descriptors on each of the five factors can be evaluated with three potential options by the employees:

- 1- which means that the description is relevant,
- 2- Which means that the description is not relevant
- 3- That means that the employee does not have an opinion

2.5. EFFECTS OF JOB SATISFACTION

Job satisfaction causes a series of influences on various aspects of organizational life. Some of them such as the influence of job satisfaction on employee productivity, loyalty and absenteeism are analyzed as part of this text.

The preponderance of research evidence indicates that there is no strong linkage between satisfaction and productivity. For example a comprehensive meta-analysis of the research literature finds only a best estimate correlation between job satisfaction and productivity. Satisfied workers will not necessarily be the highest producers. There are many possible moderating variables, the most important of which seems to be rewards. If people receive rewards they feel are equitable, they will be satisfied and this is likely to result in Greater performance effort. Also, recent research evidence indicates that satisfaction may not necessarily lead to individual performance improvement but does lead to departmental and organizational level improvements.

Finally there are still considerable debate whether satisfaction leads to performance or performance leads to satisfaction (Lufthansa, 1998).

Employee loyalty is one of the most significant factors that human resource managers in particular must have in mind.

Employee loyalty is usually measured with the Loyalty Questionnaire and can cause serious negative consequences when not in a high level.

Usually three types of employee loyalty are considered: affective loyalty, normative loyalty and continuity loyalty. Affective loyalty happens when an employee feels an emotional connection to the company, normative loyalty is a sort of loyalty that appears in cases when the employee feels like he owes something to the company and continuity loyalty comes as a result of the fact that the employee does not have an opportunity to find a job somewhere else. Put a check under the face that expresses how you feel about your job in general, including the work, the pay, the supervision, the opportunities for promotion and the people you work with.

Research conducted by Vandenberg and Lance (1992) during which they surveyed in the information services for five months showed a strong relations between job satisfaction and employee loyalty.

Their research proved that the higher the degree of job satisfaction the higher is the level of employee loyalty.

Employee absenteeism causes serious additional costs for companies, therefore managers are in permanent peruse of ways how to decrease and reduce it to its minimum. Probably, the best way o reduce employee absenteeism would be through an increase in the level of employee satisfaction. The main idea behind this approach is that the higher the degree of job satisfaction is the lower employee absenteeism should be. Even though the effects are modest the fact that job satisfaction contributes to decreasing the level of employee absenteeism remains.

So satisfaction is worth paying attention too, especially since it is potentially under your control – unlike some of the other causes of absenteeism (e.g. illness, accidents). But as we said circumstances can alter this equation.

As a manager you could be implicitly encouraging absenteeism by enforcing company policies. If people are paid for sick days, and if they must be “used or lost” this is pretty strong encouragement for employees to be absent. In other words, you’ve helped create a culture of absenteeism that can overcome the “satisfaction” effect. (Sweney and McFarlin, 2005) When satisfaction is high, absenteeism tends to be low; when satisfaction is low, absenteeism tends to be high.

However as with the other relationships with satisfaction, there are moderating variables such as the degree to which people feel their jobs are important. Additionally, it is important to remember that while high job satisfaction will not necessarily result in low absenteeism, low job satisfaction is likely to bring about high absenteeism.

2.6. Job Characteristic Model:

Whereas Herzberg advocated the creation of "good jobs", Richard Hackman and Greg Oldham built on that concept by attempting to define our understanding of what a "good job" actually looks like. In other words, what are the characteristics of motivating jobs? In the Job Characteristic Model Hackman and Oldham (1975) identified five core dimensions for evaluating the immediate work environment. They say that any job can be analyzed for its motivating potential by using these five dimensions. The job can then be

redesigned in order to eliminate its dissatisfying aspects. The five dimensions are (Arnold et al 1998 p. 204):

- Skill variety: skill variety describes the degree to which a job requires the implement at of a number of different skills, abilities or talents. These activities should not only be different, but they also need to be distinct enough to require different skills.
- Task identity: task identity defines the extent to which a job requires completion of a whole and identifiable piece of work.
- Task significance: task significance refers to the importance of the job; the degree to which the job has an impact on the lives of other people, the immediate organization or the external environment.
- Autonomy: autonomy is the degree to which the jobholder is free to schedule the pace of his or her work and determine the procedures to be used.
- Feedback: feedback is the degree to which the individual doing a job obtains information about the effectiveness of the performance. Feedback does not only refer to supervisory feedback, but also the ability to observe the results of one's own work.

These core dimensions turned out to be associated significantly with job satisfaction and a high employees' motivation.

Hackman and Oldham's model claims that attention to these five job characteristics produces three critical psychological states (Tosi et al 2000 pp. 135-136):

- Meaningfulness of work: this results from the belief in the intrinsic value/ meaning of the job. For example, teachers may experience meaningfulness of work, even in difficult working conditions, because of the conviction that their efforts make a difference in the lives of their pupils.
- Experienced responsibility for outcomes of work: job efforts are perceived as causally linked to the end results of the work.
- Knowledge of the actual results of work activities: this can be qualified as feedback.

The employee is actually able to judge the quality of his or her performance.

According to the model different job dimensions contribute to different psychological

states. Job meaningfulness can be defined as the product of three dimensions: skill variety, task identity and task significance. Experienced responsibility is a function of autonomy and knowledge of results is dependent on feedback. The psychological state that receives the most attention in Hackman and Oldham's study is the meaningfulness of work (Tosi et al 2000 p. 136).

Finally, the presence of these critical states can in turn increase the probability of positive

work outcomes, especially for employees with a high growth-need. The positive work outcomes are (Tosi et al 2000 pp. 134-135):

- High internal work motivation: motivation is caused by the work itself.
- High quality performance: this results from the meaningfulness of work. Quality, However, does not necessarily imply quantity.
- High job satisfaction.
- Low absenteeism and turnover.

2.7. Job satisfaction as Function of other People

According to the social information processing model, as we have pointed out earlier, job satisfaction is susceptible to the influence of others in the work place. People are inclined to observe and copy the attitudes and behaviors of colleagues with similar jobs and interests, and of superiors who are perceived as powerful and successful (Furnham 1992).

2.7.1 Direct Influence by Others

Griffin's and Bateman's (1986) research in this field revealed strong, positive correlations between behavior exhibited by leaders and job satisfaction (Arnold et al 1998 p. 206). Weiss and Shaw (1979) conducted a study in which participants were required to observe one of two training videos on how to execute a task. The first video contained footage of a „trainee“ reacting enthusiastically to the task. In the second video, however, the trainee displayed a negative attitude towards the task. The participants who were subjected to the first video had a more favorable attitude after performing the same task than those who were subjected to the second video (Furnham 1992 p. 210).

2.7.2 Indirect Influence by Others:

Agho et al (1993) came to the conclusion that perceptions of distributive justice – the perceived level of fairness in distributing rewards in a company – had an impact on job satisfaction (Arnold et al 1998 p. 206).

O'Reilly and Caldwell (1991) demonstrated the importance of congruence between personal cultural preferences and organizational culture. Their research revealed a strong, negative correlation between person-organization fit and turnover. This result indirectly indicates that a lack of correspondence between an employee and the culture of a company will most likely lead to lower job satisfaction (DeWayne 2005 pp. 34-37).

In conclusion, these studies have clearly demonstrated that the influence of others in the work place on job satisfaction is significant. However, it should be noted that not everyone is equally prone to the influence of others. There are individual differences which can be attributed to differences in personal dispositions.

2.8. Job Satisfaction as Function of Personal Dispositions

The concept of personal disposition can cover a fair number of aspects, which are not all equally relevant to the topic of job satisfaction. Therefore, in this chapter we will try to cover the most important personal dispositions.

2.8.1. Genetic or Hereditary Disposition

In a controversial series of studies Avery (1991) discovered that job satisfaction might Have a genetic cause. He based his findings on the Minnesota Twin Family Study – a Study to determine the influence of genes and environment on the development of psychological traits in twins. The use of identical twins in the on-going nature-nurture debate has always been widely popular in psychological studies, since identical twins Share identical genes. Therefore, any incongruence in the development of psychological traits between the twins can be attributed to environmental influences (Aamodt p.368). Arvey analyzed the level of job satisfaction of 34 pairs of identical twins who had been Separated from an early ages. If job satisfaction is merely the result of environmental Factors, there should not be any significant correlation in the level of job satisfaction between identical twins who grew up in different environments and who had different Jobs. Consequently, if identical twins with a different upbringing and different jobs do display a similar level of job satisfaction, then we should, at least partially, consider a

Genetic disposition as a determining factor (Aamodt p.368). Arvey's studies revealed that almost 30 percent of the variation in job satisfaction depends on genetic factors. According to Arvey the level of job satisfaction between genetically identical people with a different job is more similar than the level of job satisfaction between genetically different people with the same job (Arnold et al 1998 p. 207) However, this does not imply that there is a „job satisfaction“ gene. All in all, it is impossible to determine which proportion of job satisfaction is a function of someone's disposition.

2.8.2. Affective Disposition

Judge and Hulin (1993) studied the connection between affective disposition (the tendency to have positive or negative emotions and thoughts), subjective well-being (the perceived level of satisfaction about life in general), job satisfaction and job characteristics (Arnold et al 1998 p. 207) The study revealed that affective disposition had an important impact on subjective well-being. Subjective well-being in turn – and affective disposition in consequence - had a significant influence on job satisfaction and so did job satisfaction on subjective well-being. Lastly, job characteristics were the most important determinants for job satisfaction, but they were barely more important than subjective well-being (Arnold et al 1998 p. 207).

This indicates that, besides the content of the job itself, the affective disposition of a person is a major determinant for job satisfaction. Another conclusion is that job satisfaction influences a person's overall satisfaction. This implies that an employee who is dissatisfied with his or her job, but very satisfied with his or her life, may perform well on the job. Also, an employee who is very satisfied with his or her job, but very dissatisfied with his or her life, may perform poorly on the job.

2.8.3. Behavior versus Outcomes

From an employee's point of view job performance is essentially the result of a series of behaviors. The various tasks performed on a daily basis contribute to job performance in general (Cardy2004 p. 13). In this line of thought Campbell (1993) developed an influential model containing eight dimensions to measure job performance (Jex2002 pp.90-92):

1. Job-specific task proficiency: behavior related to core tasks of the job;
2. Non-job-specific task proficiency: general work behavior;

3. Written and oral communication task proficiency;
4. Demonstrating effort: level of commitment to core tasks;
5. Maintaining personal discipline;
6. Facilitating peer and team performance;
7. Supervision/Leadership;
8. Management/Administration.

From a supervisor's perspective, on the other hand, outcomes are the key elements for job performance appraisal. After all, at the end of the day results are more important to an employer than the activities leading to those results (Cardy 2004 p. 13).

So which approach is more important? There is not really a superior approach in all cases:

both approaches have advantages and disadvantages (Cardy 2004 p. 14)

2.9 Job satisfaction as Function of Job Features

2.9.1 Two-Factor Theory

In his Two-Factor Theory Frederick Herzberg (1959) addresses the issue of workplace motivation. The theory introduces two elements or „factors“ to account for overall job satisfaction: motivators and hygiene factors. While the presence of motivators in a job can contribute to the increase in the level of satisfaction, the absence of hygiene factors in the workplace can be the cause of dissatisfaction. Hygiene factors allude to the environment and the context of the work. This can include salary, safe working conditions, etc. Motivators are related to the characteristics of the job itself. According to the theory motivators and hygiene factors are non-exclusive. Satisfaction and dissatisfaction cannot be considered as the opposite ends of one continuum. Therefore an increase in the level of job satisfaction does not necessarily imply a decrease in job dissatisfaction, since the elements affecting satisfaction and dissatisfaction are different. The Two-Factor is also often referred to as the Motivation-Hygiene Theory (Davies 2008 p.8).

Herzberg's theory offers an explanation to why employees still lack motivation when confronted with high salaries and great working conditions. The latter two elements only represent hygiene factors, which keep dissatisfaction at bay. According to Herzberg, motivation comes from the job itself. Therefore, it is important for managers to look into

the nature of the jobs they ask their employees to do. Herzberg's idea is that if you want an employee to perform well and do a good job, he should have a good job to begin with. So, in order to improve job attitudes and productivity, employers must attend to both factors and not assume that an increase in satisfaction leads to a consequential decrease in dissatisfaction.

In consequence, Herzberg's work implies that almost anyone will respond positively to a job with highly motivating factors.

Herzberg's Two Factor Theory is probably the most often cited point of view. In fact the main idea is that employees in their work environment are under the influence of factors that cause job satisfaction and factors that cause job dissatisfaction.

Therefore all factors that have derived from a large empirical research and divided in factors that cause job satisfaction (motivators) and factors that cause job dissatisfaction (hygiene factors), Table 1.1.

| Hygiene factors | Motivators |
|-------------------------|----------------|
| Company policies | Achievement |
| Supervision | Recognition |
| Interpersonal relations | Work itself |
| Work conditions | Responsibility |
| Salary | Advancement |
| Statues | Growth |

Table 2.1 : hygiene factor motivation and motivation

Gill, J. and Johnson, P. (2010) *Research Methods for Managers*, (4th Ed), Paul Chapman, London.

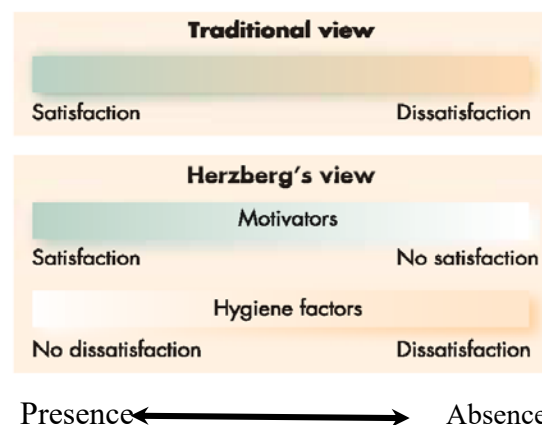


FIGURE 2.1 tradition and hezerberg's view

Source: Pareek, U. (1974, p.23).

2.9.2 Job Satisfaction and Motivation

The concepts of job satisfaction and motivation are clearly linked and invariably used interchangeably in practice Bowen et al; (2008). They further explain that job satisfaction describes or measures the extent of a person's contentment in his or her job while motivation explains the driving force(s) behind the pursuit or execution of particular activities or a job. Herzberg as cited in Dinham and Scott (1998), explains that both phenomena are linked through the influence each has on the other. He continues to give examples by saying that lower order needs otherwise known as hygiene factors and higher order needs also known as motivators are also concerning satisfaction and dissatisfaction flowing from these and the need to engender long term career satisfaction.

Mullins (2005) is however of the view that job satisfaction is linked to motivation but the nature of this relationship is not clear and in the view of (Michaelowa (2002) job satisfaction is not the same as motivation. She argues that these two terms are related but may not be used as synonyms. Motivation is essential to labor, as it gives site workers satisfaction such as achievement, sense of responsibility and pleasure of the work itself (A. Enshassi et al; 2007). In supporting a similar view, Chase (1993) (cited by Mohajed, 2005) is of the view that a combination of training, orientation for new employees, provision of a safe and clean environment, encouragement of two-way communication, employee participation in planning or decision making, and individual / team recognition may be utilized to achieve employee satisfaction. Herzberg argues that all too often management fails in its attempt to motivate employees because it puts all of the emphasis on removing dissatisfiers and neglects satisfiers that create motivation (Oglesby et al (1989) cited by Mohajed , 2005)

2.9.3 Maslows Need Hierarchy Theory (1943, 1954)

Most contemporary theories recognized that motivation begins with individual needs. Needs are deficiencies that energize or trigger behaviors to satisfy those needs.

Maslow cited in Mcshane and Glinow (2000) identifies five basic categories of human needs and placed them in a hierarchy. At the bottom of this hierarchy is physiological needs, which includes the need to satisfy biological requirements for food, air and shelter. Next is safety needs, the need for a secure and stable environment and the absence of pain, threat, or illness. Belongingness which includes the need for love, affection and interaction with other people follow. The fourth category is the need for

esteem which includes self-esteem, through personal achievement as well as social esteem through recognition and respect from others. At the top of the hierarchy is self-actualization which represents the need for self-fulfillment or a sense that the person's potentials has been realized? An employee's behavior according to this theory is motivated simultaneously by several need levels but Maslow agrees that behavior is primarily motivated by the lowest unsatisfied need at a time. As the person satisfies a lower level need, the next higher need in the hierarchy becomes the primary motivator. This is called the satisfaction-progression process. Even if the person does not satisfy a higher need, he or she will be motivated by it until it is eventually satisfied.

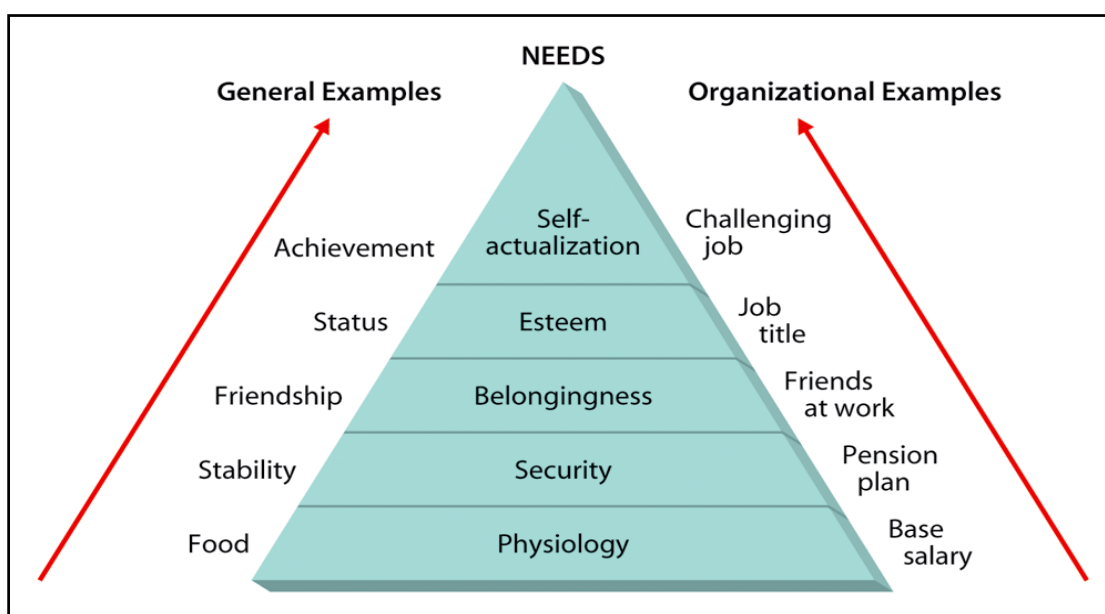


Figure 2.2 Maslow's Need Hierarchy

Source: Grobler et al. (2002, p.107).

2.9.4. Alderfer's ERG theory (1972)

This theory groups human needs into three broad categories, existence, relatedness, and growth. Thus it takes its name from the first letter of each need. Existence needs correspond to Maslow's physiological and safety needs, relatedness needs refer mainly to Maslow's belongingness needs and growth needs match with Maslow's esteem and self-actualization needs. Existence needs include a person's physiological needs and physically related safety needs such as the need for food, shelter, and safe working conditions. Relatedness needs include a person's need to interact with other people, receive public recognition, and feel secure around people (interpersonal safety). Growth needs consists of a person's self-esteem through personal achievement as well as concept of self-actualization.

Alderfer's theory states that an employee's behavior is motivated simultaneously by more than one need level. One might try to satisfy growth needs by serving clients exceptionally well even though one's relatedness needs are not completely satisfied. The theory applies the satisfaction progression process described in Maslow's needs hierarchy model, and as a result one level will dominate a person's motivation more than others. For example, as existence needs are satisfied, relatedness needs become more important. Unlike Maslow's model, ERG theory includes a frustration regression process so that those who are not able to satisfy a higher need become frustrated and regress back to the next lower need level. If existence and relatedness needs, for example, have been satisfied but growth need fulfillment has been blocked, the individual will become frustrated and relatedness needs will again emerge as the dominant sources of motivation. Human needs are believed to be clustered around the three categories proposed by Alderfer.

2.9.5. McClelland's Achievement Theory (1975)

David McClelland cited in McCone and Glinow (2000) mentions three secondary needs as being important sources of motivation. These three sources are need for achievement, need for affiliation, and need for power. According to him, people with high need for achievement want to accomplish reasonably challenging goals through their own efforts. They prefer working alone rather than in teams because of their strong need to assume personal responsibility for tasks. High needs for achievement people are also likely to be successful in competitive situations and have a strong need for unambiguous feedback regarding their success.

These people are therefore most satisfied when their jobs offer challenge, feedback and recognition. High need for achievement people are mainly motivated by expectation of satisfying their need for achievement. Money is a relatively weak motivator for them, except that it provides feedback and provides recognition for their success. Employees with low need for achievement put in their work better when money is used as a financial incentive.

2.9.6. McGregor's Theory X and Theory Y

McGregor (1960) as cited in Mullins, (2005) constructed a philosophy based on differing managerial practice and presented a sharp contrast between two different sets of managerial assumptions about people and identified them as theory X and theory Y.

2.9.6.1 Theory X

Theory X set of assumptions about human behavior suggest that people act to realize basic needs and, hence, do not voluntarily contribute to organizational aims (Bloisi et al., 2003).

McGregor made an assumption that individuals are indolent, self-centered, resistant to change, lack ambition, dislike responsibility and are naïve (McCaffer et al., 2005).

Theory X further characterizes people in the following ways:

- Workers are lazy, lack ambition, and work as little as possible.
- They dislike responsibility and prefer to be led.
- They are self-centered and indifferent to organizational needs.
- They are resistant to change.
- They are dim-witted, gullible, and easily duped.

Theory X further postulates that management, faced with the above human fiber with which to accomplish work, has two choices. The first is to follow a hard line, using tight controls, coercion, and threats.

The second is to take a soft approach characterized by permissiveness and accession to workers' demands in order to make them more likely to accept direction (Warren, 1989). McGregor then suggests that the cause of human behavior problems in industrial organizations is the manner, in which workers are managed, not the workers themselves.

Managers are, therefore, to direct and modify worker behavior to meet organizational needs by persuading; rewarding, punishing and controlling those who do not naturally strive to learn and grow.

2.9.6.2 Theory Y

Theory Y is based on more adequate assumptions regarding human nature and human motivation. It has four elements, the first of which is identical to the first element in Theory X.

- i. Management is responsible for organizing people, materials, and machines to achieve economic ends.
- ii. . People are not naturally passive or resistant to organizational needs, and that poor management has made them that way.
- iii. All people possess latent motivational capabilities, the potential for development, the capacity to take on responsibility, and the readiness to work toward organizational goals. Management's task is to nurture these tendencies and help people develop these characteristics in themselves.
- iv. Management should structure its organization and its methods of operation so as to allow people to set their own goals and direct their own efforts toward the organization's objectives.

Management can do this by creating opportunities, removing obstacles, encouraging growth, and providing guidance, McGregor maintains. In essence, Theory Y recognizes the contributions workers can make Toward the organization's goals, if management will allow them to do so. He maintains that implementation of

Theory Y would result in substantial improvement in the effectiveness of the industrial organization.

As did Maslow, McGregor raised some cautions to implementation of his theory. He predicted failure if management subscribed to the concept of Theory Y but applied the concept within the framework of Theory X.

He also saw lack of sincerity in its application as preventing success. If the concept were applied as a sales gimmick or as a device for tricking people into thinking that management viewed them as important when it really did not, failure is certain.

The combined impact of Maslow and McGregor on the worker-management relationship is enlightenment. On the contrary, Theory Y view of worker behavior sees people as motivated by higher order growth needs. It is, therefore, the task of management to facilitate individuals to act on these needs and grow in their job. Management's essential task is to structure the job environment to allow people achieve their higher order individual goals in accomplishing the organizational objective. McGregor saw theory Y as a way to align workers' goals with that of the organization (Bloisi et al., 2003).

2.9.7. Expectancy Theory

According to Mcshane and Glinow (2000) this theory is a process theory of motivation based on the belief that people will direct work efforts to behaviors they believe will lead to desired outcomes. That is, people develop expectations about whether they can achieve various job performance levels. They again develop expectations about whether performance and work behaviors lead to particular outcomes. People finally direct their effort towards outcomes that help them fulfill their need. Lawler explains that an individual effort level depends on three factors, effort to performance (E-P) expectancy, performance to outcome (P-O) expectancy and outcome to valence (V). Employees' motivation is influenced by all the three components of the expectancy theory model.

The effort to performance (E-P) expectancy refers to the perception of the individual that his or her effort will result in a particular level of performance. Expectancy is seen as a probability which ranges from 0.0-1.0. An employee may believe that he or she can accomplish the task unquestionably (probability of 1.0). In another situation he or she expects that even the highest level of effort will not result in the desired performance level (probability of 0.0).

The E-P expectancy most of the time falls somewhere between the two extremes.

To increase the belief that employees are capable of performing job successfully

- select people with the required skills and knowledge
- Provide training and clarify job requirement
- provide sufficient time and resources
- assign simpler and fewer task until employees can successfully perform task.

Provide counseling and coaching to employees who lack self-confidence.

The performance to outcome (P-O) expectancy is the perceived probability that specific behavior or performance level will lead to specific outcomes. The probability is developed from previous learning. Employees in extreme case may believe that when they accomplish a particular task (performance) it will definitely result in a particular outcome, or may believe that the outcome will definitely not result from successful performance. People normally think of outcomes of interest to them at a particular time. At one time a person's motivation to complete a task may be based more on P-O expectancy of promotion or pay increase and at another time it may not.

To increase the belief that good performance will result in certain outcomes,

- measure job performance accurately
- clearly explain the outcomes that will result from successful performance
- describe how the employee's rewards were based on the past performance
- provide examples of other employees whose good performance has resulted in higher rewards.

The outcome valence refers to the anticipated satisfaction or dissatisfaction that an individual feels toward an outcome. It ranges from negative to positive. The outcome valence is determined by the strength of person's basic needs that are associated with the outcome. Outcomes have positive valence when they directly or indirectly satisfy the person's needs and have a negative valence when they inhibit the person's need fulfillment. If one has strong social need for example, then the outcome that likely fulfills that need will have a strong positive valence for him or her. Outcomes that move one further away from fulfilling his or her social need will have a strong negative valence. To increase the expected value of outcomes resulting from performance

- distribute reward that employees value
- individualize rewards
- minimize the presence of contravened outcomes

2.9.8.. Equity Theory

McShane and Glinow citing the equity theory explain how people develop perceptions of fairness in the distribution and exchange of resources. It explains what employees are motivated to do when they feel inequitably treated. There are four main elements of equity theory, outcome/input ratio, comparison other, equity evaluation and consequences of inequity.

Inputs include skills, effort, experience, amount of time worked, performance, results that an employee is likely to contribute to an organization, while outcomes are the things employees receive from the organization in exchange for the inputs such as pay, promotion, recognition or an office with a window. According to Mcshane and Glinow inputs and outcomes are weighted by their importance to the individual and that the weight varies from one person to the next. Some people feel that seniority is a valuable input that deserves more organizational outcomes in return. Others consider job performance as the most important contribution in the exchange relationship.

The equity theory as cited by Mcshane and Glinow recognizes that people value outcome differently because they have different needs. It accepts that some employees require time off with pay whereas others consider this a relatively insignificant reward for job performance. The theory also states that we compare our situation with comparison other. The comparison other may be another person, group of people or even oneself in the past. It may be somebody in the same organization. That is, people tend to compare themselves with others who are nearly in similar positions and with similar backgrounds. It is however easier to get information about co-workers than from people working elsewhere. The comparison other varies from one person to the next and is not easily identifiable.

Equity evaluation is formed after one identifies his or her outcome/input ratio and comparing with the comparison others ratio. When one believes that he or she has contributed more time, effort, knowledge, resources and other inputs than the comparison other in a job then he or she feels that there is under reward inequity.

The reverse produces over reward inequity. The equity theory states that equity occurs when the amount of inputs and outcomes are proportional. It does not necessarily have to be the same amount. One feels equitably treated when he or she works harder than the comparison other and receive proportionally higher rewards as a result. According to Mcshane and Glinow (2000) the consequences of inequity are numerous. They explain that under rewarded workers tend to reduce their effort and performance if these outcomes do not affect their pay equal Workers who are over rewarded sometimes but not very often increase their inputs by working harder and producing more. People with under reward equity might ask for more desirable outcome such as pay increase and if this does not work, they are motivated to join labor union and demand these changes at the bargaining table. Others misuse sick leave or may even steal company property or misuse facilities. Some employees may ask for transfer or leave the job all together.

2.9.9 Reinforcement Theory

Kreitner and Kinicki (2001) report that this theory proposed that behavior is controlled by its consequences and not by the result of hypothetical internal state such as instincts, drives or needs. It explained that people repeat behaviors followed by favorable consequences and avoid behaviors resulting in unfavorable consequences. In other words, past experiences teach people to operate in the environment so that they receive

desired consequences from that environment. If the behavior is followed by an unpleasant experience or by no response To sum up, it is evident from the review that there is a close relationship between job satisfaction and motivation even though the two concepts are not seen as synonymous.

2.10. Causes of Job Satisfaction:

Different people including Michealowa (2002), Bacarach and Bamberger (1990), Camp (1987) and Rebore (2001) have cited many factors as the causes of job satisfaction . For the purpose of this study the areas to be considered are the work environment and work facilities, workers own characteristics, human relations and worker supervision. Acoording to Lum, Kervin, Clark, Reid, Sirola, (1998), Job satisfaction has a number of facets such as satisfaction with: work, pay, and supervision, quality of work life, participation, organizational commitment, and organizational climate. Kavanaugh (2006) is of the view that while these facets are correlated, each is an independent construct. Satisfaction with one facet does not guarantee satisfaction with all other satisfaction facets. In spite of this independence, few studies have identified how demographic variables vary in their relationships with the various satisfaction facets. However, this is an important consideration since studies have shown that demographics in terms of age, education, tenure, and experience significantly influence job satisfaction. While it is true that other factors discussed in the literature review can account for more of the variance in job satisfaction, the significance of demographic factors is undeniable.

3.2. Definition of Construction Industry

Most definitions describe the construction process and features of the industry's product as merely indications of what the construction industry includes or does not include. For instant, Colean et al. (1982), Lange et al. (1979), view construction as an aggregate of business engaged in closely related activities. Nam et al. (1989) suggest that, historically, construction refers to all types of activities associated with the erection and repair of immobile structure and facilities. The United States Department of Commerce (1984) defines construction by considering the immobility of its products.

Hillebrandt (1984) defines construction process as covering the parties involved in the construction processes and, to some extent, the suppliers of the industry's inputs. In the review of statistics on the construction in the United Kingdom "construction" was interpreted to mean resources directly used in construction, the products of construction activity, and financial and operational aspects of the building materials and construction industries.

The success of any organization depends largely on the ability of managers to provide motivating environment for its employees. The challenge for most managers today is to keep the staff motivated in order to perform well at the workplace. By understanding the needs of employees', particularly in the construction supply chain, managers can understand what rewards to use to motivate and keep them satisfied. The study of job satisfaction in the construction industry is quite relevant since it can support employee retention and work performance (Schermerhorn,2005; Krietner,2003 and Arnold, et al. 1983). Job satisfaction is proven as one of the key factors that contribute to productivity (Mustapha, 2013). (Schermerhorn,2005) defines job satisfaction as the amount of positive feelings which an individual has towards a job. Job satisfaction may be improved via fulfilling issues such as self-esteem, respect, appreciation or recognition, the safety and security of the employee (Wright, 2001).

The satisfaction of the employee can also affect several factors such as motivation. The study of job satisfaction among construction workers is key since awareness of factors influencing job satisfaction is crucial to increasing productivity (Okpara, Squillance and rondou,2005, cited Mustapha, 2013).

Again, being aware of specific factors that influence satisfaction, particularly in the construction sector, could provide insights to management of organizations in terms of reducing alienation at work place, secure employee loyalty and to attract potential employee in order to increase productivity (Mustapha, 2013).

In Sudan construction industry for instance, companies are currently applying various non-financial incentive schemes aimed at providing satisfaction to employees to improve operatives' productivity.

In order to replicate such increase in productivity in the construction supply chain as a way of contributing to economic growth in Sudan, it is important and worth the effort to undertake a study that investigates the level of employee's satisfaction in the construction sector. Findings would inform policy decision regarding employee

motivation and satisfaction in the construction supply chain and to boost productivity in Sudan. To this end, this research seeks to find out factors influencing worker satisfaction and to determine the level of worker satisfaction in the construction supply chain in Sudan. In the following, we first review exiting relevant literature. We then describe the methodology used, followed by presentation of our empirical results.

Construction supply Chain Management therefore encompasses materials and supply management from the supply of basic raw materials stage to final project completion. It focuses on how firms in the construction industry utilize their construction processes, technology, and capability to enhance productivity, efficiency and competitive advantage. It is a management philosophy that extends traditional intra-enterprise activities by bringing trading partners together with a common goal of optimization and efficiency (Tan, Kannan and Handfield,1998).

Thus Construction supply Chain Management seeks to coordinate and integrate the efforts of the various firms and individuals within the construction chain to improve operational efficiency and productivity of which employee satisfaction on the job plays crucial role in this regard.

The construction industry employs a large proportion of the civilian labour force in countries at all levels of economics and social development. The most obvious indicator of the significance of construction in employment is, of course, the share of construction in the total employment. Turin (1973) stated that for thirty- two countries, series are available of the breakdown of the employed by major divisions of economic activity including construction for the period covering 1958 to 1966 or 1967, in the first group of countries i.e. those having a per capita GDP of 400 US \$ and above in 1965. The construction accounted for a minimum of 3% to a maximum of nearly 12% of total employment over the period observed. Countries in groups with per capita GNP of less than 400 US \$ in 1965 cover a much wider range from a minimum of less than 0.5% to a maximum of nearly 12%.(1) Turin (1973) add that construction accounts for between

(1) The notion that expanding human capital, just like physical capital, results in higher growth and productivity has been acknowledged since Adam Smith and emphasized more recently in the development literature since the 1960s (Schultz, 1961; Becker, 1964).

Since the mid 1980 there were wave so-called endogenous or "new" growth theories that focus on increasing returns investment, not only in physical but also in human capital. The "new" growth theories have rediscovered the virtues of human capital with a great deal of vigor. It has become an endogenous variable that drives the growth process through multiple channels. These considerations allow endogenous growth theorists to claim that "...the main engine of growth is the accumulation of human capital...and the main source of differences in living standards among nations is differences in human capital" (Lucas, 1993). The public policy implications of the new growth theories would indeed point to a presumption in the favor of government intervention going beyond compensating for market forces to more deliberate and aggressive investment in education and training,

6% and 10% of the total employment in a majority of the more industrialized countries, and from between 2% and 6% in the less developed ones.

Employment in the building materials and components industry, in the transport, stock, and distribution of building materials and other ancillary operations connected with construction, is not identified separately in national series. Evidence derived from censuses of industrial production shows that these related activities may add another 4% to 6% to total employment in the developed countries, and probably 2% to 4% in the less developed ones. This means that construction as a whole, i.e. including the production and delivery of material inputs, can account for as much as 15% of the total employment in some of the more industrialized countries of the world, and as much as 10% in the less developed ones.

3.2.1. The Labor Market and the Image of the Construction Industry

Employment of craftsmen in construction activities is characterized by instability. Contractors normally hire workers for specific projects that have a finite duration. Thus, a construction worker is hired on a project with the objective of being laid him off when it is finished. As a consequence of this instability, an area of pool labor does not characterize the construction industry. This allows for the movement of workers among contractors, different branches of the industry (industrial, residential, nonresidential and heavy construction), and jobs that are being completed and others that have increasing manpower needs. Contractors in need of workers hire from the area pool of labor and return workers to the pool when they are no longer needed. Like any industry, the construction industry has to compete for its workforce from the limited pool who is able and willing to work.

Historically, this has not been a problem for the construction industry. Martin et al., (2003) argue that any sustained downturn in population growth, in many developing countries, and changes in gender demographics affecting traditional recruitment sectors have made this market more competitive and raised the real possibility of the industry being affected by skills shortages in the near future. Labour market present a concern for all industrial sectors, as falling birth rates lead to competition between sectors for an increasingly limited pool of job candidates. It is inevitable that in this environment less

including a move from low-skill labor-intensive products to more skill-intensive goods and services, thus attaining rapid, internationally oriented growth.

attractive industries will be unable to recruit their share of high-quality schools and university leavers, and will eventually suffer from skills deficiencies. Clearly high-achieving individuals are likely to gravitate towards industries and sectors which are seen as offering good wages, good working environment and good career opportunities, and as being the most glamorous and attractive to work in. Thus, the unattractiveness of construction as a career choice has become a topic of concern and debate amongst the industry's various bodies and training organizations. For instance, according to the American Jobs Rated Almanac, (edition 1999) civil engineering fell from 18th to 70th position in expressed job and 14 construction trades were rated in the bottom ranks. Given the shrinking labor market and images problems of the industry, it is clear that further economic growth is likely to lead to severe shortages in both traditional and new skills areas (Agapiou et al., 1995b).

The incumbents on those working within the construction sector have to work to improve the image and the attractiveness of construction as a career option. The reality is that the industry has a long way to go in improving its stereotypical image. Indeed, research has shown that it is currently regarded as having an occupational status similar to that of a cottage industry (Gale, 1994). Because of the nature of the industry, small shortage and surpluses will occur for brief periods of time. The real concern is when the situation becomes grossly out of balances for extended periods of times. Shortage results in hiring of unqualified workers, the use of overtime to maintain schedules, and increased wages to attract workers. Training and development is the most effective way to maintain, update and enhance the intellectual capital of the industry workforce and to ensure that its activity contribute positively to the well-being of society as a whole. Indeed, concerns over the quality of recruits to the construction industry have been a major problem recent years and this has led to a range of training initiatives. Construction trade training is likely administrated by the industry itself in different countries (such as Construction Industry Training Board (CITB) in the United Kingdom, Sticking Vakopleting Bouwbederijf (SVB) in the Netherlands, National Training Institute (NTI) in Ghana, the Construction Industry Training Center (CITC) in Singapore, and Construction Training Australia (CTA) in Australia.

In the recruitment climate mentioned above it is increasingly important for the construction to retain their professional employees in order to remain competitive.

Employee turnover or 'wastage' is an extremely important issue for construction companies' strategic HR planning yet, a culture of mobility has emerged in the industry which has led to a workforce (2) of corporate mercenaries that coldly drift from job to job with little sense of loyalty to their employers. This should be a worrying development for any company that takes training seriously, although, such companies are likely to experience less labour turnover. This is due to the cost of training staff where they are sufficiently productive to generate income. In the U.K. industry there are concerns that staff turnover may increase even further as staff shortages intensify and competition between different employers increases. In a recent survey conducted in the U.K. a 42 % construction professionals said that they were actively looking for new positions (J.Ford, 1997). Thus the need for companies to retain their staff seems to become a major HRM issue in the construction industry of the future. Without an increase in labour resources, only companies offering competitive salary packages, good working conditions and exciting career opportunities will be able to satisfy their labour requirements. Indeed, recent reports suggested that skills shortages are already leading to increased salary levels (Cargill, 1996). However, increased remunerative costs lead to competitive labor markets, which has inflationary effects on the cost of construction work (Agapiou et al., 1995b).

For this reason, Briscoe (1990) predicated that U.K. Construction Company might start to lose projects to other countries if wage levels increase as a result of skill shortages, which may threaten the future growth of the U.K. industry. Thus it is essential that the industry addresses its image problems and begins to recruit from non-traditional sectors such as women and, in some countries such as the U.K., ethnic minority groups.

3.22. Self-Employment in the Construction Industry

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- (2) The reason put forward for the construction industry's poor public image have been numerous, and they include:
- The site based and hence itinerant work patterns, which result in job insecurity or require many construction workers continually to relocate in pursuit of new project opportunities;
 - The poor on-site working conditions, health and safety record and employee welfare provision within the industry,
 - The industry's association with manual, blue-collar occupations rather than more highly regarded white-collar positions
 - The male-dominated and discriminatory 'macho' culture that is commonly portrayed as the way the industry operates.

The construction industry relies on subcontracting for the majority of its production effort. Hence the construction industry comprises a large number of small and medium-sized enterprises, which operates in subordinate productive role to larger 'main' contractors. In the U.K. self-employment is higher than any other European country at around 45 %, compared to 10 % in Germany and 18 % in France. The rise of self-employment amongst construction workers in the U.K. can be traced back to the 1980s and early 1990s, when a political agenda of de-unionization, a philosophy that small is beautiful, and favorable tax reform made self-employment a lucrative option for many skilled workers (Martin et al., 2003). This more flexible structure was perfectly suited to the fluctuating workloads of the construction and led to major structural changes where the majority of the workloads became self-employed.

However, this also produced problems of reduced control, which lies at the heart of many of the industry's inefficiencies today. Research also suggests that small business does not manage occupational health and safety risk as effectively as large business, and may be unaware of their responsibilities under occupational health and safety law (Lingard, 2002). These factors present difficulties for the prevention of occupational injuries and diseases, which likely contribute to the higher incidence of occupational injury in small construction firms (MacVittie et al., 1997).

Chapter (3)

Job Satisfaction in the Construction Industry

Chapter 3

Job Satisfaction in the Construction Industry

3.1 Introduction:

Construction is one of the major industries in the global world- it is the creator of the built environment within which most other economic activities take place. Providing work for a significant proportion of the labor market and accounting for a significant share of the world Gross Domestic Product (GDP). Buildings and other construction products have a pervasive influence on social activity in modern society. The built environment of a society expresses its cultural values, and is a major influence on the visual beauty or squalor people experience. However, houses, roads, factories, offices, schools, hospitals are also part of complex physical infrastructure of daily life.

The hard, physical nature of much construction work, often undertaken in a poor working environment, its frequent combined with images of masculine stereotypes to create impressions of what construction work is like. At best a half-truth, the idea of ‘hard men’ dashing around construction sites with devil-may-care attitudes in attempts to make the most out of piece rates and bonuses may be used as part explanation of poor site safety, the young age profile of the workforce, and low-quality work. From this perspective, management may be said to do its best to contain the worst excesses, and is conveniently absolved of responsibility for their causes.

Few manual workers now do the traditional laboring jobs associated with construction; over the past thirty years machines have taken over many of the heavy digging and lifting tasks. In United Kingdom, roughly 70% of private-sector building workers are classified as having some sort of skill, according to Construction Industry Training Board (CITB) returns. ‘Skill’ is a social construct denoting status, earning capacity, industrial power and the ability to exclude others, as well as indicating a capacity of certain specified tasks.

3.3. Job Satisfaction in the Construction

Job satisfaction is the degree to which individual feels positive or negative about their jobs. It is an attitude or emotional response to one's tasks as well as to the physical and social conditions of the workplace. It is the amount of overall positive feelings that individual has towards the job (Schermerhorn, et al., 2005; Krietner, 2003 and Arnold, et al., 1983). According to Judge (2002), job satisfaction typically reflects attitudes towards the job itself, quality of supervision, co-worker, opportunity, pay, work condition and security as the prime job satisfaction factors.

3.4 Job Satisfaction and Performance:

The importance of job satisfaction can be viewed in the context of two decisions namely decision to belong; that is, to join and remain a member of an organization and the decision to perform; that is, to work hard in pursuit of high levels of task performance. The decision to belong concerns an individual's attendance and longevity at work. Workers who are satisfied with the job itself have more regular attendance and are less likely to be absent for unexplained reasons than are dissatisfied workers (Boggie, (2005).

The relationship between job satisfaction and performance is an issue of continuing debate and controversy. Some are of the view that satisfaction leads to performance while others also believe that the reverse is also true. Luthans (1995) however believes that there is no strong linkage between satisfaction and productivity. Bowling (2007) found in his study that a cause and effect relationship does not exist between job satisfaction and performance. Instead, the two are related because both satisfaction and performance are the result of employee personality characteristics, such as self-esteem, emotional stability, extroversion and conscientiousness. Bassett (1994) also has a view that research studies have found only a limited relationship between satisfaction and work output and offer scant comfort to those seeking to confirm that a satisfied worker is a productive worker. He continues to propose that, it is primarily in the realm of job design that opportunity for constructive improvement of worker satisfaction appear high. He believes that the long-presumed link between satisfaction and work output cannot be supported by the evidence of human relations research alone as worker satisfaction is a complex matter that deserves careful thought and consideration in any management systems design decision. The satisfied worker is a productive worker

paradigm does not work as it is much more complicated than that. Heller (1999) support this idea and states that in the human relations model, there is an assumed causal relationship through which job satisfaction is thought to cause higher productivity, although available research is unreliable. Human resources model is by comparison more fact based and refers to a relation between participation, a better use of competence leading to superior performance and as a consequence improve job satisfaction.

Other researchers including Tait et al., (1989) and Judge et al., (2001) found job satisfaction to be related to job performance, workplace turnover and life satisfaction. Morrison (1997) found a strong relationship between job satisfaction and performance while Iaffaldano and Muchinsky, (1985) found a weak relationship between the two.

On his part, Borcharding (1974) in the study of construction productivity and job satisfaction discovered that a productive job created high job satisfaction while a non – productive job (one which fall behind schedule produce dissatisfaction at all levels of the management / the worker chain. This relationship he found to be the inverse of what pertains in office or factory setting where high job satisfaction leads to grater productivity. The inverse relationship he believes was due to the very nature of construction where a worker through his own efforts, produces a highly visible , physical structure in which great satisfaction comes from it's completion. Bowen et al, (2008) in studying South African quantity surveyors however confirmed that accomplishment influenced job satisfaction. The situation pertaining in the construction industry being the inverse of what pertains in other areas may be explained by (Simon and Enz (1995)) when they found that there is a significant difference in terms of what employees want in their work in different industries. Responses from the hospitality industries, they said showed a marked difference from those of the manufacturing industries.

Mcshane and Glinow (2000) state that organizational behavior research consistently reports an insignificant or modest association between job satisfaction and task performance. They explain that popular opinion may prove more accurate than research in this issue and cite one scholar as admitting recently that he suspects a consistent significant job satisfaction-task performance relationship is out there to be found. They give one reason for which organizational behavior research reports a modest association between job satisfaction and task performance as general attitudes do not predict

specific behaviors very well and that people have unique values and experiences so they react differently to the same job satisfaction. One dissatisfied employee may decide to put in less work effort, whereas another maintains the same level of effort while looking for employment elsewhere.(Mcshane and Glinow) They give the second explanation that Job performance leads to job satisfaction (rather than vice versa) but only when performance is linked to value rewards. Higher performers receive more reward and consequently are more satisfied than low performing employees who receive fewer rewards. The third reason they give is that job satisfaction and performance may occur because satisfied employees engage in more organizational citizenship behavior but not higher levels of traditional job performance. They maintain that satisfied employees are less likely to quit their job. Kreitner and Kinicki (2001) support this view by saying that one of the biggest controversies within organizational research center's on the relationship between satisfaction and job performance. According to them, some of the people such as Herzberg argue that satisfaction leads to higher performance while others contend that higher performance leads to satisfaction. They however maintain it appears managers can positively affect performance by increasing job satisfaction. They again identify other effects of satisfaction as job involvement and organizational citizenship behavior.

3.5. Approaches to Job Satisfaction

In explaining job satisfaction and measuring the level of employees' satisfaction three Different approaches have been developed.

The first approach turns its attention to the characteristics of the job and it is called the "Information processing model" (Hackman and Oldham 1976). According to this model employees gather information about the job, the workplace and the organization and cognitively assess these elements in order to determine the level of satisfaction (Jex2002 p.117). The second approach suggests that the measurement of the level of job satisfaction is founded on „social information“ – information based on past behavior and what others at work think. It shifts its attention to the effects of the context and the consequences of past behavior, rather than to individual pre-dispositions and rational decision-making processes (Penning's 1986 p. 65). Therefore job satisfaction is dependent on how others at work evaluate the workplace. This approach is called the “social information processing model” (Selznick and Pfeffer 1978).

The third approach indicates that job satisfaction relies on the characteristics or the dispositions of the employee. These dispositions can be based on experience or genetic heritage or on both (Jex2002 p.117).

In summary, job satisfaction can be seen as a function of:

The features of a job, the view of others, the employee's personality.

3.6. Job Satisfaction and Commitment.

A lot of researchers have extensively studied the relationship between commitment and job satisfaction. Whilst others think there is a relationship, a few others think otherwise. Kreitner and Kincki (2001) for example revealed that a meta-analysis of 68 studies and 35282 individuals uncovered a significant and strong relationship between organizational commitment and satisfaction. Linz (2003) intimates that the greater the degree of organizational commitment, the greater the probability that a high level of job satisfaction will be expressed. Kreitner and Kincki (2001) thus continued by advising managers to increase job satisfaction in order to elicit higher levels of commitment since higher commitment can facilitate higher productivity.

Mcshane and Glinow (2002) agree on the relationship between job satisfaction and commitment by reporting that research has found that employees with higher levels of affective commitment to be less likely to quit their jobs and be absent from work. They continue that employees with effective commitment tend to have higher work motivation and organizational citizenship. Job satisfaction is part of what we call human resource maintenance, which is related to organizational commitment and job commitment.

While Firth et al., (2004) agree that job satisfaction and organizational commitment are interrelated as the more satisfied one is, the more committed they are, researchers like Rahim and Psenicka (1996), Morrison, (1997) and Lum, et al., (1998) are of the view that job satisfaction and organizational commitment are related to a person's intention to quit a job. Raju and Srivastava (1994) does not share the views of those above as they are of the view that predictability of commitment by job satisfaction is proved to be ill-founded, they cite Weiner and Vardi as stating that „job satisfaction is concerned with the immediate and temporary situational fluctuations whereas commitment is a more stable state of the person.

Mowday et al., (1979) explain organizational commitment as the strength of one's identification and involvement with their respective organization.

DeCotis and summers (1987) intimate that research shows that social involvement predicts organizational commitment where the more involved the individual, the more committed they are. According to Shore and Martin (1989) organizational commitment is related to a person's intention to leave and turnover as well as theoretically to job performance. This view is also shared by Tett and Meyer (1993). Essentially, committed individuals are expected to extend greater efforts on the job, having a direct impact on job performance.

Mowday et al., (1982) relate that organizational commitment and job satisfaction have been found to be significantly related to one another with the basic proposition that job satisfaction is an antecedent of organizational commitment since commitment takes longer to form and only after one is satisfied with their job. According to Roe et al., (2000) it should also be noted that involvement and commitment play the central mediating role assumed in the initial model. They affect effort and satisfaction, as well as performance and tendency to leave. They again intimate that the opportunities to satisfy needs play a much stronger role in the prediction of outcomes, but remarkable enough they have little relationship with organizational commitment as expected opportunity for growth relates to both meaningful and responsibility as well as to satisfaction. But unexpectedly it is also related to effort which suggests that a greater possibility for growth makes people work harder. Mcshane and Glinow (2002) agree on the relationship between job satisfaction and commitment by reporting that research has found that employees with higher levels of affective commitment to be less likely to quit their jobs and be absent from work. They continue that employees with effective commitment tend to have higher work motivation and organizational citizenship. Job satisfaction is part of what we call human resource maintenance, which is related to organizational commitment and job commitment.

3.7 Job Satisfaction and Worker Retention.

Studies have been relatively consistent in establishing a strong relationship between job satisfaction and retention. Edelwich and Brodsky (1980) found in a study that,

employees who are dissatisfied in their job become less committed or give up the profession altogether. Gerhart (1990) suggested in an investigation of the effects of Unemployment that job dissatisfaction is more strongly related with high turnovers during periods when the rate of unemployment was lower. Okpara, J. O (2004) attributed the continuous exodus of managers to the west primarily to the differences in the level of income. Many of these managers are willing to leave the country for riskier but potentially more financially rewarding employment in the west. The impending shortage of managerial personnel in the IT sector does not bode well for the long term economic growth and sustainable development of the country.

In the view of Farkas and Tetrick, (1989) total years of experience also affects the areas of job satisfaction and overall job satisfaction. The longer the time spent in the organization, the more satisfied the managers were with their jobs. This may be an indication that once the process of acculturation is over, managers settle into their jobs, have an increased organizational commitment, and seem to like their jobs. On the other hand, this may be an indication of complacency, suggesting that the longer the time spent in the organization, the more managers tend to be satisfied with the status quo. If the latter is the case, then a satisfied manager is not necessarily a productive manager.

3.8. Management Role:

Mojahed (2005) and Oglesby et al., (1989) defined motivation as inciting unconscious and subconscious forces in people to achieve particular behaviors. It is, therefore, imperative that a motivational climate be developed for workers to perform more efficiently, thereby causing an increase in goal accomplishing and productivity.

In the classical theory by Taylor, it is believed that the basis of increasing productivity was more of technology and, therefore, demanded that leaders should enforce pre-established productivity criteria to meet fixed goals.

Mayo (1992), on the other hand, postulated the humanist theory and stated that the role of a leader is to attain goals by the provision of opportunities for growth and development for the workers. Thus, leadership, therefore, remains the most single important aspect of enhancing productivity on construction projects. They, therefore, demonstrate the willingness to react to worker environmental needs which in effect will motivate them to work at their highest level (Berg and Magnus, 1999; Olabosipo et al., 2004). Business Roundtable (1989) edition of motivation in the construction industry

reported that foremen are often unable to motivate the average craftsman today but suggested that craftsmen will motivate themselves given the right conditions and opportunities.

Management of construction site is in this instant said to start from the foremen and can have an impact on the performance of the workforce to increase productivity as a whole. The onus, therefore, lies on management to assign foremen from whom subordinates would derive inspiration from. This would persuade workers to always work to their satisfactory level.

3.9. Work Environment and Workplace Facilities

An increasing important issue affecting job satisfaction and efficiency is the nature of the work environment and workplace facilities (Mullins, 2005). Handy (1997) argues that when a workplace is inspired, the resultant is that workers are inspired and they draw attention to the importance of the atmosphere quality, style of buildings and offices for work performance. The opposite can also be true in that a survey by the Chartered Management Institute (2003) and Myerson (2003) revealed that people were willing to relinquish one week's annual leave for better offices while some were willing to forgo £ 1,000 in salary or private medical care to for a significantly upgraded workspace. Some workers were contemplating changing companies for an improved environment.

McKenna (1994) for example is of the view that in human terms any situation that is seen as burdensome, threatening, ambiguous or boring is likely to induce stress. This explains Thomas (2003) findings that on civil engineering projects overcrowded conditions were demotivating, with feeling of constriction and frustration felt frequently.

Work environment and workplace facilities are therefore very essential in dealing with job satisfaction. That is why in the study of South African Quantity Surveyors' job satisfaction, Bowen et al (2008) found that a secure working environment (safety needs) was deemed important by majority of respondents although they claimed they were working in an environment that was continuously not safe.

3.10. Human Relations and Worker Job Satisfaction.

In explaining the humanitarian perspective to job satisfaction, Spector (1997) sees job satisfaction as identifying how people deserve to be treated fairly and with respect. According to him, the facets of job satisfaction like equitable rewards and supportive working conditions and fellow employees are related to being treated fairly and with respect. Spector again explains the utilitarian perspective to job satisfaction by asserting that job satisfaction can lead to behaviors that can have either positive or negative effect on organizational functioning. Perhaps it is as a result of this effects that Wolfsan (1998) is of the view that workplace boredom and frustration is as a result of an employee's lack of involvement with the company's goals and a feeling that their ideas are not wanted or listened to. Subsequently there is going to be increase in staff turnover for the employer as employees would walk out of door for more interesting jobs.

Mullins (2005) view that organizations should harness the talents and commitment of all their employees and get the best out of people in an attempt to improve job satisfaction demand a spirit of teamwork and co-operation, and allowing people a greater say in decisions that affect them at work all buttress Spector's point that the facets of job satisfaction are related to people being treated fairly. Pickard (1993) on the other hand is of the view that empowerment appear to have a radical effect on the way people work. As an example, He describes improved job satisfaction and changing attitude of staff arising from the introduction of empowerment at Harvard restaurants. Jamison (1999) also shares his view and states that empowerment programs will result in motivated staff, quality customer services and improved profits. In Reviewing issues and debate about empowerment, Wilkinson (1999) reports that all the theories share a common assumption that workers are untapped resource with knowledge and experience and an interest in becoming involved and employees need to provide opportunities and structures for their involvement.

It is also assumed that participative decision making is likely to lead to job satisfaction and better quality decisions and that gains are available both to employees (increased efficiency) and workers (job satisfaction), in short an everyone-wins scenario.

Cordery (1991) also linked job satisfaction to workers being grouped, and the group having autonomy. Thus according to him in a self-managed group, although effectiveness does not appear to be all positive, individual members of the group however do have higher levels of job satisfaction. This is because the group assumes

greater autonomy and responsibility for effective performance of work but the individual members decide on the best means by which these goals are to be achieved. This same view is shared by Borcharding (1974). On his part he expressed that good working relationships with and within a crew as well as good social work relations contribute to job satisfaction. Bowen et al., (2008) however found various facets of human relations such as being part of a team and participating in decision making; undertaking challenging and creative work as well as receiving recognition for achievements over and above normal responsibilities all influenced job satisfaction.

3.11. Supervision and Job Satisfaction.

According to Scarpello and Vandenberg (1987) supervision involves technical knowledge, human relations skills and co-ordination of work activities. Effective supervision is therefore necessary for job satisfaction and high level of performance. That is why Bassett (1994) believes that a kindly and thoughtful leader generates high worker satisfaction. Hence supervisors who adopt considerate approach of leadership towards workers turn to have the more highly satisfied work groups. In the study of job satisfaction among quantity surveyors, Bowen et al., (2008) found this to be true as they stated that that a low degree of supervision and being encouraged to take initiative among quantity surveyors contributed to job satisfaction.

According to Bacharach, Bauer and Conley (1989) supervision of workers activities seems critical in examination their dissatisfaction. They explain that supervision takes two aspects, positive and negative. According to them when applying the positive supervision, supervisors show appreciation for workers activities and solicit inputs from them. On the other hand, supervisors applying negative supervision maintain a critical orientation towards workers and their work by criticizing their work, refusing to help, or being generally unavailable. They continue that these types of supervisory behavior can be expected to lead to dissatisfaction. Crow and Hartman (1999) therefore suggest that instead of trying to improve employee satisfaction, it may be time to consider leadership approaches and management programs that reduce employee dissatisfaction. Schnake (1987) on his part argues that, the climate of the work group is likely to be influenced by the chosen motivation strategies of the supervisor. An emphasis upon extrinsic rewards, intrinsic or some combination of rewards will each produce a different climate.

When extrinsic rewards are emphasized, employees often feel controlled. Extrinsic reward tends to „push“ employees to perform and intrinsic rewards „pull“ employees to put forth effort. Both types of rewards are important to most employees. Shani and Lau (2000) support this view by stating that “ rewards actually received from performance affect both satisfaction and subsequent performance; intrinsic rewards and extrinsic rewards. Of course rewards can be negative as well as positive.”

Chapter (4)

Research Methodology

Chapter 4

Research Methodology

4.1. Introduction:

The novelty of the industry and its rapid progression persuades one to assess the factors influencing the construction industry. Due to the competitive market, project management area has gained undisputable importance in the construction projects. Construction firms are now seeking professionals with better management and leadership skills rather than technical skills (Dulaimi, 2005). Employees are an Important part of any industry and their job satisfaction and organisational commitment affects the turnover rate and productivity of a company (Benkhoff, 1997; Randeree and Chaudhry, pending). Leadership has a strong influence on employees' job satisfaction and organisational commitment (Lok and Crawford, 1999). Thus, it is vital to examine leadership styles in a rapidly growing industry in a cosmopolitan city. Hence, the research undertaken aims to study leadership styles and its influence on the employees' job satisfaction and organisational commitment in the construction industry in Sudan..

For the purpose of the study the researcher took DAL for Design and construction (DDC) as a case study to approve that job satisfaction is one of the major factor that influence on the performance of the employee so researcher made a questionnaire which targeting the senior staff and Junior staff or the managerial staff and non-managerial staff .

The primary data included an evaluation of the company HR strategy as well as a conducted survey on 105 employees (that whole available employees of the company using questionnaire).

A review of archival documents was equally done to throw more light on the company retention strategy thrust in the area of collective agreement between employees and management regarding incentives.

The types of data Collected were basically primary data. These were collected using questionnaire. The questionnaires were administered by H.R manager in company quarter head and by the project managers in the site of operation.

The questions were framed in a manner whereby the respondents would

Provide direct information that would help to provide answers to some of the research questions and in testing the hypotheses. Then take the limitation of this case study in consider and make tips for future studies.

For purpose of archive to the most accurate analysing the research problem, a total number of one hundred and five were selected from company head quarts and the operation site two employee categories were considered, Managers and Non Managers. All respondents are selected from random basis of the office employees and emphasis is given to profession, organization and industry. Further respondents were selected by representing ten percent of existing number of employees in each category of in each organization.

4.2. Data Collection

105 questionnaires were sent out through the DDC company headquarter and the operation site in al Khartoum Bahri and 34 questionnaires were returned, representing a return rate of 32.3%.

Questionnaire :(Appendix):

For the purpose of collecting data, and make it easier the questionnaire has 3 parts.

Part 1 and 3 were filled by every employee and part 2 was filled by managerial staff only. the respondents were required to indicate their level of satisfaction rating on the given statements by using a five-point scale ranging from very low to very high.

PART I: General information which it filled by every employee to get a general information about the employee occupation and his work duration in DDC

PARTII: Performance Evaluation

Which filled by projects managers only to evaluate the performance of the employees.

PART 3: Rating your Job Satisfaction

Which contain:

- i. General working condition
- ii. Pay and Promotion potential
- iii. Work relation ship
- iv. Use of skills and abilities

- v. Employee Job Satisfaction
- vi. Employee Job Satisfaction—Job Passion and Self-Evaluation
- vii. Employee Communication

Table 4.1 The quantity of staff and the percent of the response to the questionnaire.

| Position | Quantity of staff | Response | Percent (%) |
|--------------------|-------------------|----------|-------------|
| Security | 5 | 0 | .00 |
| Technician | 45 | 12 | 26.00 |
| Managerial | 35 | 11 | 31.00 |
| Accounting | 5 | 2 | 20.00 |
| project management | 11 | 6 | 63.00 |
| Other | 4 | 3 | 75.00 |
| Total | 105 | 34 | 32.3 |

Table 4.1 show that the response has by 34 employees at a percentage of 32.2%

4.3. Data Analysis:

4.3.1. Job satisfaction analysis

Table 4.2 The Statistics of occupation & duration of work in DDC

1: occupation & duration of work in company

Statistics

| | | duration of work in company | occupation |
|----------------|---------|--------------------------------|------------|
| N | Valid | 34 | 34 |
| | Missing | 0 | 0 |
| Mean | | 3.2765 | |
| Median | | 3.0000 | |
| Mode | | 2.00 | |
| Std. Deviation | | 1.84737 | |

Table 4.3 The percent of occupation with response to the questionnaire in DDC

| occupation | | | | | |
|------------|--|-----------|---------|---------------|--------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| | Civil engineer | 8 | 23.5 | 23.5 | 23.5 |
| | Human recourse operation | 3 | 8.8 | 8.8 | 32.4 |
| | Human resource manager | 1 | 2.9 | 2.9 | 35.3 |
| | Health safety and environment | 1 | 2.9 | 2.9 | 38.2 |
| | Health safety and environment assistant | 3 | 8.8 | 8.8 | 47.1 |
| | Learning and development coordinator | 1 | 2.9 | 2.9 | 50.0 |
| | Learning and development coordinator assistant | 1 | 2.9 | 2.9 | 52.9 |
| | survey engineer | 5 | 14.7 | 14.7 | 67.6 |
| | stores department assistant | 7 | 20.6 | 20.6 | 88.2 |
| | stores department | 4 | 11.8 | 11.8 | 100.0 |
| | | | | | |
| | | | | | |
| | Total | 34 | 100.0 | 100.0 | |

- Table 4.3 show that the percent of response is 34 % from the total number of available employee.

1. Duration of work and position in DDC

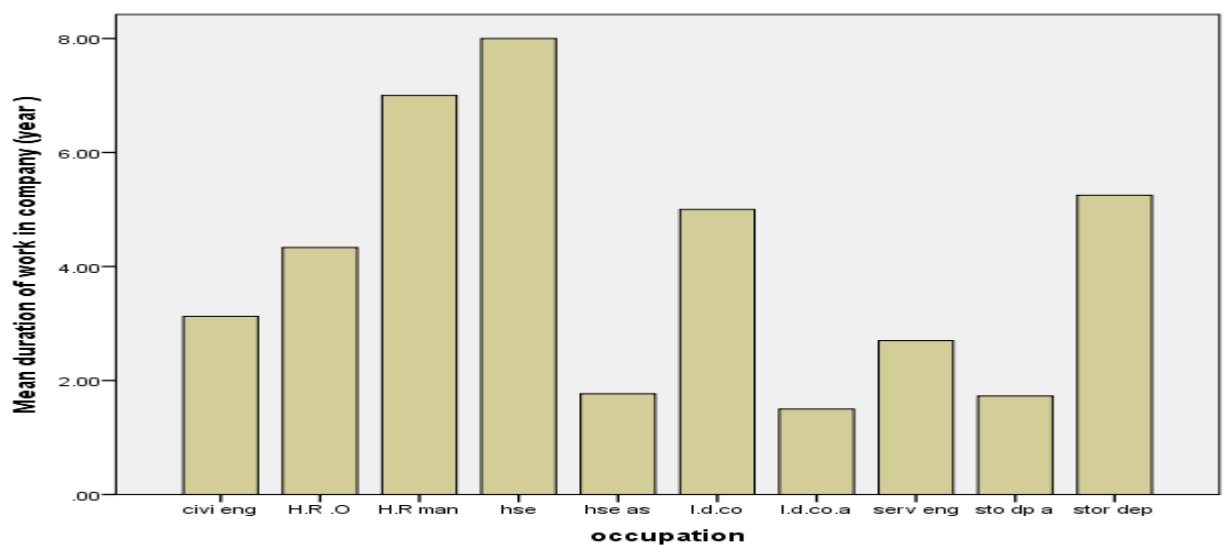


Figure 4.1 mean duration of work and occupation of which response to the questionnaire in DDC

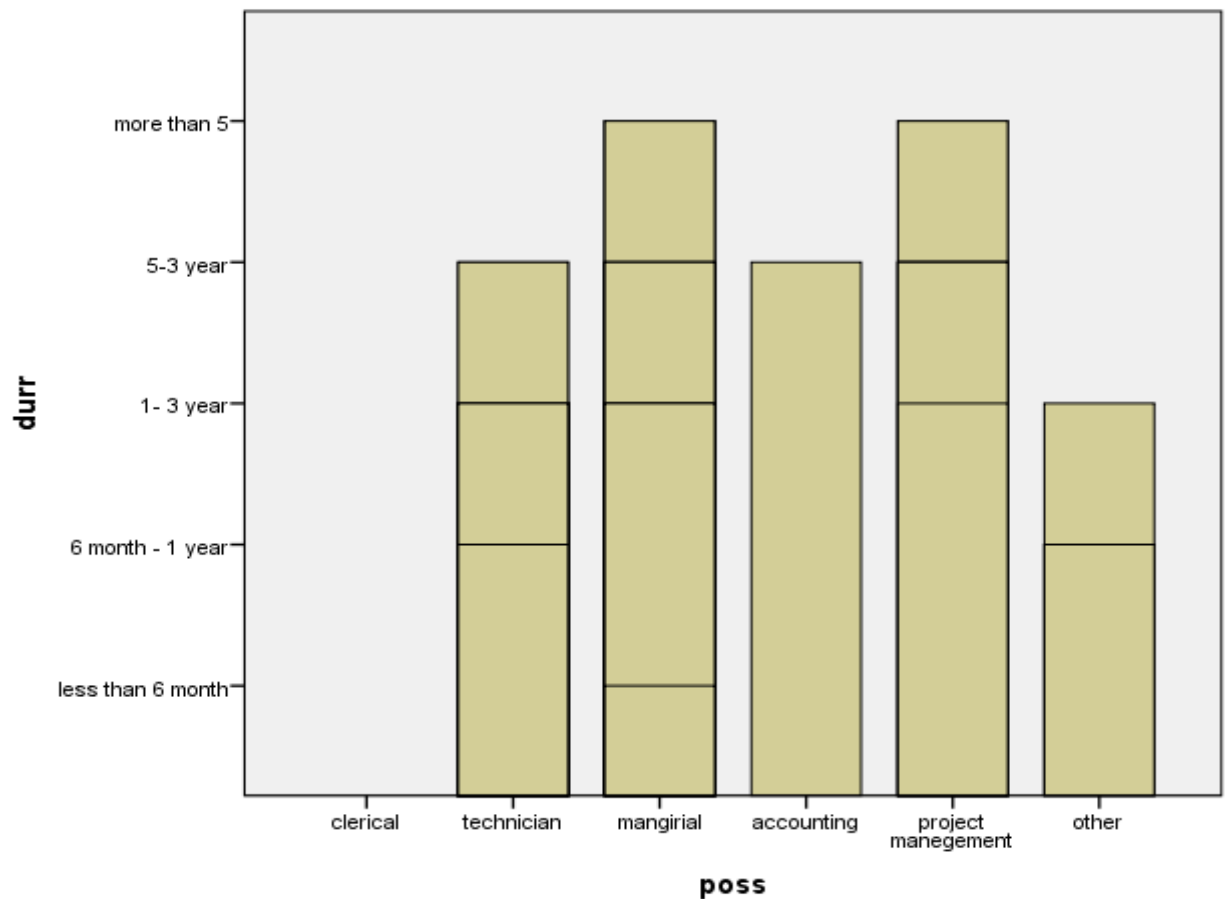


Chart 4.2 duration of work and position in DDC

1. The general work condition:

Table 4.7 **Statistics of** general work condition and rate of job satisfaction

| Statistics | | | | |
|----------------|---------|-------|---------|---------|
| | | Rate | g.w.c | fre |
| N | Valid | 20 | 20 | 20 |
| | Missing | 1 | 1 | 1 |
| Mean | | 3.00 | 2.5000 | 6.8000 |
| Median | | 3.00 | 2.5000 | 5.0000 |
| Std. Deviation | | 1.451 | 1.14708 | 5.25758 |
| Variance | | 2.105 | 1.316 | 27.642 |

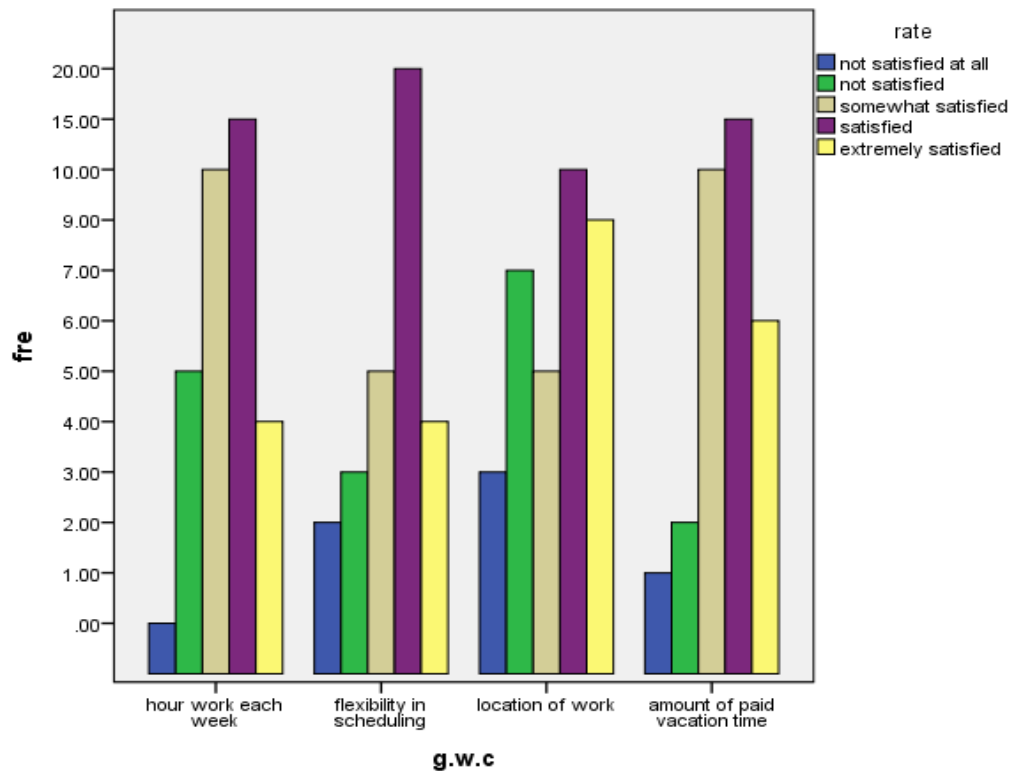


Figure 4.3 The general work condition and rate of job satisfaction

- Figure 4.3 show that the rate of (satisfied) is a dominated for each general work condition

2. pay and promotion :

Statistics

| | | Rate | pay and promotion | fre |
|----------------|---------|-------|-------------------|---------|
| N | Valid | 25 | 25 | 25 |
| | Missing | 0 | 0 | 0 |
| Mean | | 3.00 | 3.0000 | 6.8000 |
| Median | | 3.00 | 3.0000 | 4.0000 |
| Std. Deviation | | 1.443 | 1.44338 | 6.60177 |
| Variance | | 2.083 | 2.083 | 43.583 |

Table 4.8 The **Statistics of** The pay and promotion and rate of job satisfaction

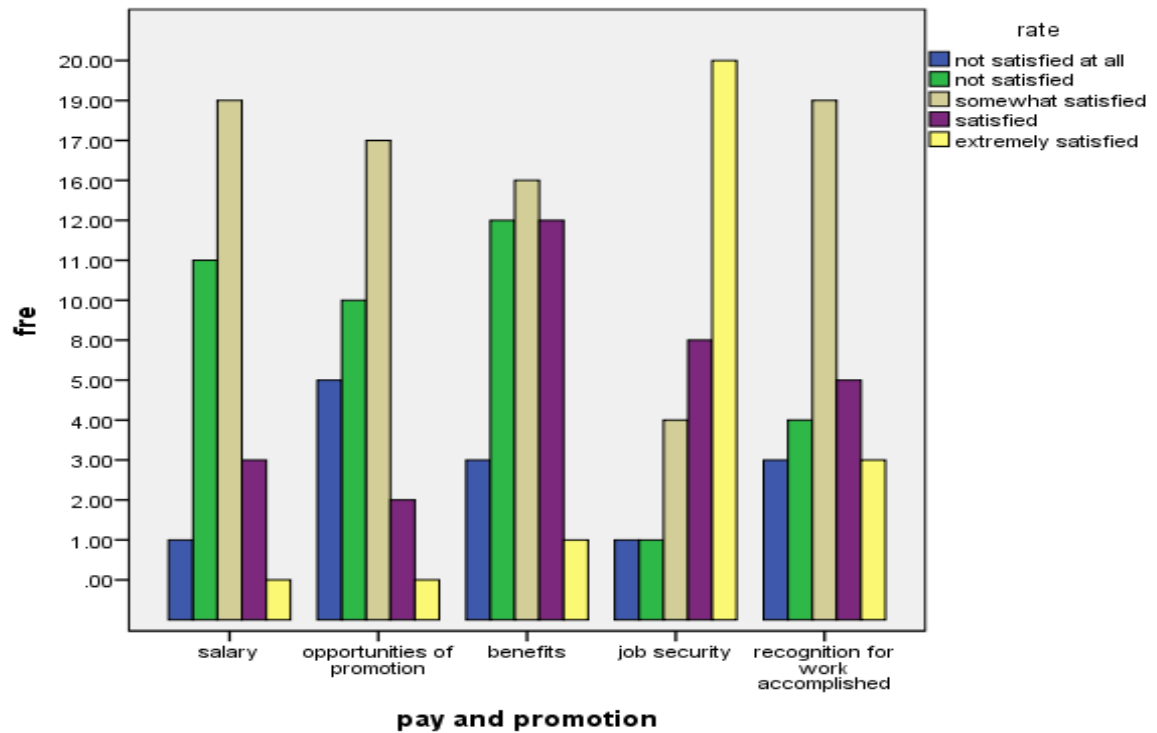


Figure 4.4 The pay and promotion and rate of job satisfaction

- Figure 4.4 show that the rate of (extremely satisfied) of the job security

3. worker relation:

Table 4.9 The **Statistics** of worker relation and rate of job satisfaction

And rate of job satisfaction.

| Statistics | | | | |
|----------------|---------|-------|-----------------|---------|
| | | Rate | worker relation | fre |
| N | Valid | 15 | 15 | 15 |
| | Missing | 0 | 0 | 0 |
| Mean | | 3.00 | 2.0000 | 6.8000 |
| Median | | 3.00 | 2.0000 | 4.0000 |
| Std. Deviation | | 1.464 | .84515 | 8.17837 |
| Variance | | 2.143 | .714 | 66.886 |

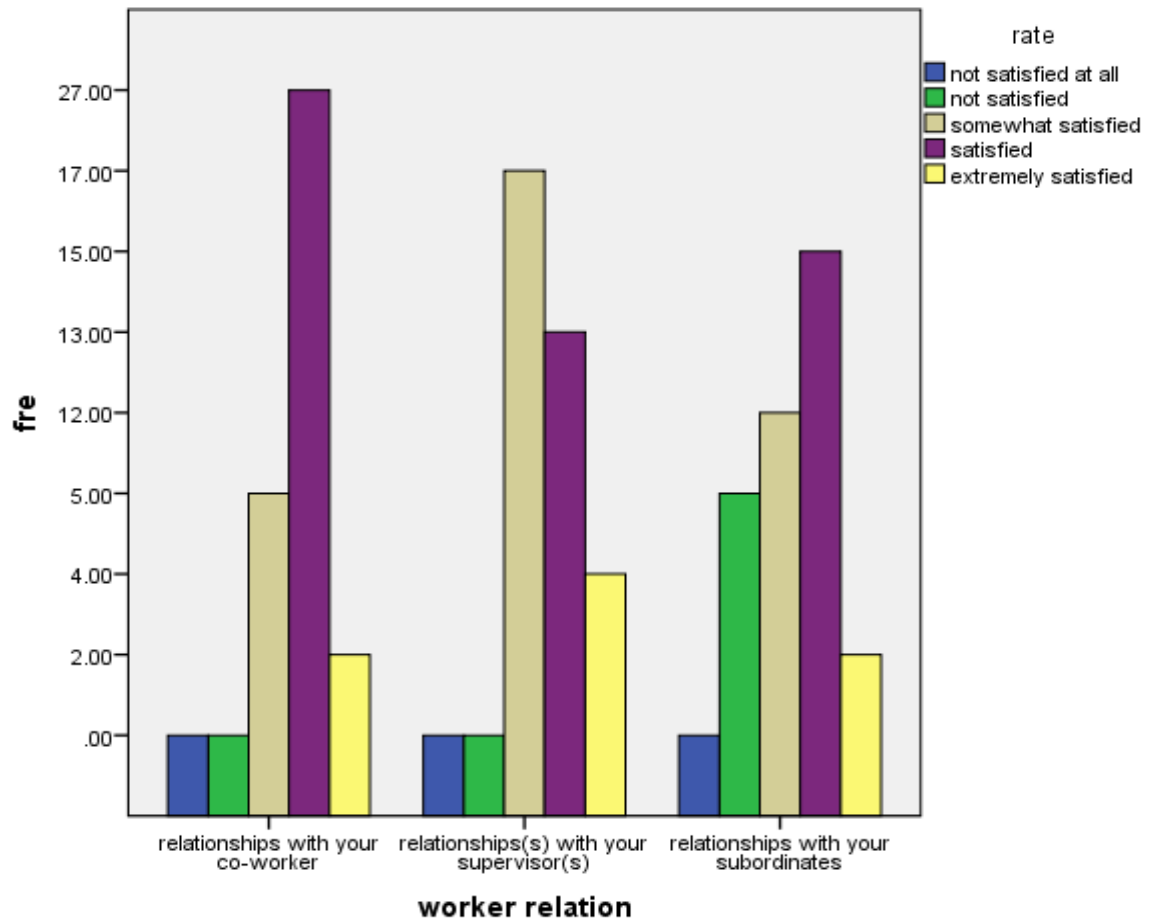


Figure 4.5 worker relation and rate of job satisfaction

- Figure 4.5 show that the relation of co- worker have a rate of (satisfied) as the highest rate

4. use skills and abilities

Table 4.10 The **Statistics** of use skills and abilities and rate of job satisfaction

| Statistics | | | | |
|----------------|---------|-------|--------------------------|---------|
| | | Rate | use skills and abilities | fre |
| N | Valid | 15 | 15 | 15 |
| | Missing | 0 | 0 | 0 |
| Mean | | 3.00 | 2.0000 | 6.8000 |
| Median | | 3.00 | 2.0000 | 5.0000 |
| Std. Deviation | | 1.464 | .84515 | 6.32681 |
| Variance | | 2.143 | .714 | 40.029 |

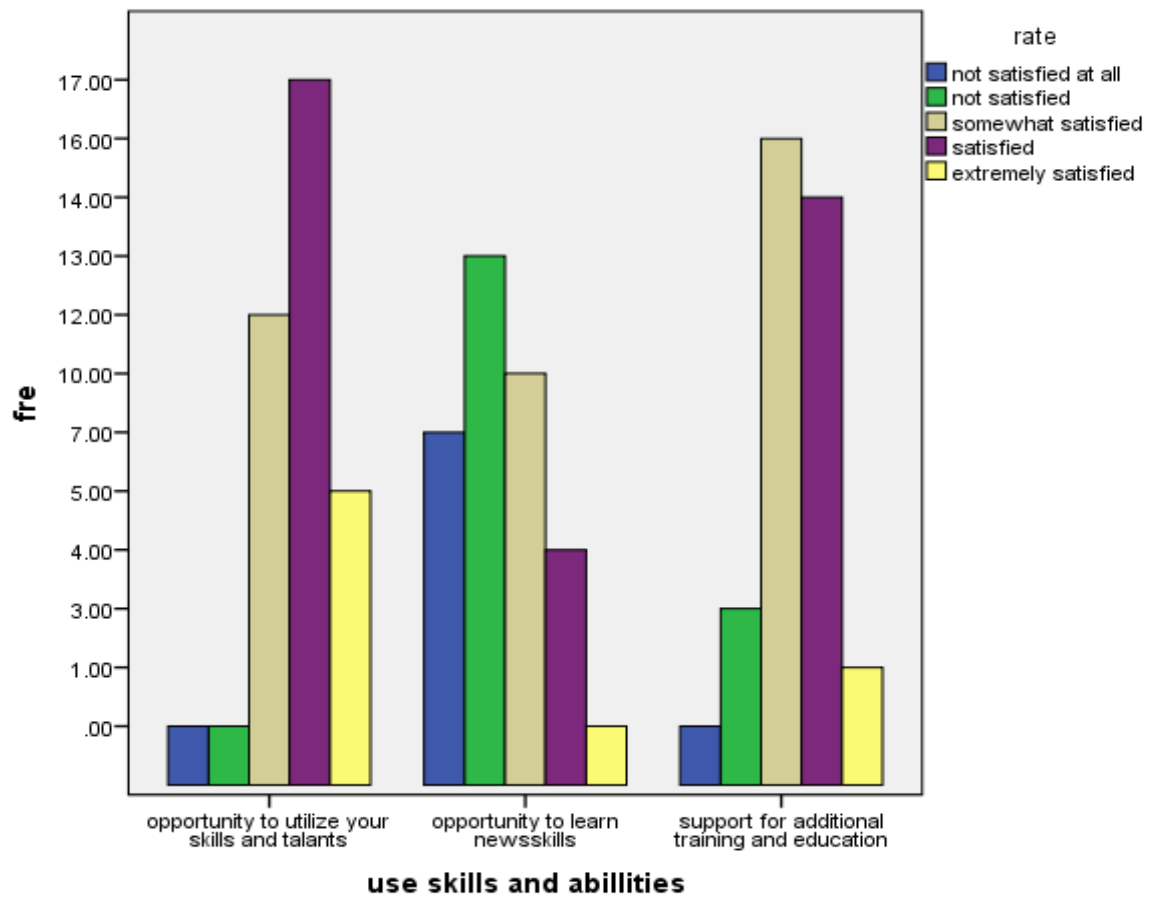


Figure 4.6 use skills and abilities and rate of job satisfaction

- Figure 4.6 show that opportunity of utilize the skills and talent have a rate of (satisfied) as the highest rate.

7. Employee job satisfaction:

Table 4.11 The Statistics of employee job satisfaction

| Statistics | | Rate | employee job satisfaction | fre |
|----------------|---------|-------|---------------------------|---------|
| N | Valid | 40 | 40 | 40 |
| | Missing | 0 | 0 | 0 |
| Mean | | 3.00 | 4.5000 | 6.8000 |
| Median | | 3.00 | 4.5000 | 4.5000 |
| Std. Deviation | | 1.432 | 2.32048 | 6.33347 |
| Variance | | 2.051 | 5.385 | 40.113 |

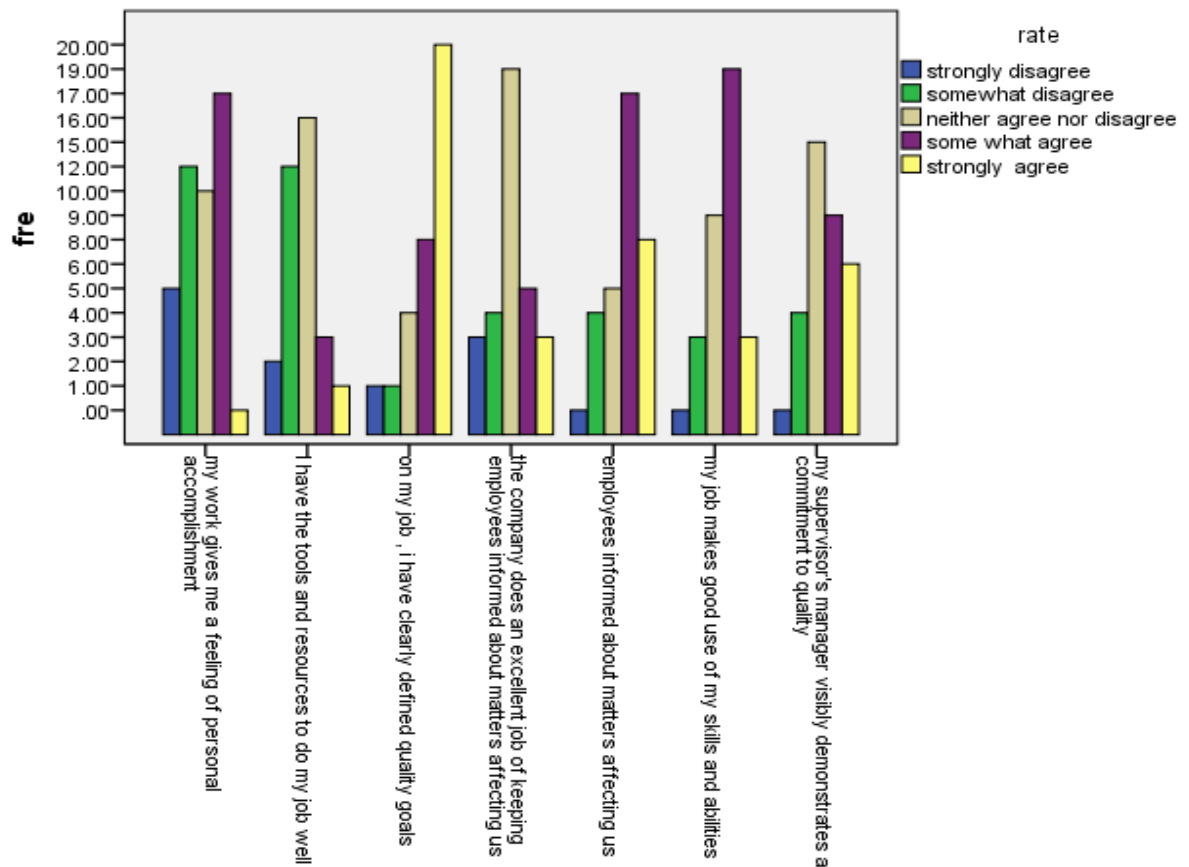


Figure 4.7 employee job satisfaction

- Figure 4.7 show that the clear definition of goals have the rate of (strongly agree)

8. Employee communication:

Table 4.13 The **Statistics employee** communication

Statistics

| | | Rate | employee communicatio n | Fre |
|----------------|---------|-------|----------------------------|---------|
| N | Valid | 20 | 20 | 20 |
| | Missing | 0 | 0 | 0 |
| Mean | | 3.00 | 2.5000 | 6.7500 |
| Median | | 3.00 | 2.5000 | 4.0000 |
| Std. Deviation | | 1.451 | 1.14708 | 7.69740 |
| Variance | | 2.105 | 1.316 | 59.250 |

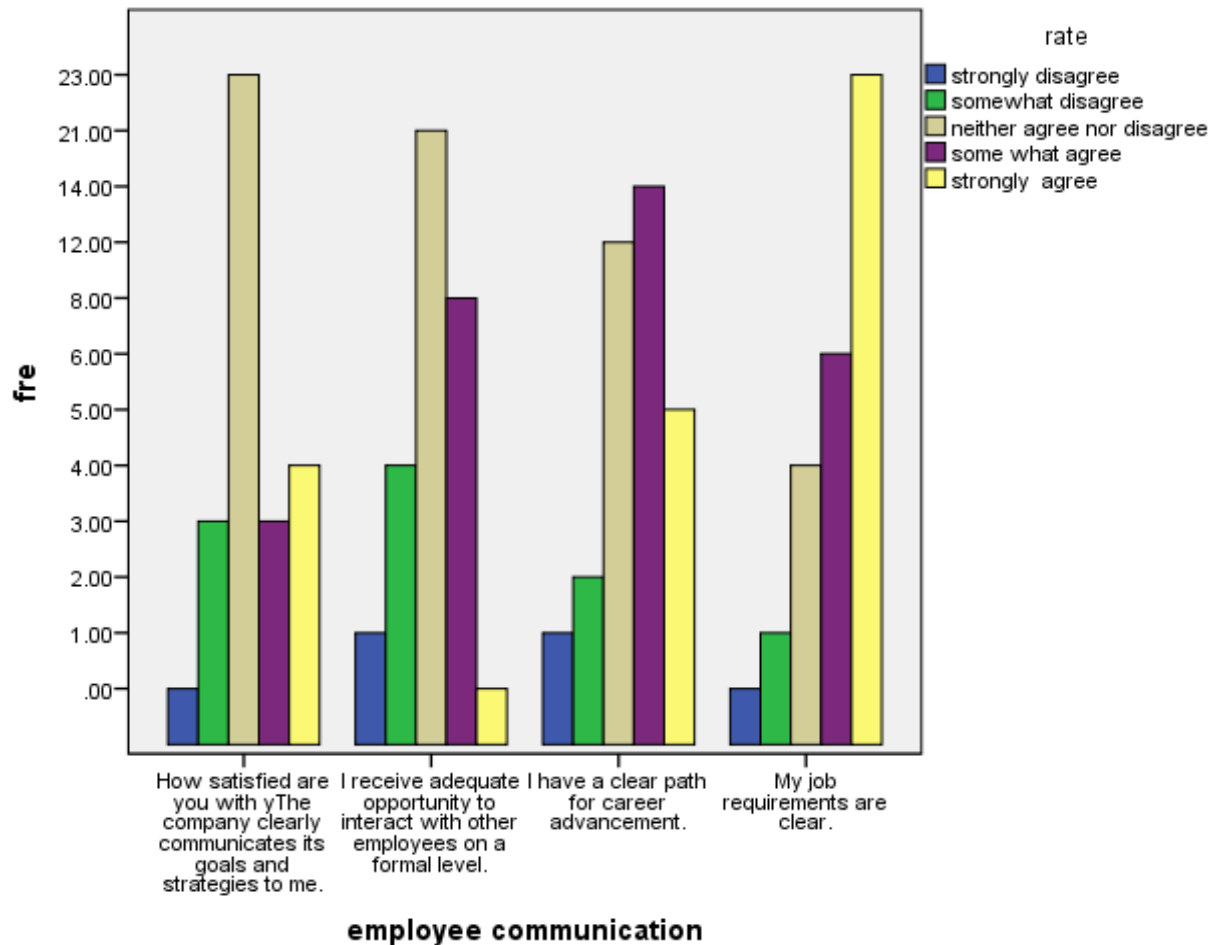


Figure 4.7 employee communication

- Figure 4.7 show that the almost of the opinion of the employee is the neutral rate (Neither agree nor disagree)

9. Employee Job Satisfaction—Job Passion and Self-Evaluation:

Table 4.14 Statistics of Employee Job Satisfaction—Job Passion and Self-Evaluation

| Statistics | | Employee Job Satisfaction—Job Passion and Self-Evaluation | | |
|----------------|---------|---|---------|---------|
| | | Rate | Rate | fre |
| N | Valid | 35 | 35 | 35 |
| | Missing | 0 | 0 | 0 |
| Mean | | 3.00 | 4.0000 | 6.8000 |
| Median | | 3.00 | 4.0000 | 4.0000 |
| Std. Deviation | | 1.435 | 2.02920 | 7.02433 |
| Variance | | 2.059 | 4.118 | 49.341 |



Figure 4.8 Employee Job Satisfaction—Job Passion and Self-Evaluation

- Figure 4.8 show that the greatest rate is (somewhat agree) in supervisors encourage of the employee to do the best of his job.

4.3.2. Performance analysis:

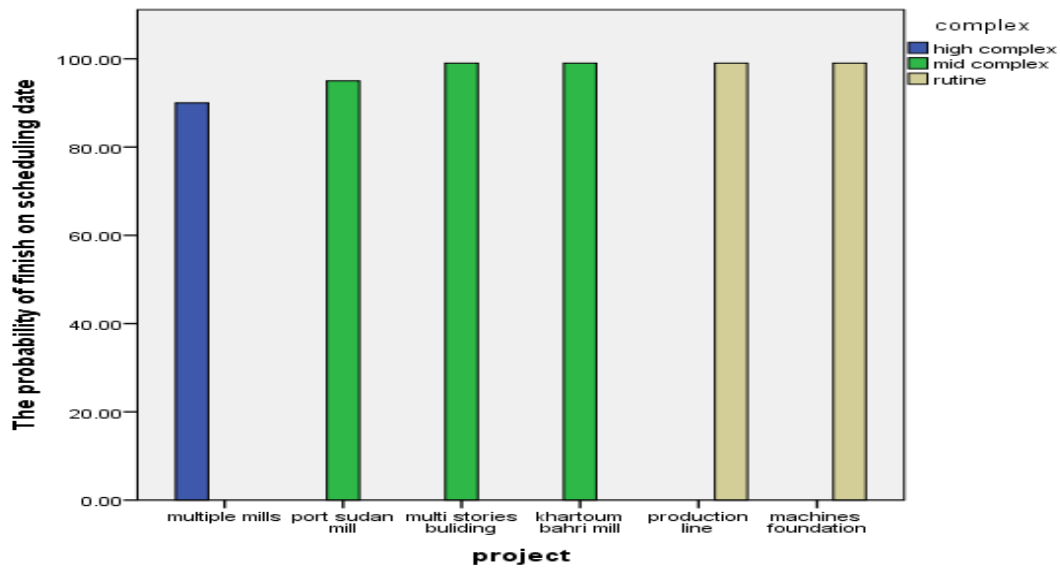


Figure 4.9 The probability of finish on scheduling date

| Project | The probability of finish on scheduling date % |
|------------------------|---|
| Multiple mills | 90 |
| Port Sudan mill | 95 |
| Multi stories building | 99 |
| Khartoum Bahri mill | 99 |
| Production line | 99 |
| Machines foundation | 99 |

Coordination:

Table 4.15 The **Statistics** of rate of coordination in DDC projects

| Statistics | | | |
|----------------|---------|-------------------|--------|
| | | Pro | rate |
| N | Valid | 6 | 6 |
| | Missing | 0 | 0 |
| Mean | | 3.5000 | 1.8333 |
| Median | | 3.5000 | 2.0000 |
| Mode | | 1.00 ^a | 2.00 |
| Std. Deviation | | 1.87083 | .75277 |
| Variance | | 3.500 | .567 |

a. Multiple modes exist. The smallest value is shown

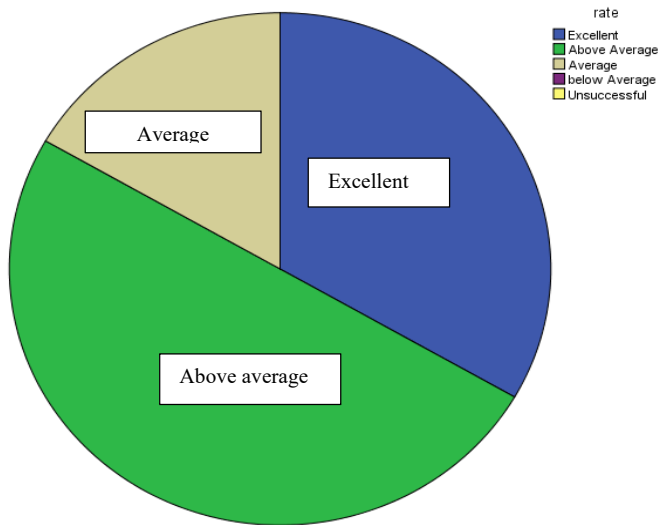


Figure 4.10 The **percent** of coordination in DDC projects

| The rate | Percent |
|---------------|---------|
| Excellent | 33.3 |
| Above Average | 50.5 |
| Average | 16.7 |
| Below average | 0 |
| Low rate | 0 |
| Total | 100.0 |

all safety program

Table 4.16 The **Statistics** of rate of **OVERALL SAFETY PROGRAM** in DDC projects

| Statistics | | Pro | rate |
|----------------|---------|-------------------|--------|
| N | Valid | 6 | 6 |
| | Missing | 0 | 0 |
| Mean | | 3.5000 | 2.0000 |
| Median | | 3.5000 | 2.0000 |
| Mode | | 1.00 ^a | 2.00 |
| Std. Deviation | | 1.87083 | .63246 |
| Variance | | 3.500 | .400 |

a. Multiple modes exist. The smallest value is shown

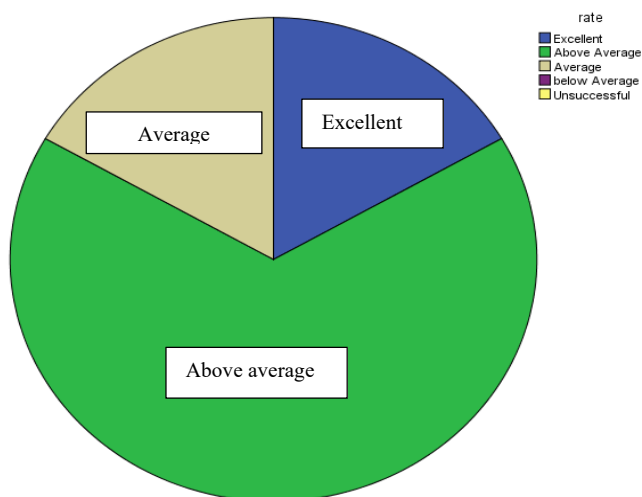


Figure 4.11 the percent of **OVERALL SAFETY PROGRAM** in DDC projects

| The rate | Percent |
|---------------|---------|
| Excellent | 16.7 |
| Above Average | 66.7 |
| Average | 16.7 |
| Below average | 0 |
| Un successful | 0 |
| Total | 100.0 |

BUDGET:

Table 4.17 The **Statistics** of rate of **BUDGET** in DDC projects.

| Statistics | | Pro | rate |
|----------------|---------|-------------------|--------|
| N | Valid | 6 | 6 |
| | Missing | 0 | 0 |
| Mean | | 3.5000 | 2.5000 |
| Median | | 3.5000 | 2.0000 |
| Mode | | 1.00 ^a | 2.00 |
| Std. Deviation | | 1.87083 | .83666 |
| Variance | | 3.500 | .700 |

a. Multiple modes exist. The smallest value is shown

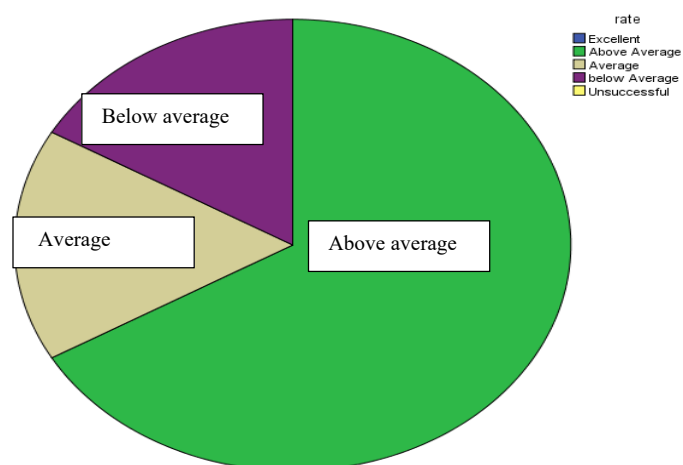


Figure 4.12 The percent of **BUDGET** in DDC projects

| The rate | Percent |
|---------------|---------|
| Excellent | 0 |
| Above Average | 66.7 |
| Average | 16.7 |
| Below average | 16.7 |
| Un successful | 0 |
| Total | 100.0 |

Turnover:

Table 4.18 The **Statistics** of rate of **turnover** in DDC projects

Statistics

| | Pro | rate |
|----------------|-------------------|--------|
| N Valid | 6 | 6 |
| Missing | 0 | 0 |
| Mean | 3.5000 | 4.6667 |
| Median | 3.5000 | 5.0000 |
| Mode | 1.00 ^a | 5.00 |
| Std. Deviation | 1.87083 | .51640 |
| Variance | 3.500 | .267 |

a. Multiple modes exist. The smallest value is shown

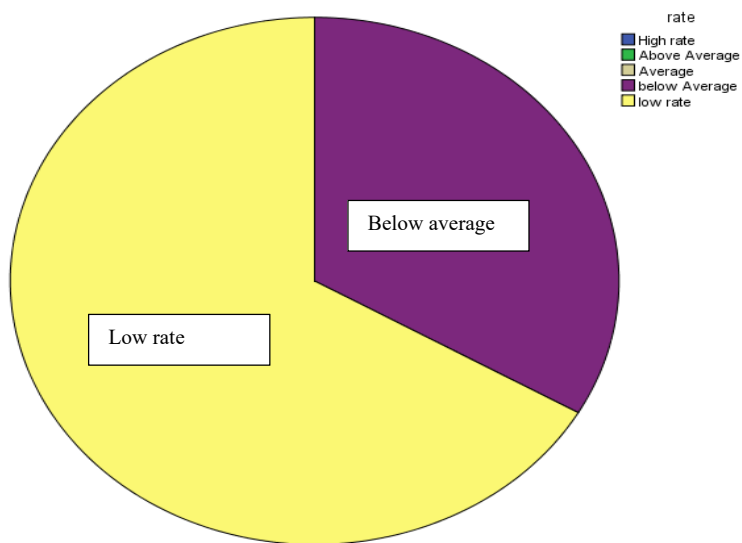


Figure 4.13 The percent of turnover in DDC projects

| The rate | Percent |
|---------------|---------|
| Excellent | 0 |
| Above Average | 66.7 |
| Average | 33.3 |
| Below average | 0 |
| Low rate | 0 |
| Total | 100.0 |

Ability to overtime work:

Table 4.19 The Statistics of rate Ability to overtime work in DDC projects

| Statistics | | Pro | rate |
|----------------|---------|-------------------|-------------------|
| N | Valid | 6 | 6 |
| | Missing | 0 | 0 |
| Mean | | 3.5000 | 2.3333 |
| Median | | 3.5000 | 2.0000 |
| Mode | | 1.00 ^a | 1.00 ^a |
| Std. Deviation | | 1.87083 | 1.36626 |
| Variance | | 3.500 | 1.867 |

a. Multiple modes exist. The smallest value is shown

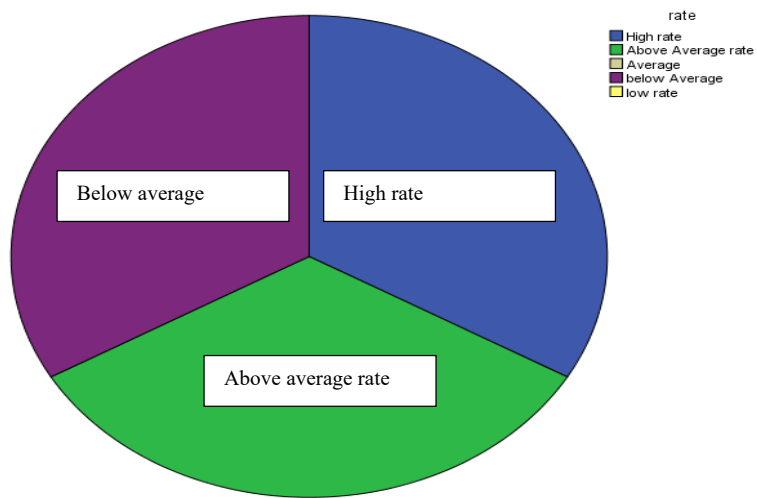


Figure 4.14 The **percent of Ability to overtime work** in DDC projects

| The rate | Percent |
|---------------|---------|
| Excellent | 33.3 |
| Above Average | 33.3 |
| Average | 33.3 |
| Below average | 0 |
| Low rate | 0 |
| Total | 100.0 |

4.4 . Results and Discussion:

Job satisfaction analysis

1: occupation & duration of work in company

From table 4.1, we find the mean of working duration in the DDC Company is 3.27 year which can be an average valid.

From chart 4.1 and chart 4.2 we investigate the managerial staff have a longest duration which can a job satisfaction is one of causes of this case.

2: The general work condition:

From chart 4.3 we find the rate (satisfied) is highest rate in the 4 following items:

Hour work each week

Flexibility in the scheduling

Location of work

A mount of paid vacation time

Also in the both items (hour work and amount of paid vacation time) we observe that a second highest rate is the neutral rate (somewhat satisfied) which we conclude that they difference from employee to other according to his occupation.

3: pay and promotion:

From chart 4.4 which evaluate the pay and promotion which contains:

Recognition of work accomplished.

Job security.

Benefits.

Opportunity of promotion.

Salary.

We observe the neutral rate (somewhat satisfied) are the most chosen except the job security which has the (extremely satisfied rate) .this rate refers to the company's high interest of the site and job security.

For benefits and recognition of work accomplished which they clearly have a average rate but if they got a more concerning they become better.

Finally we have the salary and opportunity of promotion which we observe they have

A neutral rate as a highest rate but we observe the rate of (not satisfied) is the second highest rate which refers the salary and the ability of promotion have a significant attention by DDC managers.

The two component salary and opportunity of promotion have strong relation if the employee got a promotion means he has an increase of salary.

Although maybe DDC offer a high rate of salary compered to others companies but still this rate become far to gain the satisfied of the employee because the high rate of requirement from any employee from his family a friend especially in Sudan .

4: worker relation:

From chart 4.5 which contains:

Relation with co worker

Relation with your supervisor(s)

Relation with your subordinates

Clearly we observe the high rate of the relation between employee and his co-worker in DDC. And less rate between his subordinates. But we observe the rate relation between employees and their supervisors in the lowest rate comparing to other relation in DDC.

5: use skills and abilities:

From chart 4.6 which contains:

Opportunity to utilize your skills and talent

Opportunity to learn a new skills

Support for training and education

We observe the opportunity to utilize your skills and talent has high rate of (satisfied) and average rate of (extremely satisfied) which refers to the high knowledge in DDC to utilize skills and talent to their employee.

Typically we observe the same high rate of the neutral rate (somewhat satisfied) and second highest rate (satisfied) which it indicates that there is considerable proration of dissatisfied with the support for training and education by DDC managers.

Finally on opposite to the above the opportunity to learn a new skill has a highest rate of the (not satisfied) which can conclude from that in term of the ability to learn new skills are limited . In addition of that the almost project in DDC are repeated project which make a learning a new skills very difficult.

6: employee job satisfaction:

From chart which contains the following question

1. My work gives me a feeling of personal accomplishment.
2. I have the tools and resources to do my job well.
3. On my job, I have clearly defined quality goals.
4. The Company does an excellent job of keeping employees informed about matters affecting us.
5. My job makes good use of my skills and abilities.
6. My supervisor's manager visibly demonstrates a commitment to quality.

At (1 , 5, 6 ,) we observe that the highest rate of answer is (somewhat agreed) which that indicate that the tools and equipment available for the work of the job in the best form according the opinion of the good number of the employee in DDC. And the company tried to make its employee have a significant awareness about what matters and affecting to them and the supervisors encourage staff's commitment to quality.

At (2 , 4 , 7) we observe the highest rate of answer is (somewhat agreed) which that refers to DDC employee thinks he has a sense of self-accomplishment .

At (3) which clearly observe that the goal are clearly defined which the highest rate of answer of (strongly satisfied) which it refers to the truth of the question and the employee can self-evaluation of the quality stage targeted by the company

7: employee communication:

From chart 4.7 which contains:

1. The company clearly communicates its goals and strategies to me.
2. I receive adequate opportunity to interact with other employees on a formal level.
3. I have a clear path for career advancement.
4. My job requirements are clear.

From (1, 2) we observe that the highest answer of rate is the neutral answer (neither agree nor disagree) which refers to that the opinion of the staff disagree about the clarity of the communication so some of the employees think that they have almost received an educate opportunity to interact to the other employee on the formal level.

From (3, 4) we clearly observe that the greatest number of the employees selected the rate of answer (somewhat agreed) and (strongly agreed) which refers to they have a clear path profession and work requirements are clear.

8: Job Passion and Self-Evaluation:

From chart 4.8 which contains:

1. I experience personal growth such as updating skills and learning different jobs
2. Supervisors encourage me to be my best
3. I am rewarded for the quality of my efforts
4. The company has a positive image to my friends and family.
5. My job makes a difference in the lives of others
6. Overall, I am satisfied with my job.

From (1, 2, 4, 5) we observe that the highest rate of answer is (somewhat agree) and in (4) the rate which the largest area of rate of answer is (strongly agree) which refers to the moral motivation which give to the employee in DDC by the positive image of his family and friend and in (5) which the rate of answer (somewhat agree plus strongly agreed) is formed the largest area of chart, which refers to the employee think his experience is improve by time and his supervisors are always encourage him to do his best job, and this job make his personal live different.

From (3).we observe the largest area of rate of answer is the neutral one (neither agree nor disagree) which refers to the most employee think that they deserve better reward according of the efforts.

From (6) which observe that question is nearly evaluate the overall satisfied of the employee and we observe the rate of answer (somewhat agree plus strongly agreed) is formed the larger area between other rate of answer but by a small variation which refers to their is a big different in the employee opinion about his job satisfaction according of many factors.

Performance analysis:

From chart 4.9 We observe we have a six project which different level complex and we observe the this project is mutual about the high degree of probability of finish on scheduling date .which that make a good sign a bout the good performance .

So on following we check the truth of the above.

Coordination:

From circle 4.1 we observe that the area of the rate of answer (above average is about the half of the area of the circle. so we observe the 3 of 6 project have a rate of (excellent) of percent of good coordination and 2 of 6 have a rate of (above average) and 1 project of 6 have a are of (average) , we observe this project – which have a rate of (average) – classify on a complex project so the average rate of percent of coordination not bad for it

From a above we can say the percent of coordination are good in DDC projects.

Over all and safety program:

From circle 4.2 we observe that the area of the rate of answer 1 project of 6 have a are of (average), we observe this project – which have a rate of (average) – classify on less degree of the complex so it have not enough care about safety and the remain project have a rate of answer above excellent about the **percent** of overall safety program which have a normal and high degree of complex.

From a above we can say The **percent of overall safety program** are good in DDC projects.

Budget:

From circle 4.3 we observe that the area of the rate of answer (above average is more than half of the area of the circle. so we observe the 4 of 6 project have a rate of (above average) of not increase to the expected budget and 1 of 6 have a rate of (average) and 1 project of 6 have a are of (blow average) , so from that we observe this project – which have a rate of (below average) – classify on as a routine project and by the interview I find this project have not significant monitoring different than the complex project but overall the rate of The Budget in near the expected in DDC projects.

Turnover:

From circle 4.4 we observe that the area of the rate of answer (below average is more than half of the area of the circle and the other area is filled by the rate of answer (low average) and from table 4.23 we observe that 4 of 6 have a a rate (below average) and 2 of 6 have a rete (low average).

So from a above we can say The percent of Turnover is very low in DDC projects.

Ability to overtime work:

From circle 4.5 we observe that the area of the rate of answer (high rate), (above average) and (below average) are equal .

and from table 4.24 we find that 2 of 6 project have a rate of (high rate) of percent of good coordination and 2 of 6 have a rate of (above average)

and 2 project of 6 have a are of (blow average) , so we observe that the rate varies according to level of complex of the project .

From an above we can say the **percent** of Ability to overtime work is depend of the level of complex of the project in DDC projects.

4.5. Hypotheses test:

1. The job characteristic such as payment .bonus, training, influence the relationship between job satisfaction and employee performance. (**accept**)
2. The increase job satisfaction predict increase employee performance (**accept**)
3. The increase job satisfaction predict decrease employee turnover. (**accept**)
4. The pay and promotion are good in the DDC (**reject**).

Chapter (5)

Conclusion and Recommendation

Chapter 5

Conclusions and recommendations

5.1. Conclusion:

Though there have been certain limitations in the study, the following conclusions drawn from the study could provide some insight to the managers to improve the level of job satisfaction of employees in DAL for design and construction.

- Employees who are in higher levels tend to derive more satisfaction from intrinsic rewards While, employees who are in lower levels tend to derive more satisfaction with Extrinsic rewards.
- Higher level employees are more satisfiers than the lower level employees in private Sector organizations.
- Employees who are in highly competitive industries are more satisfied with their jobs than employees who are in less competitive industries.
- Professionals and Managers are willing to extend more effort to the job than non-managers.
- High experienced employees tend to satisfy with their jobs more than the less experienced Employees in private sector organizations.
- High satisfaction leads to less turnover of employees in private sector organizations.
- Financial benefits play an important role to satisfy
- Satisfied employees have high commitment to the job than dissatisfied employees.
- Monitoring is important in every project if it complex or normal.

5.2 . Suggestions and Recommendations

- Satisfied employees have positive attitudes regarding their jobs. Satisfied workers are tend to attend to work on time, more concern about the given targets, work speedily, work free of errors and omissions, loyalty and commitment to the job, less dependability, suggest new ideas, tend to improve knowledge, willing to accept more responsibility, obedience of rules and regulations, less absenteeism and effort to retain in the present job. The positive attitudes will increase the quality and quantity of employees' performance. Hence such a situation is good for an organization. But, some organizations do not concern about satisfaction of employees. Therefore, if organizations can be more concerned about the job satisfaction of employees, better performances can be expected, because the relationship between satisfaction and performance is positive and significant.
- This aspect should be given more consideration by the managers in order to improve performance. For this, in macro level managers can be educated the importance of the concept of job satisfaction. In DDC the employee can considered satisfied except the salary and bonus.
- Autonomy, recognition, accomplishment, challenge and feedback etc.
- In addition most of employees expect career development from their profession. It seems that the existing promotional programs do not serve this purpose adequately. Higher level employees also derive satisfaction with their job, if they have opportunity to career development. Therefore, organizations can arrange internal programs for providing prospects to career development of employees.
- The study also revealed that, financial benefits have a significant influence to attract and retain employees in an organization. Some employees leave from organizations due to lack of financial benefits. In highly competitive industries, most employees are not satisfied with money rewards. Therefore, organization should more concern about the financial benefits and revised the existing monetary rewards systems to retain and attract employees.

5.3 . limitation and Further Research

- The important thing that maybe make the result of the questionnaire were not clearly truth the administration of the questionnaire which it collected by the H.R. manager and the projects managers so it possible to grow a kind of fried from employee about known his answers by his boss. So to avoid this situation can make the collected of administrated the questionnaire by neutral person.
- The present study was concerned only of the DDC Company limiting the number and sectors. A large sample would have been more representative of the private sector employees. In addition another possibility is to conduct the same study for public sector employees. That will give a comparable picture between employees in public and private sector.
- Though the study provides evidence on satisfaction of workers in the construction industry context in developing country, it is limited to building construction industry. Again, the satisfaction of the workers was measured against theoretically and empirically identified dimensions of work provision requirement. There might be other useful dimensions that were not included in this study such as grievances resolution, Future research could explore other critical work provision requirement dimensions in construction industry. Furthermore, future research could examine the influence of workers satisfaction on promotion and growth of the construction industry.
- Further, the present study conducted only for the employee which can read and write. This is too extended into many more categories. That will give a more realistic picture.
- The variation of degree of satisfaction can be measured against demographic variables. Such as educational level, sex and family background of employees.
- This study considered only the influence job satisfaction on performance. But there are other factors which influence on performance. Such as leadership, organizational culture, Climate and other external variables. A detailed study considering all these factors would provide an insight to determine the most crucial factor that influence performance.

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The Appendix

1. The questionnaire

Sudan University of Science and Technology

Postgraduate College

‘Job Satisfaction & performance Questionnaire’

Supervised by DR .AWAD SAAD HASSAN

Prepared by

MOHAMED KAMAL

E-Mail: mkemomks87@yahoo.com

This Questionnaire focuses on how employees feel about their job description, position within the company, relationships with colleagues and superiors, advancement opportunities, and overall satisfaction.

This Questionnaire asks questions about your experience working for The Company. It starts and ends with some questions about your satisfaction with various aspects of work and contains other questions about how you think and feel about The Company.

Thank you for sharing your opinions.

PART I

GENERAL INFORMATION (fill by everybody)

Occupation: _____

How long have you worked for this company? _____

What previous positions have you held with the company? _____

How long have you held your current position? _____

Briefly describe your work responsibilities (as you would on a resume):

- PART II (Fill by projects managers only)**

(Performance evaluation)

Part 1 (To Be Completed by Firm Requesting Reference)

1. Project address (City and State):

2. Title of Project/Contract Number: Design-Bid-Build ☐ or Design-Build ☐

3. Description of Project for Which Reference is Requested (Include type of work/trades performed):

4. Complexity of Work: High _____ Mid _____ Routine _____

5. Location of Work: _____

6. Role on Project: ☐ Prime ☐ Subcontractor/Sub consultant

7. Contract Amount: _____

8. Date of Award: _____

9. Status: Percent complete _____

Project Completion Date: _____ (Scheduled)

The probability of finish in time _____

1. QUALITY OF WORK: WAS THIS EFFORT DESIGN BUILD? Yes ____ No ____

Evaluate performance in complying with contract requirements, quality achieved and overall technical expertise demonstrated.

Excellent Quality above Average Quality Average Quality below Average Quality

Unsuccessful or Experienced Significant Quality Problems

2. DOCUMENTATION

To what extent were reports, submittals and other required documentation accurate, complete?

Excellent Quality above Average Quality Average Quality below Average Quality

Unsuccessful or Experienced Significant Quality Problems

3. COORDINATION

How well were subcontractors, sub consultants, suppliers, and/or the labour force managed and coordinated? Or, if firm was a subcontractor, how well did they respond to coordination efforts and work with other subs? Were there any problems and, if so, how were they handled?

Excellent Above Average Average below Average Unsuccessful

5. OVERALL SAFETY PROGRAM

How well did the contractor manage the construction as it relates to safety? Discuss any Safety issues that arose during the course of the construction.

Excellent Above Average Average below Average Unsuccessful

6. BUDGET

How well did the firm conform to the project budget? or change order requests?

Excellent Above Average Average below Average Unsuccessful

8. If given the opportunity, would you work with this firm again?

Yes _____ No _____ Not Sure _____

9. The rate of turnover in your project

High rate Above Average rate Average below Average low rate

10. Ability to overtime work rate is

High rate Above Average rate Average below Average low rate

Part 3 (fill by everybody) RATING YOUR JOB SATISFACTION

| 1 | 2 | 3 | 4 | 5 |
|-------------------------|---------------|-----------------------|-----------|------------------------|
| not satisfied at all | not satisfied | somewhat satisfied | satisfied | extremely satisfied |

Using the scale shown above, rate your level of satisfaction with the following aspects of your job.

GENERAL WORKING CONDITIONS

_____ Hours worked each week
_____ Flexibility in scheduling
_____ Location of work
_____ Amount of paid vacation time/sick leave offered

PAY AND PROMOTION POTENTIAL

_____ Salary
_____ Opportunities for Promotion
_____ Benefits (Health insurance, life insurance, etc.)
_____ Job Security
_____ Recognition for work accomplished

WORK RELATIONSHIPS

_____ Relationships with your co-workers
_____ Relationship(s) with your supervisor(s)
_____ Relationships with your subordinates (if applicable)

USE OF SKILLS AND ABILITIES

_____ Opportunity to utilize your skills and talents
_____ Opportunity to learn new skills
_____ Support for additional training and education

1. Employee Job Satisfaction

Please take a few minutes to tell us about your job and how the organization assists you.

| | Strongly Disagree | Somewhat Disagree | Neither Agree nor Disagree | Somewhat Agree | Strongly Agree |
|---|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| My work gives me a feeling of personal accomplishment. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I have the tools and resources to do my job well. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| On my job, I have clearly defined quality goals. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The Company does an excellent job of keeping employees informed about matters affecting us. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My job makes good use of my skills and abilities. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My supervisor's manager visibly demonstrates a commitment to quality. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

2. Employee Communication

| | | | | | |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| The company clearly communicates its goals and strategies to me. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I receive adequate opportunity to interact with other employees on a formal level. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I have a clear path for career advancement. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My job requirements are clear. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

3. Employee Job Satisfaction—Job Passion and Self-Evaluation

| | Strongly Disagree | Somewhat Disagree | Neither Agree nor Disagree | Somewhat Agree | Strongly Agree |
|--|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| I experience personal growth such as updating skills and learning different jobs | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Supervisors encourage me to be my best | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am rewarded for the quality of my efforts | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| The company has a positive image to my friends and family. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| My job makes a difference in the lives of others. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Overall, I am satisfied with my job. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

We would like to ask you about the kinds of positive experiences you have in your organization

| Clerical | Technician | Managerial | Accounting | Project Management | Other |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |






How long have you worked at (company)?

| Less than 6 months | 6 months – 1 year | 1-3 years | 3-5 years | More than 5 years |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |






Overall, how satisfied are you with your position at (company)?

| Very Dissatisfied | Dissatisfied | Neutral | Satisfied | Very Satisfied |
|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

Do you feel that employees are recognized as individuals?

| | | | | |
|---|---|---|---|---|
| Strongly Disagree | Disagree | Neither Agree nor Disagree | Agree | Strongly Agree |
|  |  |  |  |  |

How motivated are you to see the company succeed

| | | | | |
|---|---|---|---|---|
| Very motivated | Somewhat motivated | Not very motivated | Not at all motivated | Not sure |
|  |  |  |  |  |

2. Statistic tables :

1. duration of work and position in DDC

| duration of work in company | | | | | |
|-----------------------------|------|-----------|---------|---------------|--------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | .80 | 1 | 2.9 | 2.9 | 2.9 |
| | 1.00 | 3 | 8.8 | 8.8 | 11.8 |
| | 1.40 | 1 | 2.9 | 2.9 | 14.7 |
| | 1.50 | 2 | 5.9 | 5.9 | 20.6 |
| | 2.00 | 5 | 14.7 | 14.7 | 35.3 |
| | 2.20 | 1 | 2.9 | 2.9 | 38.2 |
| | 2.50 | 3 | 8.8 | 8.8 | 47.1 |
| | 3.00 | 3 | 8.8 | 8.8 | 55.9 |
| | 3.20 | 1 | 2.9 | 2.9 | 58.8 |
| | 3.50 | 1 | 2.9 | 2.9 | 61.8 |
| | 3.80 | 1 | 2.9 | 2.9 | 64.7 |
| | 4.00 | 4 | 11.8 | 11.8 | 76.5 |
| | 5.00 | 3 | 8.8 | 8.8 | 85.3 |
| | 6.00 | 3 | 8.8 | 8.8 | 94.1 |
| | 7.00 | 1 | 2.9 | 2.9 | 97.1 |
| 8.00 | 1 | 2.9 | 2.9 | 100.0 | |

Table 4.4 The percent of duration of work by years in DDC

| poss | | | | | |
|-------|--------------------|-----------|---------|---------------|-----------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Technician | 12 | 35.3 | 35.3 | 35.3 |
| | Managerial | 11 | 32.4 | 32.4 | 67.6 |
| | Accounting | 1 | 2.9 | 2.9 | 70.6 |
| | project management | 7 | 20.6 | 20.6 | 91.2 |
| | Other | 3 | 8.8 | 8.8 | 100.0 |
| | Total | 34 | 100.0 | 100.0 | |

Table 4.5 The percent of duration of work in DDC

Durr

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|-------------------|-----------|---------|---------------|--------------------|
| Valid | less than 6 month | 1 | 2.9 | 2.9 | 2.9 |
| | 6 month - 1 year | 3 | 8.8 | 8.8 | 11.8 |
| | 1- 3 year | 15 | 44.1 | 44.1 | 55.9 |
| | 5-3 year | 10 | 29.4 | 29.4 | 85.3 |
| | more than 5 | 5 | 14.7 | 14.7 | 100.0 |
| | Total | 34 | 100.0 | 100.0 | |

Table 4.6 The percent of **duration of work** in DDC

| Project | | | | | |
|---------|------------------------|-----------|---------|---------------|--------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | multiple mills | 1 | 16.7 | 16.7 | 16.7 |
| | port sudan mill | 1 | 16.7 | 16.7 | 33.3 |
| | multi stories building | 1 | 16.7 | 16.7 | 50.0 |
| | khartoum bahri mill | 1 | 16.7 | 16.7 | 66.7 |
| | production line | 1 | 16.7 | 16.7 | 83.3 |
| | machines foundation | 1 | 16.7 | 16.7 | 100.0 |
| | Total | 6 | 100.0 | 100.0 | |

Table 4.15 the percent of probability of finish on scheduling date

| rate | | | | | |
|-------|---------------|-----------|---------|---------------|--------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Excellent | 2 | 33.3 | 33.3 | 33.3 |
| | Above Average | 3 | 50.0 | 50.0 | 83.3 |
| | Average | 1 | 16.7 | 16.7 | 100.0 |
| | Total | 6 | 100.0 | 100.0 | |

Table 4.17 The **percent** of coordination in DDC projects

Rate

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|-------|---------------|-----------|---------|---------------|--------------------|
| Valid | Excellent | 1 | 16.7 | 16.7 | 16.7 |
| | Above Average | 4 | 66.7 | 66.7 | 83.3 |
| | Average | 1 | 16.7 | 16.7 | 100.0 |
| | Total | 6 | 100.0 | 100.0 | |

Table 4.18 The percent of rate of **OVERALL SAFETY PROGRAM** in DDC projects

| | | rate | | | |
|-------|---------------|-----------|---------|---------------|--------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | Above Average | 4 | 66.7 | 66.7 | 66.7 |
| | Average | 1 | 16.7 | 16.7 | 83.3 |
| | below Average | 1 | 16.7 | 16.7 | 100.0 |
| | Total | 6 | 100.0 | 100.0 | |

Table 4.21 the percent of rate of **BUDGET** in DDC.

| | | rate | | | |
|-------|---------------|-----------|---------|---------------|--------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | below Average | 2 | 33.3 | 33.3 | 33.3 |
| | Low Average | 4 | 66.7 | 66.7 | 100.0 |
| | Total | 6 | 100.0 | 100.0 | |

Table 4.23 The percent of rate of **turnover** in DDC

| | | rate | | | |
|-------|--------------------|-----------|---------|---------------|--------------------|
| | | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid | High rate | 2 | 33.3 | 33.3 | 33.3 |
| | Above Average rate | 2 | 33.3 | 33.3 | 66.7 |
| | below Average | 2 | 33.3 | 33.3 | 100.0 |
| | Total | 6 | 100.0 | 100.0 | |

Table 4.25 The percent of rate of **Ability to overtime work** in DDC.