



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



Sudan University of Science & Technology

College of Graduate studies

**Impact of Motivation on Engineers Productivity in
Construction Industry in Khartoum state-(Sudan)**

تأثير التحفيز علي إنتاجية المهندسين في صناعة التشييد في
ولاية الخرطوم - (السودان)

A Thesis Submitted in Partial Fulfillment of the
Requirements for the Degree of Master of Architecture
and Planning -Building Services

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الاستهلال

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

قال تعالى:

(قل ان صلاتي ونسكي ومحياي ومماتي لله رب العالمين)

صدق الله العظيم

(سوره الانعام الايه 162)

Dedication

*To the source of my power and the sun
that is always shining in my way of life.*

.... To my Parents...

..... To my Sisters.....

...To my husband and my baby leen...

.... To my close Friends

*..... And to everyone who stood by my side
in this Research.....*

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First of all, I am grateful and thankful to ALLAH for everything's and for giving me the wisdom, understanding, knowledge and strength to successfully completes this research.

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Abstract

Background:-Public and private institutions practice their work through their staff s in order to implement their objectives in the near and long terms. In order for these institutions to reach the goal, it is necessary to find a professional staff capable of delivering the institution to that goal, and this institution to repay the first hand to motivate the engineers to continue in good performance and effectiveness .**Research Problem:-**Incentives play a significant role in influencing the performance of employees positively, and means not available and not distributed fairly can be reflected directly on the performance of workers, The problem of the study is to answer the main question: what is the impact of motivation on engineers productivity in construction industry in Khartoum state- Sudan. **Material and methods:-**The sample size was calculated at 95% confidence level and 5% confidence interval. Fifty (50) potential participants' engineers was randomly selected from all the companies (private or governmental) in Khartoum state. **Results:-**Majority of participants 54% shows frequency of age between(31- 40),48% shows frequency of qualification have bachelor,44% shows frequency of experience(6-11),90% shows frequency to type of work(private),78% shows frequency according to work place(office)The (administrative motivation) axis 98% answered(yes) the motivation increases the productivity. The (financial motivation) axis 90% answered (no)that they doesn't gives housing allowance, The (non financial motivation) axis answered 96% does not get any medals .The (motivations affect productivity) axis 88% answered (always) the appropriate salaries motivating a sufficient productivity .The (job satisfaction) axis 64% answered they are satisfied to some extent with working hours. **Recommendations:-**The most successful construction companies will be those that Implement sophisticated motivation programs and that maintain good communications between managers and employees. Motivation programs should be designed with consideration and Find ways to learn about the employees and learn what they needs.

خلاصة البحث

الخلفية: تمارس المؤسسات العامة والخاصة اعمالها بواسطة كوادرها البشرية وذلك لتنفيذ اهدافها على المدى القريب والبعيد . ولكي تصل هذه المؤسسات الى الهدف المراد الوصول اليه كان لابد لها من ايجاد الكادر الوظيفي القادر على اىصال المؤسسة الى ذلك الهدف, وعلى هذه المؤسسة رد الجميل بتحفيز الموظفين باستمراره لاداء الجيد والفعال.. **مشكلة البحث:** - تلعب الحوافز دورا كبيرا في التأثير على أداء العاملين بشكل ايجابي, ويعني عدم توفرها وعدم توزيعها بشكل عادل قد ينعكس مباشرة على أداء العاملين, وتتلخص مشكلة الدراسة في الاجابة على التساؤلات الرئيسية وهي: ماهو تأثير التحفيز علي انتاجية المهندسين في صناعة التشيد في ولاية الخرطوم- السودان, **المواد والطرق:** - تم حساب حجم العينة بمستوى ثقة 95% وافصل ثقة 5%. تم اختيار خمسين (50) مهندس مشارك بشكل عشوائي من جميع الشركات (الخاصة أو الحكوميه) في ولاية الخرطوم. **النتائج:** -أغلبية المشتركين 54% تظهر تواتر العمر بين (31-40) ، 48% تبين تواتر المؤهلات لديهم البكالوريوس ، 44% تظهر تواتر الخبرة (6-11) ، 90% تعرض تواتر لنوع العمل (خاص) ، 78% تظهر مكان العمل (المكتب), (المحور التحفيزي) أجاب 98% (نعم) الدافع يزيد من الإنتاجية. أجاب محور(المحفز المادي) 90% (لا) على أنهم لا يمنحون بدل السكن، اجاب محور (المحفز المعنوي) 96% لم يمنحوا المداليات. اجاب محور (محفزات تؤثر على الإنتاجية) 88% (دائماً) على ان الأجور المناسبة تحفز الانتاجيه. أجاب محور (الرضا الوظيفي) 64% بأنهم راضون إلى حد ما من ساعات العمل. **التوصيات:** - أنجح الشركات الهندسيه هي تلك التي تنفذ برامج تحفيز متطورة وتحافظ على اتصالات جيدة بين المدراء والموظفين لذلك يجب تصميم برامج التحفيز بجوانب خاصة بالبحث للتعرف على الموظفين والتعرف على احتياجاتهم.

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Abbreviations:-

1-GDP	Gross Domestic Product
2-ERG	Existence Relatedness and Growth
3-SPSS	Statistical Package Social Sciences
4-MPS	Motivating Potential Score
5-JCM	Job Characteristic Management

Chapter One

Introduction

Chapter one

Introduction:

James O'Toole, author of *Making America Work*, identifies three basic sources of productivity: labor (the mental and physical efforts of workers), management (the activities of planning, coordinating, motivating, and controlling), and technology (the contribution of machines transferring energy into useful work). The analysis of any construction project will clearly show that the construction managers seeking to manage resources effectively and efficiently in order to complete the project. The success with which the construction manager accomplishes that goal is highly dependent upon certain skills that he exhibits.

James O'toole has spelled out those activities that embrace management. It is important to note that the selection of an individual for a management position based on construction competence does not guarantee that the individual will be the most effective.

The manager often enters the management position with some degree of planning and coordinating skills. Yet, many managers often lack an understanding or appreciation of human behavior and motivation. Those managers that seek to understand human behavior and apply the principles of motivation theory to motivate the construction worker can and nearly always benefit. Through improved productivity Understanding motivation theory and being able to apply this theory to the labor force plays an important role in increasing productivity. Japan's productivity growth has been considerably greater than that of the United States. the Japanese have outperformed their American counterparts in nearly every area of industry. American managers may college that the Japanese culture is the basis for their success. There may be some truth to that, but the better answer is that the Japanese among other things use effective motivation techniques. American managers should not view the cultural differences as the key ingredient to improved productivity stemming from successful motivators. The American culture is not the root of the evil. The blame should place on managerial policies and practices that were compatible with American culture in

the 1940s and 1960s. To accomplish this task, the manager must have an understanding of the nature of man's present day needs and desires. Construction projects present the construction manager with many challenges. Among them is the coordination of material, equipment, finances, and labor that must come together to produce the desired output. The labor, better known as human beings, is the most essential resource available to the construction manager and the most complex resource with which to deal. Therefore, the construction manager needs to understand the construction worker. The construction manager also needs to make sure that supervisors at all levels are sufficiently skilled in handling subordinates, that they can satisfy the craftsman's need for sense of achievement, the craftsman's wish to be wanted, and his or her need to account for something. It is through an understanding of the concepts of motivation that the construction manager can accomplish these objectives. The focus of this report centers on how to motivate the construction worker toward increased productivity. This most vital resource, the construction worker, management decisions influence his actions, the environmental factors that affect his behavior, and what management can and must do to motivate the worker towards increased productivity.

Every organization and business wants to be successful and have desire to get constant progress. The current area is highly competitive and organizations regardless of size, technology and market focus are facing employee retention challenges.

To overcome these restraints a strong and positive relationship and bonding should be created and maintained between employees and their organizations.

Human resource or employees of any organization are the most central part so they need to be influenced and persuaded towards tasks fulfillment.

For achieving prosperity, organizations design different strategies to compete with the competitors and for increasing the performance of the organizations.

A very few organizations believe that the human personnel and employees of any organization are its main assets which can lead them to success or if not focused well, to decline. Unless and until, the employees of any organization are satisfied with it, are motivated for the tasks fulfillment and goals achievements and encouraged, none of the organization can progress or achieve success.

The focus of this study is to enlighten that how an organization through its employees can achieve success and effectiveness.

1.2 Research Problem:-

- Construction industry suffers lack of employee motivation in particular for engineers who considered to be key resource of to improve the human behavior and engineers' productivity.
- Managers misunderstand human behavior and apply the principles of motivation theory.
- Managers misunderstanding of the nature of engineers needs and desires.

1.3 Main Objective:-

The main objective of the study is to analyze the impact of engineer's motivation on organizational effectiveness and productivity.

The sub-objectives of the study are:-

- To determine the factors that increase engineer's motivation.
- To examine the relationship between engineer's motivation and organizational effectiveness and productivity.

1.4 Hypotheses:-

- Based on the literature and model the study is designed to test the following hypothesis:
- There is an effect of recognizing engineers work on their motivation to work.
- There is an effect of empowering engineers in tasks on their motivation to work.
- There is a relationship between engineers' motivation and organizational Effectiveness.

1.5 Research Methodology:-

The purpose of the study is to analyze impact of engineers' motivation on organizational effectiveness.

The study has two sub-objectives; firstly the factors that increase motivation of engineers are to be determined. Secondly the relationship of engineers motivation and organizational effectiveness.

1-Questionnaire:-

Questionnaire as to know the types of motivation for engineers and the job satisfaction for them.

2-Analysis of the questionnaire:-

Analyze information and data using SPSS program.

1.6 Meaning and Definitions:-

1. Motivation:-

According to Webster's New Collegiate Dictionary, a motive is "something a need or desire that causes a person to act". "Motivate, in turn, means "to provide with a motive," and motivation is defined as "the act or process of motivating". Consequently, motivation is the performance or procedure of presenting an intention that origin a person to capture some accomplishment.

2. Employee Motivation:-

Employee Performance fundamentally depend on many factors like performance appraisals, employee motivation, Employee satisfaction, compensation, training and development, job security, organizational structure and other, but the area of study is focused only on employee motivation as this factor highly influence the performance of employees.

Employee motivation is one of the policies of managers to increase effectual job management amongst employees in organizations (Shadare et al, 2009).

3. Productivity:-

It is an average measure of efficiency of production and it can be expressed as the ratio of output to inputs used in production process.

1.7 Research structure:-

Chapter One: - Explanation explains the research problem, objectives and hypotheses.

Chapter Two: -Review the definitions of motivation and the process of motivation.

Chapter Three: -Displays motivation in construction industry and types of motivation.

Chapter Four: -. Displays models survey and gives the analysis and discussion of the survey.

Chapter Five: - The solutions and recommendations that may contribute to the motivating worker in the construction industry in Sudan. The chapter gives Conclusion, References and appendixes.

Chapter Two

Literature Review

Chapter two

Literature Review

MOTIVATION AND THE PROCESS OF MOTIVATING

2-1: Introduction:-

Construction is one of the major industries in the global world, it is the creator of the built environment with in which most other economic activities take place. Construction is 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 a complex physical infrastructure of daily life.

The hard, physical nature of much construction work, often undertaken in a poor working environment, its frequent combination with images of masculine stereotypes is 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.(Awaad saad2007)

2.2 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 instance, 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.

Considering the participants in the construction process, the various definitions appear to portray the industry as a series of related but discrete activities, persons, or organizations.

The international Standard Industrial Classification of all Economic Activities (1968) defines construction as follows:

“. Constructing, altering, repairing and demolishing building; constructing, altering and repairing highways and streets and bridges, and other types of heavy construction. Mining services such as preparing and constructing mining sites and drilling crude oil and natural gas wells. Specialist trade contractors' activities.

"The assembly and installation on site of prefabricated, integral parts into bridges, water tanks, storage and warehouse facilities, Departments or other units of the manufactures of the fabricated parts and equipment which specialize in this work and which it is feasible to treat as separate establishments, as well as business primarily engaged in the activity, are classified in this group.

Affori (1990) suggest a broad definition that reads:

" The industry may be defined as that sector of the economy which plans, designs, constructs, alters, maintains, repairs and eventually demolishes buildings of all kinds, civil engineering work, mechanical and electrical engineering structures and other similar works."

Construction industry has an important role and significance in a Nation's development, that why because the construction industry accounts for a sizeable proportion of worldwide economic activity. Stoecked et al. (1990) reported that if the construction industry increased its effectiveness by 10% this could lead to an increase of up to 2.5% in GDP.

The process of management consists of following:

- 1-Forecasting.
- 2-Planning.
- 3-Organizing.
- 4-Motivating.
- 5-Co-ordination.
- 6-Controlling.
- 7-Communicating. (Awaadsaad 2007)

Construction industry includes:

Persons, enterprises and agencies, both public and private, involved in physical construction; those whose main activity is construction and the relevant parts of entities engaged in other fields of activity who retain some construction capacity (such as the maintenance units of a university or a manufacturing enterprise);

Those providing all kinds of planning, design, supervisory, and managerial services relating to construction.

Construction industry has 4 main fundamentals (4Ms) which are:

- 1-Manpower.
- 2-Money.
- 3-Machines.
- 4-Material.

2.3 Employee Motivation in the Construction Industry:-

In many construction projects the emphasis is almost entirely upon monetary rewards, but it is debatable whether this strategy achieves the aim of motivating people and organizations to perform to their highest level. Human relations theorists recognized that all kinds of cognitive processes affect the relationship between pay and motivation. (Gonzalez1991)

2.4 Historical development of incentives:-

At the beginning of the eighteenth century, when the movement of scientific management emerged, scientists appeared to be interested in their research on the subject of incentives, and we can distinguish between three stages to develop

administrative thought regarding the subject of incentives and these stages as follows al (harazi 1987):-

- The traditional stage:

This stage represents the traditional theories of management where the institution is an economic unit ideal for the external environment and from the perspective of Max Weber, the leader of bureaucratic theory that the individual nature is not ambitious and lazy and always seeks to satisfy the material needs and thus focused on this phase only on material incentives, Led by Frederick Taylor in its motivational policy on a material basis

- School of Human Relationships: -

From this school's point of view, the institution is a large and complex system, consisting of different parts of performance, the most important of which is the human and technical aspect. This school looks at the human being as it has feelings and works within the groups and therefore we see clearly the evolution in the perception of man and how to deal with him The institution, as well as being an economic unit, is a social unit. Therefore, we find diversity in the granting of incentives between material and moral.

-The modern stage: -

This phase attempts to avoid the mistakes of the theories and the previous stages, benefiting from their experiences. This stage considers the system as an open system, not as closed as the traditional schools. Modern schools have claimed to link the results with the results achieved and called the need for different workers to obtain incentives, whether physical or moral, according to levels of performance and from this point of view of the need for the participation of employees with the administration in the development of incentive schemes.

2.5 The Motivation:-

Motivation is analyzed and related to behavior. To do this, a ten step process is introduced that links the various motivation theories in an attempt to clarify the concepts of motivation and establish their connection to performance.

Industrial organizational psychologists have been studying work motivation and work satisfaction for several years. Several important motivation theories have been

developed and applied to the industrial setting. In many cases successful motivation has been achieved by aligning organizational interest with personnel interest. Among the findings that the industrial-organizational psychologist have discovered, is the realization that a dissatisfied, poorly motivated workforce results in low productivity, high turnover, absenteeism and counterproductive behavior.

Motivation involves the active process of directing behavior toward preferred situations and objects. Motivation is a psychological force. For the purposes of this report, motivation is described as the amount of effort that one desires to expend in a given direction toward the attainment of some goal. It encompasses those variables acting on or within a person that arouse, sustain, and direct behavior (Madsen, 1959). The amount of effort one expends in pursuit of a goal is in direct proportion to the magnitude of the force that causes the expenditure. Humans are willing to exert energy because they believe such behavior will relieve a need.

2.6 The Concept of Motivation:-

According to Webster's new collegiate dictionary a motivate "is something a need or desire" that causes a person act. Motive is turn, means to provide with motive and motivation is defined as the act or process of motivating thus motivation is the act or process of providing that causes a person to take some action.

In the most cases motivation comes from some needs that leads to behavior that results in some type of reward when the need fulfilled. (Gonzalez1991)

2.7Incentives Objectives:-

It is considered (Juda1987) that the development of a system of incentives in an organization must take into account the following two main objectives:-

- **The economic objective:** The development of a system of incentives in an organization should benefit the organization and its employees as the organization seeks to make better use of the elements of production aimed at increasing productivity, improving their products and quality that benefit them first, as well as their employees.

- **Moral Objective:** It is related to the worker directly as it is the most important component of production and control in the productive process and mind effective, which is the goal of the system of incentives and must contribute to the system to satisfy some of his desires and feelings, feelings and needs that must be understood to deal with.

2.8 The Process of Motivation:-

The process of motivation can be modeled as shown in Figure (2.1) below. This is a needs related model and it suggests that motivation is initiated by the conscious or unconscious recognition of unsatisfied needs. These needs create wants, which are desires to achieve goods or obtain something.

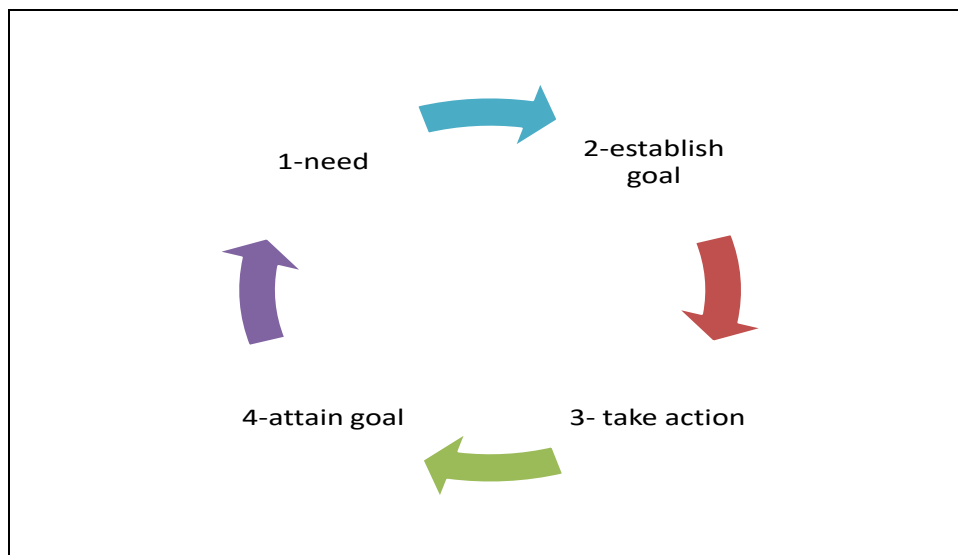


FIG (2.1): The process of motivation.

(Gonzalez1991)

Goals are then established which will satisfy these needs and wants and a behavior trail is selected which it is expected will facilitate the achievement of the goal. If the goal is achieved the need will be satisfied and the behavior is likely to be repeated the

next time a similar need emerges. If the goal is not achieved the same action is less likely to be repeated.

This model describes how individual motivation process takes place. It is based on the motivational theories related to needs (achievements), goals, equity, behavior modeling (reactance) and expectancy. It is also influenced by three concepts relating to motivation and behavior reinforcement (Hull, 1951), homeostasis, intrinsic and extrinsic theories. The model can be used to illustrate a process of motivation which involves setting of corporate goals that are likely to meet individual and organizational needs and wants, and encourage the behavior required to achieve those goals.

2.9 Motivation Classifications:-

To study motivation and performance the major theories should be analyzed separately. Motivation theories can be classified as need theories and process theories, Need theories emphasize the identification of specific needs and rewards that influence behavior. Process theories try to explain the processes through which motivation takes place. These theories identify factors such as:

Incentive, reinforcement, and expectancy, and then attempt to specify how these factors interact and lead to motivation. Each theory offers some unique insight into the motivation process. Yet, the theories do not by themselves significantly explain motivation. It is helpful for the manager to become somewhat acquainted with the theories and combine the general categories to build an understanding of motivation.

The manager needs to know how to motivate. With this goal in mind, the single model of the motivation performance process is used to illustrate the most significant aspects of many motivations.

This model is a complete representation of how the major motivation theories are interrelated. Figure 2.2 represents the cyclical model of motivation-performance. It depicts the relationships between individuals, the individual and the organization and the self-James M. Higgins, author of Human Relations Concepts and Skills, used this model to relate the subject of motivation and performance to the management practitioner.(gonzalez1991).

2.10 Motivation Performance Cyclical Process:-

The model depicted in figure (2.2) first and then proceeds with the introduction and description of each theory as it relates to the various elements of the model. Since the model attempts to consolidate the various motivation theories into one understandable framework, it is better to present it first and associate the various theories to the model as the discussion proceeds. Thus, the model gives the point of reference from which to start in order to evaluate the theories and interrelate their central idea. An evaluation of the model, by managers, can help managers in strengthening their human relations skills particularly with regards to:

1. "Leadership choices: How to treat people in order to motivate them."
2. "Motivation: Influencing others, treating them in a certain way, so that they will perform their work adequately or better."
3. "Communication: Communicating leadership choices in order to motivate."

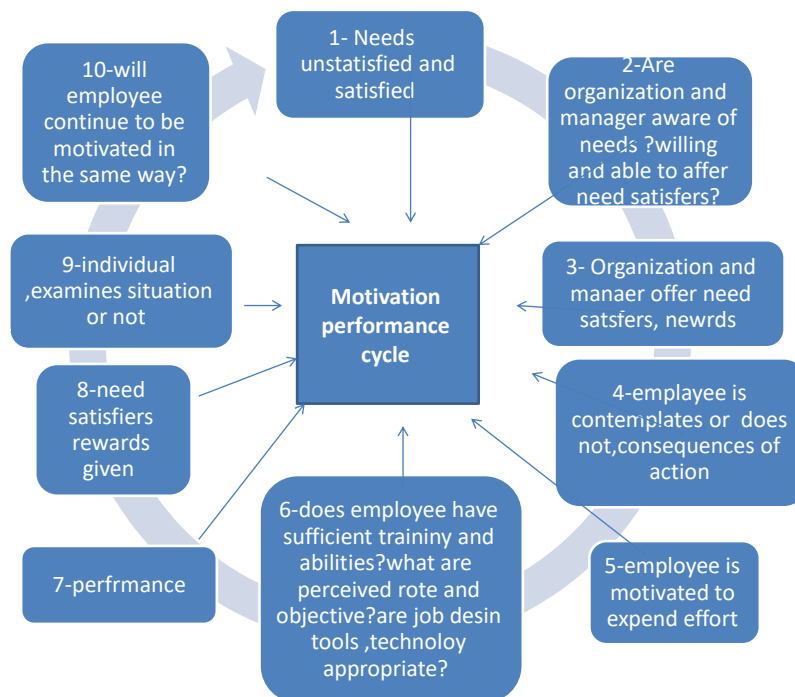


FIG 2.2 Motivation/ Performance cycle model

(gonzalez1991)

2.10.1 Step1. Needs : –

Motivation begins with an individual's needs. By offering need satisfiers, managers can motivate workers. Figure 2.2 is based primarily on the needs theories. Needs relate to the basic types of relation required by the individual for optimal functioning. Needs identify intrinsic concepts of motivation. Motivation comes from within the individual. Yet, by understanding individual needs, the manager can create a proper environment.

1 -Maslow's Needs Hierarchy Theory:-

The most widely used theory of motivation is the needs hierarchy theory. Abraham H. Maslow proposed that all individuals have basic sets of needs that they strive to fulfill over the course of their lives. The theory represents a hierarchy of needs. Underlying this hierarchy are four assumptions:

- a. A satisfied need does not motivate. When a need is satisfied, another need emerges to take its place, so people are always striving to satisfy some need.
- b. The grouping of needs for people is very complex, with a separate number of needs affecting the behavior of each person at any one time.
- c..Lower-level needs must be satisfied before higher level needs can be fully dealt with to drive behavior.
- d. There are more ways to satisfy higher-level needs than lower level needs.

Maslow's theory suggests that there are five needs categories:-

Physiological, security, affiliation, esteem, and self-actualization. Figure 2.3 shows the five need categories arranged in Maslow's hierarchy. The needs are as follows:-

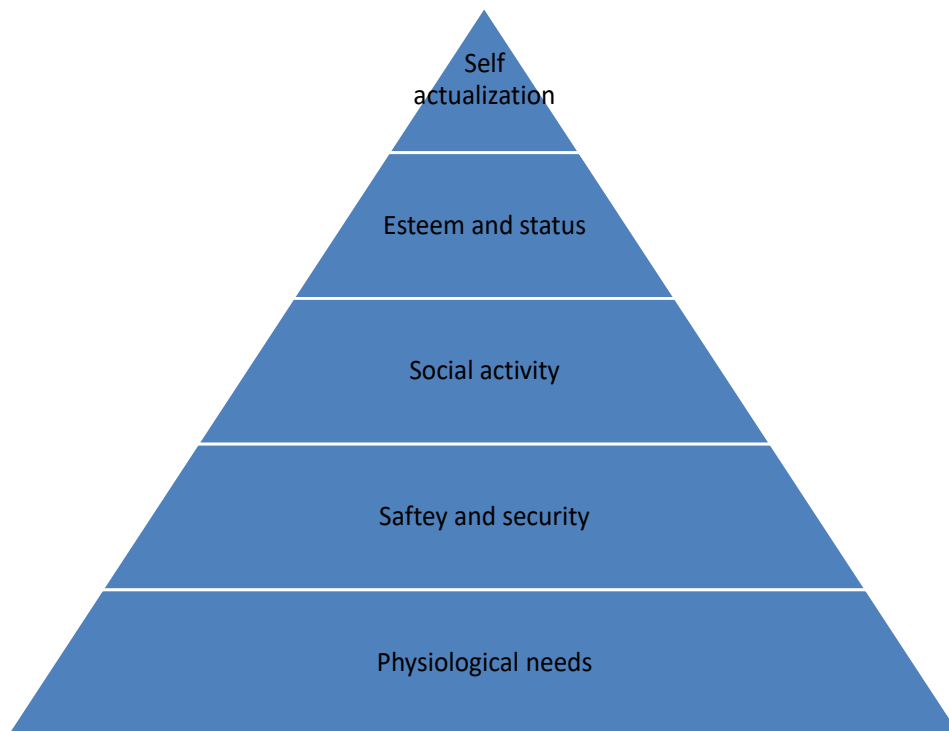


FIG 2.3 Maslow's hierarchy of needs (Gonzalz1991)

. Physiological needs:-

The lowest level of needs is satisfied by those things which sustain life. These include needs for food, water, shelter and clothing.

Managers who focus on these needs try to motivate employees by offering wage increases, better working conditions, more leisure time, and better fringe benefits.

. Safety and security needs:-

When physiological needs are reasonably satisfied, the next level needs, those for safety and security, begin to dominate an individual's behavior. A manager who provides for this individual need focuses on providing job security, fringe benefits, and employee protection against automation.

- Social needs:-

The need for acceptance, affection, friendship, love, and a feeling of belonging are all social needs. Managers address these needs by being supportive, emphasizing

employee acceptance by co-workers, extracurricular, Activities and following group norms.

- Esteem needs:-

This describes the need an individual has to occupy a position in time and space as a function of capable. The individual seeks a feeling of achievement or self-worth and recognition or respect from others. Managers who focus on esteem needs tend to emphasize public awards and recognition.

• Self-actualization needs:-

The highest level of needs is for fulfillment, self-realization and self-actualization. This is the need that one has to accomplish his or her full potential. Managers who emphasize self-actualization may involve employees in designing jobs, make special assignments that capitalize on employees' unique skills, or allow work crews to develop work procedures and plans for implementation.

Maslow's theory states the goals that people value and suggest types of behavior that will influence the fulfillment of the various needs. The manager should come away from this presentation with an understanding that individuals have needs and therefore they have natural objectives that they want to achieve. The manager needs to focus on providing for these needs.

2- ERG Theory:-

Clay Alderfer supported Maslow's theory that individuals have needs that are arranged in a hierarchy. But, Alderfer's ERG theory proposes that the individual has only three basic set of needs:

Existence, relatedness, and growth. Figure 2.4 represents Alderfer's hierarchy of the three basic needs. Existence needs are material needs and satisfied by environmental factors such as food, air, water, pay, fringe benefits, and working conditions. Relatedness needs are needs that deal with establishing and maintaining interpersonal relationships with co-workers, superiors, subordinates, friends, and family. Growth needs are needs that are displayed by the individual's attempt to find opportunities for unique personal development .

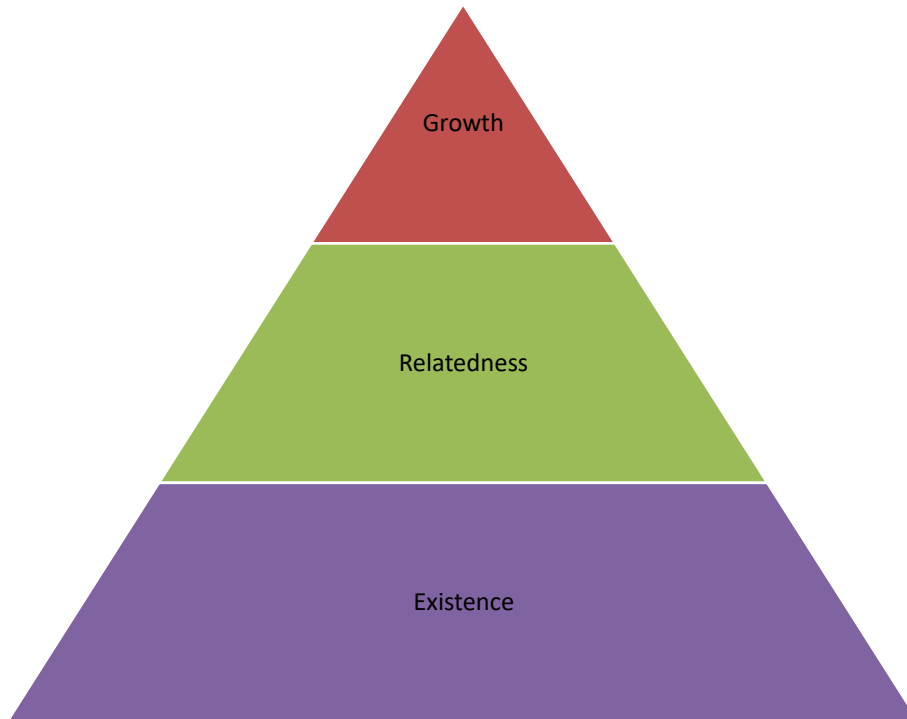


FIG (2.4) Alderfer ERG Theory

(Gonzalez1991)

They comprise the needs that involve a person's attempt to make creative or productive contributions at work.

Alderfer's theory differs from Maslow's theory in that for Maslow's theory, the process is one of fulfillment-progression, while Alderfer, the process is one of fulfillment progression and frustration-regression. Maslow states that unfulfilled needs are motivators and that the next higher-level needs become activated only as lower-level needs are satisfied. Alderfer states that if a person is continually frustrated in attempts to satisfy growth needs relatedness needs will reemerge as a major motivating force. The ERG theory has merit for a manager because if the manager is unable to satisfy a higher level need, the manager should attempt to redirect the subordinates' behavior toward satisfying relatedness or existence needs. The ERG theory, unlike Maslow's theory suggest that the manager can always deploy means to satisfy lower-level needs if higher level needs are blocked, though these lower-level needs may become less important to the individual over time. It also suggests that

different people have different degrees of strengths as related to the three needs. This aspect of the ERG theory relates back to the issue of behavioral factors. Understanding an individual's personality and perceptions can provide insight into what needs are more fitting to the individual. For example, the following findings were presented in Alderfer's study of work motivation:-

1. Individuals with parents who had higher educational levels had greater growth needs than did individuals with parents who had lesser educational levels.
2. Men had higher strength of existence needs and lower strength of relatedness needs than women.
3. Blacks showed significantly greater strength of existence needs than did whites.

3- Achievement Motivation Theory:-

David McClelland proposed that humans have three important needs: achievement, affiliation, and power. McClelland states that people are motivated according to the strength of their need to perform in terms of a standard of excellence or their need to succeed in competitive situations. Almost all people have an achievement motive, however probably only 10 percent of the U.S. population is strongly motivated for achievement. The amount of achievement an individual has is dependent on the same factors that influence behavior. With the need for achievement also exist the fear of Failure. The individual associates certain actions with success and therefore will likely repeat those actions. On the flip side, an individual will unlikely repeat an action that he associates with failure.

High achievers prefer to set their own goals and pursue tasks for which success is moderately high. The task must be attainable and, yet they must be equally challenging. These individuals seek feedback so they may gauge their performance. They prefer tasks in which their own efforts and ability will have a major impact on determining the outcome of their efforts. The high achiever personality develops most often under the following circumstances :

1. A favorable religious/ ethical climate in which the systems belief and that of the culture encourages individual distinction. This attitude is more prevalent among western cultures.

2. A society in which the stories told to children stress economic achievement.
3. A favorable family environment in which the family stresses:
 - (1) High achievement in terms of objectives and performance,
 - (2) provide positive recognition for performance,
 - (3) give continuous feedback, and are headed by a person whose leadership style is more democratic than authoritarian.

3.1 Culture, Individuality, Teamwork and Achievement:

In the Japanese society, while the culture stresses teamwork and devotion to the organization more so than individuality, the culture does practice conditions two and three stated above. However, the Japanese quest for achievement is rooted more in their work ethic toward the company in which they believe that if the firm does well, so will they. Stressing teamwork as the Japanese do is important. Yet, for Americans, individuality is very important. American culture does not have to imitate Japanese culture in this sense to achieve motivation.

Japanese use motivation techniques that fit their culture. It is this simple fact that probably makes the Japanese highly successful. American management has not evolved with American culture. The American workforce is very capable of achieving great productivity. The key may be in management's ability to come of age.

2.10.2 Step 2 Managers Aware of Employer Needs:

Managers and organizations can know employee needs by knowing their employees and by being concerned about their needs. In the discussion on behavior, several factors were presented that affect behavior. To understand behavior the manager should understand those factors that influence behavior. If the managers makes a concentrated effort to understand those elements of behavior all probability be better able to understand what needs subordinates have as individuals and as a group.

2.10.3 Step 3. The Manager Offers Need Satisfiers or Rewards:-

The first two points identified the needs that individuals have and discussed the necessity for management to satisfy those needs. If the manager is aware of those needs and can satisfy those needs, the worker will be motivated. Frederick Herzberg went a step further a broke down needs into what he called motivator needs and hygiene needs. It has also been called the two-factor theory.

1- Herzberg's Motivator-Hygiene Theory:-

Herzberg reported that satisfaction and dissatisfaction were not caused by different degrees or levels of the same factors, but by completely different factors. The factors associated with satisfying experiences he called "motivators," and those associated with dissatisfying experiences he called "hygiene factors." The first factor, motivator needs, is higher-order or growth needs.

Motivator needs includes the work itself, recognition, advancement, and responsibility. These needs are satisfied by things such as responsible challenging work, independence of action, recognition, achievement, trust, and respect for the individual. Motivators appeal to employees' higher level needs and self-esteem. The second set of factors, hygiene needs, is lower level needs that cause dissatisfaction when absent, but when present do not motivate. They are basically maintenance needs. These needs include such things as pay, security, coworkers, general working conditions, and company policies. The factors associated with motivators and hygiene factors are summarized in table (2-1.)

TABLE (2.1) the factors Herzberg's theory (Gonzalez1991)

Hygiene factors	Motivators
External , extrinsic dissatisfiers	Internal , intrinsic satisfiers
- Company and administration	- Achievement
- Methods of supervision	- Recognition of achievement
- Inter personal relations with peers, superiors, and subordinates	- Responsibility advancement
- Working conditions	- Interesting work
- Compensation	- Personal growth
- Job security	
- Symbols of status	
- Personal problems	

When hygiene factors are inadequate, employees will become dissatisfied. Yet, adding more hygiene factors to the job does not motivate someone; they simply insure that the individual is not dissatisfied. The implications to the construction manager are that he or she should provide an efficient environment that will minimize the causes for dissatisfaction. Yet, he needs to be cautious so that he does not use hygiene factors as motivators. Hygiene factors affect lower-level needs and since lower level needs are quickly satisfied, the manager will have to escalate the offer to further motivate the employee. One important element includes pay. The manager has only so much he can offer and should not rely exclusively on pay in his attempt to motivate the worker.

2- Maslow's Theory versus Herzberg's Theory:-

Herzberg's theory may be helpful for focusing attention on the importance of psychological needs. The theory is useful for drawing attention to the fact that higher level needs are somewhat infinite, difficult to satisfy, and therefore useful as motivators, while the lower-level needs, being easier to satisfy, quickly lose their effectiveness as motivators. Herzberg's theory as well as

Maslow's theory should be applied while bearing in mind the factors that influence an individual's behavior such as personality or perception. An individual whose primary goal is security rather than responsibility and independence may not function to his optimal level under a job enrichment program.

Herzberg's theory does contribute to the growing understanding of motivation. When compared with Maslow's hierarchy of needs, it is apparent that the hygiene factors correspond to the lower level of the hierarchy and the motivators correspond to the two upper levels (table2.2). The manager who uses the combine aspects of both theories can select among the many satisfiers that his or her organization has to offer to achieve motivation. In doing so the manager will have modeled organization to accomplish individual objectives while accomplishing organizational objectives.

Table (2.2) Maslow's needs hierarchy and Herzberg's motivation.

Maintenance model.(Gonzalez1991)

Maslow's need hierarchy	Herzberg's motivation maintenance modelo
- Self realization	- Work itself,achivement,possibility of growth,responsibility
- Esteem ana stats	-Advancement,recognition,status
- Social activity	-Inter personal relations,superior,subordinates,peers
-Safety and security	-Company policy and adminstration, job security
- Physiological needs	-Working condition ,salary,personal life

2.10.4Step 4. The Employee Contemplates or Does Not Contemplate (The Consequences of Actions):-

The manager has followed steps one through three, as presented in figure 2.1 and still, performance has yet to be achieved. In step four, the employee is deciding, whether consciously or subconsciously, if he or she should expend some energy. The employee may ask the question, what's in it for me? The employee will decide to engage in the activity if it will provide

Something that the employee values. The theories that apply in the following steps are categorized as process theories. The theory addressed the process of behavior modification through reinforcement of desired characteristics. The theories that follow center on the cognitive ability of the individual.

1- Expectancy Theory:-

The expectancy theory of motivation assumes that an individual's motivation depends on his or her perception of how his or her actions and rewards will be related. Victor

Vroom developed a hypothesis that subdivided the theory into three areas: (1) expectancy, (2) valence, (3) instrumentality.

Expectancy relates to the belief that a particular level of effort will be followed by a particular level of performance. The employee may ask the question, if I do the job, will I get the reward? Expectancy considers the probability of outcome with regards to input. The manager must be careful not to offer a reward for which only a few can benefit. Some employees may believe that there is no chance that they will get the reward.

Valence represents the value or importance that the particular outcome has for the individual. The employee will evaluate if the reward is worthwhile in terms of current and future needs. The outcome may be attracting or it may be dissatisfying. In the construction industry the workers may place greater value on job security and a small wage increase over a large wage increase with many short term benefits but no job security. Another area of construction that can negate each other is good wages but, dirty and dangerous working conditions.

Instrumentality refers to the relationship between first level outcomes, such as a promotion, and second level outcomes, such as a raise. The basic question is, what's in it for me, the correct answer that will result in performance is that the promotion provides the increase in pay which is an outcome that the employee values.

Vroom asserts that motivation involves a largely conscious three step process: (1) does the person feel that the action has a high probability of leading to an outcome (expectancy), (2) does the first level outcome produce other outcomes (instrumentality), and (3) are Those outcomes of any importance to the person (valence). If any of these steps are negatively perceived by the employee, motivation will be lacking and the desired performance may not be achieved.

Managers should determine the outcomes that each employee values. Using the behavioral knowledge the manager should observe employees to determine their personality, perceptions and abilities. Similarly, the manager can ask the employees about the kinds of rewards they want and the career goals they have. Managers also must define good performance and adequate performance, in terms that are observable and measurable, so that employees can understand what managers' desire of them. This relates to the aspect of positive reinforcement previously. In the construction industry this means developing and maintaining productivity measurement indexes that can provide valuable feedback to employees.

The manager should make sure that the desired levels of performance are reachable. Managers should link outcomes desired by employees to specific performances. The manager needs to make the connection between performance and outcomes and subsequently make sure the employees see the relationship. Managers also should insure that changes in outcomes or rewards are sufficiently large to motivate significant behavior rewards should not be trivial.

2 -Equity Theory:-

Equity theory assumes that individuals are strongly motivated to maintain a balance between what they perceive as their inputs, contributions, and their rewards. Employees compare their inputs and outputs with those of other employees. Equity exist whenever the ratio of a person's outcome to inputs equals the ratio of outcomes to inputs for others. Inequity exists when the ratio of outcomes to inputs are not equal. Inequity also can result when people are overpaid. If the employee perceives an inequity, tension or drive will develop in his or her mind. Since tension is not pleasurable, the employee is motivated to reduce or eliminate the inequity. The equity theory explores the behavioral factor, perception. Two valuable conclusions can be drawn from the equity theory. First, the manager who understands the equity theory and can relate it to perception, understands that he or she must seek to maintain a balance in the working environment. The manager must treat employees equitably. Second, individuals make decisions concerning equity only after they compare their inputs/outcomes with those of others. The manager provide for equity within the organization. In addition, the manager must work to establish equity within the profession. In the construction field this is easier to do than in other industrial settings since craft wages are typically equivalent for the same geographical area.

2.10.5 Steps 5 Employee is Motivated/ Skills, Objectives, Job Design, and Tools, Performance:-

At this point the rewards that are offered are suitable for stimulating positive responses. The satisfiers meet with the individual's behavior. The individual will attempt to expend effort.

Now the employee needs to develop knowledge of the direction in which he or she is to expend that effort. How much effort the employee expends and in which direction

the employee expends that effort becomes a question of several factors including skills, ability, training, work objectives, job design and available tools .Once management addresses these aspects the desired results should be achieved.

1- Skills and Training:-

Skills require two things: ability and training. Ability and Training is critical to the success of an organization and superior performance. An individual will be unable to reach his full potential unless he is provided with some degree of training. Maslow's needs theory identified self-actualization as the highest of needs. The fact that individuals seek to become good at something supports Maslow's theory. They work to claim expertise in a certain area. This is an intrinsic objective. The manager can help by providing the training to reach that level. Providing the required training motivates, and the development of motivation generates a greater capacity to learn and to better ones abilities. On the other hand, lack of ability and lack of training to develop one's ability leads to dissatisfaction.

2- Work Objectives:-

The behavior that the manager desires may or may not be realized unless the manager ensures that subordinates are aware of management objectives and that both agree on the objectives. Agreement does not imply that subordinates must accept the objectives unconditionally. It does suggest, however that the subordinates must have an awareness and understanding of the objectives. They also must have an understanding of their roles and how they relate to the accomplishment of the objectives. Objectives can be achieved through goal setting. Goal setting provides considerable information on where to direct effort. Employees know what is expected of them and as a result have a clearer focus on what is to be done .

2.10.6. Step 6 Job Design and Tools:-

All the motivation in the world does not insure that the desired performance and accompanying results are achieved if the tools are inadequate or the job design is poor. In the construction industry, productive performance is based on adequate tools, proper materials, a workable schedule, and availability of required equipment. Lack of any of these elements will make it difficult for the employee to accomplish the stated

objectives and goals. "Primarily, in the construction industry, a well-planned project seems to be the first and most important step to achieve good productivity. Duplication of effort, numerous modifications to plans, incorrect sequence of task, or schedules that consistently slip have degrading effects on motivation.

2.10.7 step 7 Performance:-

Having accomplished steps, the desired performance should be realized. In the construction industry performance needs to be measured. If the ultimate goal of the manager is to improve productivity and he or she realizes that one of the factors to achieve that goal is to motivate the workforce, and measure productivity. If a quality measure of productivity is developed and fed back, it will lead to significant increases in productivity through increased motivation.

2.10.8 Step 8 Needs Satisfied, Employee Evaluates Rewards, Continued Motivation:-

Once the performance has occurred the manager needs to insure that the rewards are given. Failure to provide rewards promised will often result in failure to repeat the performance. Having received the rewards and need satisfiers, the employee will evaluate the rewards and ask the same questions that were asked during step four. The employee applies the rationale that was presented in the discussion of the expectancy theory.

The manager has reached a decision point if the individual will continue to be motivated in the same manner. Depending on what has happened previously the individual may or may not be motivated in the same way again. The individual who is rewarded for his behavior will tend to repeat the behavior that bought the reward. The reward will serve as positive reinforcement. Yet, not all individuals react in the same manner to the reward. If the motivation process fails to keep in tune with the individual's perceptions, personality, and abilities, the individual may fail to be satisfied. If the individual's personality is such that he or she does not wish to be singled out as an achiever or he or she is prone to react to group pressure, the reward may not satisfy the individual's needs. Additionally if the reward is not related to the performance, and therefore satisfaction is not related to performance, the performance is unlikely to reoccur.

The motivation process also must maintain or improve the individual's self-image. Individuals are happier and healthier when they feel good about themselves, and in turn they are more productive. In construction, most craftsmen take considerable pride in the work they do. They are artist of their trade. The construction worker is searching to satisfy the higher order needs that are presented in Maslow's theory. The motivation process that recognizes the construction worker's unique ability and does not belittle him or her as a blue collar worker will often lead to continued motivation. The construction worker seeks status and personal growth in the accomplishment of trade. When a manager uses pay exclusively as a motivator, the performance may not reoccur.

1-Leadership and Communications : -

If construction managers are to achieve the level of performance they desire when working through the motivation/performance cycle, and develop a motivated workforce, they must have the ability to lead and direct the work force. In addition, the construction manager must be able to communicate effectively.

-Leadership:-

A construction manager's leadership ability will impact upon ability to motivate the construction worker. The manager has choices to make as to the way he treats his subordinates.

Understanding the concepts of motivation and being able to apply these concepts will enable the manager to make the proper choices that in turn should result in productive performance. Choices should be made only after the major factors that affect the particular situation have been considered. The choices will depend on: (1) the organizational needs and objectives, (2) the personalities of the subordinates, especially their needs (Maslow and Alderfer), (3) the dynamics of the group, (4) the particular task or job concerned, and (5) other major situational variables .

Among all the things that the construction manager can do to be an effective leader and motivator, he or she must be able to work effectively with people in a variety of situations. The manager must respect others and realize that to accomplish the project tasks, the manager must be considerate of others. Greg Oldham hypothesized that

certain leadership behaviors would significantly influence worker motivation and performance. The following leadership qualities are a modification of Oldham's study:-

1. The effective construction manager will search for ways to build upon the self-esteem of the workers.
2. The manager will reward the worker for producing good work by congratulating the worker, patting him or her on the back, indicating a job well done, or engaging in similar supportive activities.
3. The manager will, when practical, consult with the craftsmen and evaluate their opinions and suggestions when making decisions.
4. The manager also will show confidence that craftsmen will attain high standards of performance.
5. The manager will set specific performance goals for the workers to achieve.
6. The manager will provide feedback to the workers and will keep them abreast of the job progress.
7. The manager will be supportive of his workforce. The Manager will provide opportunities for increased responsibility and independence of action so that the job becomes more challenging or demanding.

A- Theory X and Theory Y:-

Leadership styles can vary between an authoritarian view and a participative, democratic view. In the past, the construction manager has functioned primarily on the authoritarian type of leader. Douglas McGregor presented two leadership theories that rely on certain assumptions that are held by managers. He theorized that these beliefs help to explain why managers behave in certain ways.

The traditional authoritarian view relates to Theory X, and the progressive approach relates to Theory Y. With respect to people, these theories help the manager to understand the classification of people and in turn the process of directing their efforts, motivating them, and modifying their behavior to fit the needs of the organization. Theory X is based on the following assumptions:

- a. The average human being has an inherent dislike of work and will avoid it if he can.

b. Because of this human characteristic of dislike of work, most people must be controlled, directed, threatened with punishment to get them to put forth adequate effort toward the achievement of the organizational objectives.

c. The average human being prefers to be directed, wishes to avoid responsibility, and has relatively little ambition, wants security above all (Maslow).

B-Theory Y is based on the following assumptions:-

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

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

c. Commitment to objectives depends on the rewards associated with their achievement. The most significant of such rewards, the satisfaction of the ego and self-actualization needs (Maslow's higher-level needs), can be direct products of effort directed toward organizational objectives.

d. The average human being learns, under proper conditions, not only to accept but to seek responsibility.

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

f. Under the conditions of modern industrial life, the intellectual potentialities of the average human being are only partially used.

"Whether the manager believes in Theory X or Theory Y, the concepts provide a useful way of approaching the problem of managing people". Theory X managers practice management by control. Theory Y managers practice management by objectives. The construction manager can develop worker motivation by using both Theory X and Theory Y approaches. Theory X may serve better when applied to unskilled labor. Theory Y may serve better when applied to skilled labor.

2- Communications:-

A construction manager's communication ability also will impact upon his ability to motivate the construction worker. Because the developing and constantly changing nature of construction work, the construction manager must continuously communicate with the project supervisors and craftsmen during the project. If the manager is unable to communicate with the worker, there is not much can do to change worker attitudes and generate motivation. The manager must insure that what he or she transmits is received by the receiver and is not misinterpreted. The manager must clarify ideas before they are communicated. The manager also must solicit feedback from the receiver to insure that the receiver interprets it correctly. How the receiver interprets the communication is based on background and experience (aspects of behavior).

Therefore, the manager must be sensitive to nature of the receiver. Likewise, the manager, if his goal is to motivate, must avoid talking down to the worker or workers. The manager should bear in mind that how he or she presents something may be equally important if not more important than what presents.

2-10-9-A Review of the Cyclical Process:-

Motivation has been portrayed as a cyclical process; once motivated, people must be motivated again. The process begins with individual needs. The needs theories:-

Maslow's hierarchy Alderfer's ERG theory, and McClelland's achievement motivation theory attempt to explain those needs and provide insight as to what satisfiers the manager should offer. Herzberg's two-factor theory builds on the needs theories and makes a distinction between hygiene factors and motivators. The essence of his theory is that hygiene factors, if present, provide for attainment of lower-level needs. Similarly, if hygiene factors are present, relatedness and existence needs (ERG theory) are not likely to be frustrated. Hygiene factors do not satisfy when present; in their absence, the worker is not satisfied. Only motivators will satisfy. They satisfy higher-order needs, or growth needs (ERG theory). Achievement motivation theory does not have lower-level needs. The achievement needs may be satisfied through hygiene factors, but more importantly, achievement needs require motivators to yield a sense of achievement, power, and control.

The process theories: expectancy and equity theory relate to the cognitive ability of humans. Man is a thinking person who can reason and rationalize actions and make choices in response to the rewards or satisfiers that are offered. Rewards must relate to the performance and they must maintain a respectable self-image that man seeks. Additionally, the motivation process must be continuous meaning new rewards should be offered and satisfiers should ascend the ladder established by the needs theories. Effective leadership must be established by the manager in order to motivate. The same style of leadership may not be effective for all situations or personal. Yet, when the manager understands the personalities of the workforce and can relate to their needs, he or she can use the leadership style which best fits the situation. The manager should, despite the style of leadership chosen, focus in on the individual needs, and present the right rewards and satisfiers. These rewards and satisfiers must relate to performance. Also important is open and effective communications. The manager must understand what he wishes to communicate and insure that what he desires to communicate is what is interpreted by the receivers.

2.11 Design incentive system:

"It is not easy to design a system of incentives, and it cannot quote a system from another organization" (Ali Hassan). The proper system of incentives must be the size of the organization, which means that it fits the organization's objectives, strategy, medical work, The nature of the performance and the method of measurement, and must be proportional to the budget incentives and wages in the organization, and not taking into account these considerations refers the system of incentives to a disaster or a failed system, and the conclusion that the lack of quality may be better than its existence and therefore must avoid the reasons for failure of the incentive system, the availability of conditions for the success of this system. (Ali Hassan 2008)

2.12 Stages of incentive system design:

A-Goal Setting.

B-Performance Study.

C-Determining Budget.

D-Setting Procedures of the System.(Al ani 2007)

A- The objective of the organization:

The organizations seek general objectives and specific strategies. Those who develop an incentive system should study this well and then try to translate it as an objective of the incentive system. The incentives may be to maximize profits, raise sales and revenue, or reduce costs or encourage On new ideas, encouraging productive quantities, improving quality, improving teamwork, improving certain behavior, or other goals in order to achieve this general objective of the organization or the incentive system, it must be divided into partial objectives according to the organizational units (activities, sectors, departments, factories, centers, branches and sections). As al-Ani sees, this difference between these units justifies that there are objectives of their own, in nature the most important of all is that they must be reflected and translated into clear parts in the incentive system

B-Performance study:

Maher believes that in order for the incentive system to succeed, it is necessary to determine the type and size of the performance on which the incentives are calculated. The organization seeks to identify and describe the required performance, and seeks to determine the method of measuring actual performance (Maher 2009, p. 267) Al Ani sees Performance aims to identify and characterize the required performance, as it seeks to determine the method of measuring the actual performance, and the identification and characterization of the required performance calls for the following:

- 1- There are a proper number of employees.
- 2- Having proper design functions
- 3- Full control of the individual on the work (ALAni 2007)

C- Setting of the incentive budget:

In order to determine the incentive budget, Maher believes that two types of incentive budgets can be distinguished here, given the size of the incentives themselves

-Fixed budget: A fixed amount is defined in advance, saying that the incentive budget is \$ 3 million over the next year. It is determined by past experience of the

Organization, the size of the wage budget, the adequacy of wages and the importance of incentives to increase production.

-Flexible budget: - It means that the budget is variable, not predetermined, and is determined by profit, sales or production numbers. Therefore, the incentive budget represents a percentage of what changes, for example, from 5% profit value. The advantage of this method is that it does not impose any restrictions prior to the administration, so that it does not require the organization to pay a certain amount in advance. (Ali ani 2007)

D- Set system procedures:

Maher, 2009, says that the system is translated into sequential steps and procedures. It is concerned with recording performance, accounts, models, meetings, and problem roles, types of incentives, awards and timing of incentives.

The most important measures are:

- 1-Define roles.
- 2-Meetings.
- 3-Timing of incentives.
- 4-Type of incentives.
- 5-Models.

Factors influencing incentive systems (look at table 2.3):-

Table (2.3)

(الجريد, عارف الطويل, 2007)

External factors	Internal factors
1-Laws and legislations	1. Goals of the organization
2. Competitors	2-strategy organization
3. Supply and demand	3. Strategic human resources
4 unions	4 - Role life organization
5. Transparent community	5. Design functions
	6. Staff needs

2.13 Excellent incentive system:

Al-Ani believes that it is necessary to develop the following aspects in the development of a system of incentives:-

A. Measuring results and knowing them constantly an organization that sets itself a certain goal in which some workers deserve wages and incentive incentives should continue to collect relevant production data so that workers can know the results of their efforts first-hand

B – Performance measurement, that is, putting each total similar together to facilitate the measurement of the number of units can be completed in a certain time, and of course, for each work, whether the work is simple or complex method of the best performance can be reached using the method of study time and movement. (Al-Ani 2007)

2.14 Improvement of performance:

When the institution seeks to improve the performance of employees, it means that individual performance will be better in quantity and quality, and may be called in some cases to (improve productivity) and to achieve the goal of this goal seeks to link the wage productivity through the various systems of incentives and the following:-

Examples of linking performance improvement systems with motivation

- The incentives are designed at the individual level through the examination of the efficiency of individual performance by examining the result of the evaluation of the annual performance of the employees and granting them bonuses according to the performance assessment and grant the holders of the degree of excellence four months bonus and get a very good three-month bonus and so for example.

- Incentives are linked to the collective performance of employees at the level of management, department, production line, operating process or operating station.

When the group achieves its goal, it receives the planned incentive and then distributes it to the group

Maher's classification of incentives is as follows look at table (3.4): (Maher 2009)

A - Incentives at the level of workers.

B - Incentives at the level of administrators and specialists

Table (3.4)-Incentives Classifications

(الجريد , عارف الطويل, 2007)

	At the worker level	At the level of specialists
On an individual level	Widget or time model	All kinds of incentives
On the level of group	All of the above	
On a standard organization	Participation in profits and ownership of shares	Participation in profits and ownership of shares

Chapter Three

Financial and non-Financial Rewards on Employee Motivation

Chapter three

Financial and non-Financial Rewards on Employee Motivation

3.1 Introduction:

The pivotal function of Human resource management is to implement practices that enhance the satisfaction of employees with their jobs. Employees expect financial and non-financial rewards for their services and efforts. In the absence of equitable pay, training and development opportunities and recognition, employees get dissatisfied and do not perform to the standards. The dissatisfaction resulting from the unavailability of financial and non-financial reward usually leads to high employee turnover and poor performance. The benefits that employee foresee for themselves and their families motivates the employee to give their best. The Rewards are categorized into two groups' financial and non-financial rewards. The financial rewards are also called extrinsic rewards and non-financial rewards are called intrinsic rewards. The financial rewards include pay, bonuses, allowances, insurance, incentives, promotions and job security, whereas the non-financial rewards include appreciation, meeting the new challenges, caring attitude from employer, appreciation and recognition motivates the employee. The healthy working condition which fosters a professional relationship between supervisor and employee fulfills training and development needs of employees and ensures job security motivates employee. Once the pay exceeds a certain level, intrinsic factor become most important motivators. Different types of financial and non-financial rewards are discussed below. Fringe benefit is the benefit that is given to employee in addition to pay. It motivates the employee. The availability of fringe benefits creates a motivating environment and lead to an increase in production, sales and profitability. Bonuses are offered to the employees when they achieve certain standards and quotas. Pay is the compensation given to employees which is proportionate to the skills, knowledge and their expectations. Money is ranked at the top because it enables to fulfill their basic needs of life. At the same time money is considered as the sign of triumph and accomplishment because it allows the human to fulfill the needs of belongingness. It enables the human to establish status, rank and authority. Some of the organizations

also offer health insurance and life insurance to the employees. The health insurance is the most expensive benefit offered to the employee. Some of the organizations offer pension which is the deferred income collected during the working lives and is returned to the employee after retirement.

An efficient transport system will also enhance motivation of employee by reducing the financial burden and mental stress that employees face because the public transport is expensive. The provision of free transport facility will be facilitating even those employees who are living far away from the workplaces. A vacation with pay is another benefit that the firms offer for the well-being of their employees. The Organization also provides one free meal to their employees and unlimited amount of coffee and drinks. All these benefits motivate and facilitate the employee Training and development is the non-financial reward. The training process motivates the employee to improve performance due to many reasons. As discussed before that motivation is a goal oriented behavior. So, when employee desires or expectations are aligned with the goal accomplishment, they are motivated to give their best. Employees expect promotions, recognitions and their career development. Training helps by equipping them with skills, technologies and knowledge for fulfilling their development needs. The benefits that the employee's foresee for themselves are fulfilled by training and development.

The absence of training programs will result in unawareness of manager about the skills, knowledge and competencies that are required for employee motivation and future promotions. Organizations focus on developing the employee's motivational aspect by providing training and development. The employees expect an increase in their confidence level, self-esteem after training. So, they are motivated by the provision of training and developmental programs. All the progressive organizations which provide an equitable environment are the one where rewards are given on merit and information is shared and employees are given equal chances of participation in decision making. Empowering the employee enhances the employee motivation and their self-worth. So, they owe their job and take responsibility of their actions in order to avoid any negative impact on overall performance by their actions. If employees are given autonomy to a certain level for doing their duties, they are motivated to perform well with greater commitment.

The purpose of performance appraisal is to inform employees that the organization is

interested in their professional development. It signals the message that employees contribution plays significant role in the organizational success. As a result, employees are motivated to contribute more towards the organizational success because they are given recognition and appreciation for their contribution. The performance appraisal motivates the competent employees by rewarding them. This is how less competent employees will get inspiration from competent employees and will be motivated to perform well. The employee will feel valued if they are given career development opportunities which will lead them to move one step ahead on the promotion ladder. The intent behind the organization's investment in the career development needs of the employees is to increase the employee self-esteem and motivation with their professional development. Employees are motivated if they are given opportunities for learning and growth because the learning opportunities lead them towards future promotions and career growth. So, the career development opportunity motivates the employees by aligning their expectation with the organizational goals. The comfortable working condition also plays an important role in enhancing the employee morale. The favorable working conditions also involve comfort issues like proper ventilation, seating, lighting and no noise in the workplace. The healthy working condition also involves comfortable furniture, functional design and lightning. The Employee expects the availability of resources, supplies, tools, comfortable seating in order to perform well. The presence of disruptive employees affects the employee's relationship with the rest of the colleagues in negative way. The insecure and vulnerable environment demotivates the employee. This way the employee is more likely to leave the organization.(yosaf.slatf m 2014)

Companies can gain competitive advantage over other firms by motivating and retaining human resource. Organization motivates the high performers by providing financial and non-financial reward systems which motivate the employees and enhance job satisfaction. Financial and non-financial rewards have a strong influence over the employee motivation and are directly related to performance. The significance of financial and non-financial rewards varies with age. The non-financial rewards influence the motivation to a greater extent after the pay exceeds a certain level. According to Herzberg's there are two kinds of factors that have a strong impact on the employee motivation. The hygiene factors include pay, policies and working environment and the motivating factors include appreciation, recognition,

caring attitude from employer and achievements. An effective recognition and reward system can motivate the employee and enhance the productivity the success is based on how the firm keeps its employee motivated and in what way they evaluate the performance for compensation. The financial incentive is no doubt ranked top in motivating employees because money enables employees to fulfill not only their basic needs, but also their need of belongings and need of power. Though money is a dominant factor, but besides it there are non-financial factors also called intrinsic factors which play pivotal role in motivating employees. So, it's not only money that enhances the morale of employee, but non-financial rewards like recognition, appreciation and career development opportunities also improve the morale of the employee.(yosaf.slatf m 2014)

3.2 Critical factors for a successful incentive system:

- a- The rewards must be valued, rewards without value for the individual do Not provide motivation.
- b -Size of rewards must be large enough to affect employees' behavior, too Little a valued reward will also fail to give motivation.
- c- Employees should also understand why a reward is given and the intrinsic Value. Rewards given short after performance have a stronger effect than Those given a long time after. Therefore they should be given as soon as Possible
- d-A reward should be reversible so that mistakes can be corrected (Merchant And van der Steede 2008)

3.3 Financial Rewards:

Is influential for fulfilling their non-financial rewards are pay, bonuses, fringe benefits, transportation facility, medical facility, health and life insurance and benefits like vacation with pay meal facilities.

3.3.1 Pay:

The payment systems that employee view as being fair and proportionate with their skills and expectation is called pay. Employees are offered a financial reward for their services called pay which is a foremost stipulation in human resource management. Pay must be closely linked to the performance according to high achievers. Employees who do their best want reasonable pay that satisfies their needs. An equitable pay makes them feel appreciated so they expect to pay according to their efforts because they don't want to be unacknowledged for their services. Money is ranked at the top for creating motivation because people require money to fulfill the basic necessities of life so it motivates the employees more than any other incentive. Others believe that money monetary needs such as authority, rank and belongingness with preferred groups. It is believed that people who have more money are more powerful in society as compared to those who have lesser money. So it is easier for them to have things their way. That's why money is often viewed as a sign of personal triumph and accomplishment.

3.3.2 Bonuses:

When employees reach certain standards and quotas to complete a certain project, they are given bonuses for example (a call center representative who answered more than 200 calls).

3.3.3 Fringe Benefits:

A benefit that workforce is given with their job in addition to pay are called fringe benefits. The employee motivation is influenced by the availability of fringe benefits. The provision of fringe benefits will create an optimistic, motivating work environment and increases output and sales. The motivated workforce will lead to organizational excellence, prosperity, excellent quality and cost control. In fact fringe benefits play a significant role to motivate employees because they compel the workforce to put extra efforts as much as the incentive of money does. No doubt money is a big factor to motivate the employee, but the fringe benefits have their own

importance. It is important for managers to realize that the employees must be given the better working conditions along with the fringe benefits so that they give their best. The management should focus on creating an effective benefits program for the employees where they are given an opportunity to improve their benefits by sharing their ideas with each other and doing surveys. Management should take initiative by accepting their ideas to improve benefits. There should be frequent reviews to ensure that the benefit program meets their needs or not.

3.3.4 Transportation:

The problems of the working force and their mental stress is increasing due to the inefficient transport system. Public transport is costly, scarcely available and unpleasant. Government is still unable to provide adequate transport facilities to the commuters, even in the major cities of the country. Hostile environment and lack of infrastructure provision decreases labor force participation. So, there is a greater need to provide employees with more suitable transportation options. The availability of official transport facility for employees who were living far from their workplace and were making their own transport arrangements would reduce their financial burden and mental stress. Organizations should provide convenience to their staff because it will be very helpful in motivating the employees.

3.3.5 Life Insurance:

Insurance on the life of the insured for a fixed amount at a definite premium that is paid each year in the same amount during the entire lifetime of the insured.

3.3.6 Health Insurance:

When medical and surgical expenses of the employee are paid by the insurer, it is said to be health insurance. It is a source of motivation and attracting the competent employees because health cost has increased over the time and health insurance decreases the financial burden of the employee and increases its motivation and commitment. The insured is either remunerated for the expenses of the illness or

injury or the health care provider is given the money by the health insurance. It provides coverage for the stays in hospitals, visits and medical expense.

3.3.7 Vacations with Pay:

The Organization ensures the wellbeing of an employee by offering them vacations with pay. If employees have been working for longer duration more than seven years only they are eligible for seven, fifteen and twenty years. These vacations can be advantageous for the employees who need extra time to care for aging parents or fulfill other assignments.

3.3.8 Pension:

A deferred income that workers gather during their working lives and that belongs to them after specific time duration. When an employee reaches a certain age of 21 and have completed one year of service, they are entitled to company pension plan. The objective behind pension plan is to motivate and retain the employees. it is offered for rewarding employees for staying with the organization until retirement. Employees are disqualified for the pension award if they leave or are fired before retirement.

3.3.9 Meals:

Some of the companies offered employees free meal daily and an unlimited amount of coffee and soft drinks. Most of the companies allow employees to have free meals at the companies' cafeteria. (yosaf.slatf m 2014)

3.3.10 Job Design:

The process to systemize the tasks, duties and responsibilities is called job design. It aims at enhancing employee satisfaction and accomplishing organizational goals by designing the content, methods and connection of jobs, according to the aptitude and abilities of employees. The job design can play an effective role in motivating the employee by organizing the tasks in a way that are interesting and challenging at the same time. A well designed job can increase the employee morale by reducing the monotony and repetition of work. The perceived work demands, job control and

social support through job design leads to high productivity. The job design can be improved by implementing the HR interventions like job rotation, job enrichment and job enlargement. These interventions are helpful in terms of creating a challenging work environment with varying the job aspect which enhances the employee motivation and productivity. Flexible work schedules, job sharing and telecommuting also facilitate the employee and are helpful in motivating them. The flexible work schedule allows the employee to determine their arrival and departure time and to perform their duties during the core time. In job sharing, two employees can share their duties on one job and telecommuting motivates the employee by facilitating them to work two or three days a week from home.

3.4 Non Financial Rewards:-

3.4.1 Working Environment:

A better workplace environment leads to increased employee commitment and productivity. It boosts the employee motivation and improves the productivity. A work environment where employee feels that they have reasons for doing work and get pleasure from doing their job motivates the employee. In working conditions where employees are not provided with adequate resources, tools, training, software and supplies lead to de motivation and lesser productivity. The inefficient working conditions which include comfort issues like poor ventilation, seating, lightning and noise can cause anxiety and decrease the output. The workplace with lack of privacy and communication barriers reduces motivation and productivity. A healthy work place which is made by using ergonomic furniture and accessories, lightning and functional design will diminish distress and improve production. Lack of praise, recognition and promotions in the workplace environment affect the motivation of employees. The presence of troublesome and negative employees also influences the employee's relationship with rest of colleagues in a negative way. As a result the absenteeism rate increases and they are less likely to continue the job. Relationship with the coworker, equal opportunities for promotions, responsibility and autonomy are also components of working environment which can affect the motivation. Management should improve working conditions in order to improve productivity and

motivate the employees. Since employees are not robots so the workplace should have a gym and lounge for the wellbeing of employees.

3.4.2 Career Development:

The lack of career development opportunities affects motivation and performance. If employees are offered opportunities for developing their careers by adapting skills, technologies and competencies essential for performance improvement and promotion, they will feel valued and motivated. Motivation is goal-oriented behavior. According to this concept employees can be motivated if their expectations concerning the goal accomplishment are linked with the specific actions on the part of management. Hence, employee motivation will increase with the realization that the course of action will not only lead to accomplishment of goals but results in greater chances for their promotions. The provision of opportunities for learning and growth of the organizations can motivate the employee. Organizations pay more attention on developing their employees and enhancing their motivational aspects like self-esteem and self-actualization. So, they can reach the most favorable performance. Equal opportunities for career advancement and “equitable” payment system and training can increase the motivation of employees.

3.4.3 Performance Management System:

The performance management motivates the employees by rewarding and compensating them for their efforts and contribution to the organization. It motivates the employees by providing career development and training opportunities. The motive behind the performance appraisal is to make the employees feel that the organizational success is because of their contribution. Hence, employees desire to contribute further increases because of recognizing their contribution through an efficient performance appraisal. The objective behind the fair performance appraisal is to motivate the workforce by rewarding the high performers. In this way, it stimulates the average and low performers to follow the high performers in expectation of rewards. It also communicates the employees that the organization is authentically concerned about their development. As a result the employee

commitment and motivation increases. The performance appraisal involves comparing the employee job behavior with standards and giving feedback on their improvement areas. This is how the process of performance appraisal contributes towards the employee motivation. Ultimately it leads to an inner commitment to improved performance.

3.4.4 Training:

There is a positive relationship between the training and employee motivation. The anticipation of future financial benefits, promotions and recognition motivates the employee to adapt new skills and technology at the training program. A training program that starts with a needs assessment and then inconsistency between actual and standard performance of trainee is analyzed. Later on training objective are made. After determining who wants the training and what sort of training should be given, the training program is implemented. The last step of the process is to evaluate the effectiveness of training programs. Training has a positive impact on the employee performance. The lack of training will result in ignorance of the manager about the skills, competencies and knowledge that are decisive for the performance improvement and motivation. Organizations conduct training programs due to dynamic changes in the business environment which increases the motivation of employees. As a result, the employees are promoted due to the training provided to them. Firms who spend more on training of the employee are more developed as the human resource training enhances the productivity more than any other resources.

Concluded that employees are motivated to be trained because they foresee an increase in their confidence level, self-esteem and career satisfaction. The training and development brings more future opportunities for promotion. An involvement of employees in the training program and determining their training needs gives them ownership of the training process and add value to the performance.

3.4.5 Empowerment & Participation:

Employee participation in decision making improves effectiveness and innovation and at the same time it enhances employee motivation and trust in the organization. An equal opportunity of participation in decision making can be effective in giving

employees a sense of pride and ownership. When the employees are empowered to take action, it gives them the ownership of their job. The empowerment helps them to take responsibility of their job and impact of their performance on the organization. This increases their self-motivation and self-esteem. Organizations can motivate the employee by providing chances to pursue their own thoughts by designing employee involvement programs like participative management and quality circles. The participative management will allow the employee to share their thoughts at one platform and participate in joint decision making. In quality circles, less than ten employees meet with their supervisor to discuss and control quality issues. This will create a strong sense of accomplishment and ultimately increases motivation and job satisfaction.

The motivation of the employee to voice their ideas is increased when given an opportunity to share their perspectives in participative decision making. An equal involvement and contribution in decision making can develop team effectiveness and results in a better decision. The working places which show positive reception for equal participation in decision making are less confrontational, more practical and encouraging of other staff. (yosaf.slatf m 2014)

3.5Measures:-

Traditionally, incentive systems based on financial measures have been the most common type. Mainly return on equity, return on capital employed or different profit measures have been used (Arvidsson 2004). To base incentives on financial measures has the advantage of using numbers already existing in the firm's accounting, which makes the method easy and inexpensive, but on the other hand it has to be taken into account that accounting values are regulated and often differ from real values (Merchant and van der Steede 2008). Arvidsson (2004) states that to solely rely on financial measures is a method that has been criticized during many years. The main criticism has been that there is a tendency for financial measures to encourage short-term actions, which damages the long-term performance of the organization.

Ax, Johansson and Kullvén (2005) also think that financial measures have too much focus on events in the past and that they include too much information to enable interpreting. Complementing the financial measures with non-financial measures is often carried out to handle this problem. Arvidsson (2004) thinks that by doing

so, an organization can focus on other areas such as customer satisfaction, markets shares and employee satisfaction, which has become more important for corporations.

3.6 Uncontrollable factors:-

Uncontrollable factors that affect a business are divided into three categories: economic and competitive, acts of nature and interdependencies. The first category affects profit since it is affected by many factors that change continuously, for example consumer demand, goods/service prices and factor costs for doing business. Depending on how much the manager can influence, he/she can adapt the operation through changing purchasing, staff planning and marketing to better suit the new conditions (Merchant and van der Steede 2008).

Acts of nature are, for example, extreme weather conditions, deaths of key employees, fires and accidents not caused by negligence. Events damaging one company through a warehouse that has been burned to the ground can on the other hand benefit for example construction companies. One way of minimizing the damage from acts of nature can be to ensure that good insurance protection exists for the company.

Interdependence exists when one organizational unit shares some kind of resource with other units or receives input from them. It can also exist when senior management does not approve lower level managers' decisions (Merchant and van der Steede 2008).

3.7 Job satisfaction:

The concept of job satisfaction has been developed in many ways by many different researchers and practitioners. One of the most widely used definitions in organizational research is that of Locke (1976), who defines job satisfaction as "a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences. Others have defined it as simply how content an individual is with his or her job; whether he or she likes the job or not. It is assessed at both the global level (whether or not the individual is satisfied with the job overall), or at the facet level (whether or not the individual is satisfied with different aspects of the job). Spector (1997) lists 14 common facets: Appreciation, Communication, Coworkers, Fringe benefits, Job conditions, Nature of the work, Organization, Personal growth, Policies and procedures, Promotion opportunities, Recognition, Security, and Supervision.

A more recent definition of the concept of job satisfaction is from Hulin and Judge (2003), who have noted that job satisfaction includes multidimensional psychological responses to an individual's job, and that these personal responses have cognitive (evaluative), affective (or emotional), and behavioral components. Job satisfaction scales vary in the extent to which they assess the affective feelings about the job or the cognitive assessment of the job. Affective job satisfaction is a subjective construct representing an emotional feeling individuals have about their job. Hence, affective job satisfaction for individuals reflects the degree of pleasure or happiness their job in general induces. Cognitive job satisfaction is a more objective and logical evaluation of various facets of a job. Cognitive job satisfaction can be one-dimensional if it comprises evaluation of just one facet of a job, such as pay or maternity leave, or multidimensional if two or more facets of a job are simultaneously evaluated. Cognitive job satisfaction does not assess the degree of pleasure or happiness that arises from specific job facets, but rather gauges the extent to which those job facets are judged by the job holder to be satisfactory in comparison with objectives they themselves set or with other jobs. While cognitive job satisfaction might help to bring about affective job satisfaction, the two constructs are distinct, not necessarily directly related, and have different antecedents and consequences.

Job satisfaction can also be seen within the broader context of the range of issues which affect an individual's experience of work, or their quality of working life. Job satisfaction can be understood in terms of its relationships with other key factors, such as general well-being, stress at work, control at work, home-work interface, and working conditions.

3.7.1 History:-

The assessment of job satisfaction through employee anonymous surveys became commonplace in the 1930s. Although prior to that time there was the beginning of interest in employee attitudes, there were only a handful of studies published. Latham and Budworth note that Uhrbrockin 1934 was one of the first psychologists to use the newly developed attitude measurement techniques to assess factory worker attitudes. They also note that in 1935 Hop pock conducted a study that focused explicitly on job

satisfaction that is affected by both the nature of the job and relationships with coworkers and supervisors.

3.7.2 Methods;-

Edwin A. Locke's Range of Affect Theory (1976) is arguably the most famous job satisfaction model. The main premise of this theory is that satisfaction is determined by a discrepancy between what one wants in a job and what one has in a job. Further, the theory states that how much one values a given facet of work (e.g. the degree of autonomy in a position) moderates how satisfied/dissatisfied one becomes when expectations are/aren't met. When a person values a particular facet of a job, his satisfaction is more greatly impacted both positively (when expectations are met) and negatively (when expectations are not met), compared to one who doesn't value that facet. To illustrate, if Employee A values autonomy in the workplace and Employee B is indifferent about autonomy, then Employee A would be more satisfied in a position that offers a high degree of autonomy and less satisfied in a position with little or no autonomy compared to Employee B. This theory also states that too much of a particular facet will produce stronger feelings of dissatisfaction the more a worker values that facet.

3.7.3 Dispositional approach:

The dispositional approach suggests that individuals vary in their tendency to be satisfied with their jobs, in other words, job satisfaction is to some extent an individual trait. This approach became a notable explanation of job satisfaction in light of evidence that job satisfaction tends to be stable over time and across careers and jobs. Research also indicates that identical twins raised apart have similar levels of job satisfaction.

A significant model that narrowed the scope of the dispositional approach was the Core Self-evaluations Model, proposed by Timothy A. Judge, Edwin A. Locke, and Cathy C. Durham in 1997. Judge et al. argued that there are four evaluations that determine one's disposition towards job satisfaction: self-esteem, general self-efficacy, locus of control, and neuroticism. This model states that higher levels of self-esteem (the value one places on his/her self) and general self-efficacy (the belief

in one's own competence) lead to higher work satisfaction. Having an internal locus of control (believing one has control over her\his own life, as opposed to outside forces having control) leads to higher job satisfaction. Finally, lower levels of neuroticism lead to higher job satisfaction.

3.7.4 Equity theory:

Equity Theory shows how a person views fairness in regard to social relationships such as with an employer. A person identifies the amount of input (things gained) from a relationship compared to the output (things given) to produce an input/output ratio. They then compare this ratio to the ratio of other people in deciding whether or not they have an equitable relationship. Equity Theory suggests that if an individual thinks there is an inequality between two social groups or individuals, the person is likely to be distressed because the ratio between the input and the output are not equal.

For example, consider two employees who work the same job and receive the same pay and benefits. If one individual gets a pay raise for doing the same work as the other, then the less benefited individual will become distressed in his workplace. If, on the other hand, both individuals get pay raises and new responsibilities, then the feeling of equity will be maintained.

Other psychologists have extended the equity theory, suggesting three behavioral response patterns to situations of perceived equity or inequity (Huseman, Hatfield, & Mile, 1987; O'Neil & Mone 1998). These three types are benevolent, equity sensitive, and entitled. The level by each type affects motivation, job satisfaction, and job performance.

A-Benevolent-Satisfied when they are under-rewarded compared with co-workers.

B-Equity sensitive-Believe everyone should be fairly rewarded.

C-Entitled-People believe that everything they receive is their just due.

3.7.5 Discrepancy theory:-

The concept of discrepancy theory is to explain the ultimate source of anxiety and dejection. An individual who has not fulfilled his responsibility feels the sense of anxiety and regret for not performing well. They will also feel dejection due to not being able to achieve their hopes and aspirations. According to this theory, all individuals will learn what their obligations and responsibilities are for a particular function, and if they fail to fulfill those obligations then they are punished. Over time, these duties and obligations consolidate to form an abstracted set of principles, designated as a self-guide. Agitation and anxiety are the main responses when an individual fails to achieve the obligation or responsibility. This theory also explains that if achievement of the obligations is obtained then the reward can be praise, approval, or love. These achievements and aspirations also form an abstracted set of principles, referred to as the ideal self-guide. When the individual fails to obtain these rewards, they begin to have feelings of dejection, disappointment, or even depression

3.7.6 Two-factor theory (motivator-hygiene theory):-

Frederick Herzberg's two-factor theory (also known as motivator-hygiene theory) attempts to explain satisfaction and motivation in the workplace. This theory states that satisfaction and dissatisfaction are driven by different factors – motivation and hygiene factors, respectively. An employee's motivation to work is continually related to job satisfaction of a subordinate. Motivation can be seen as an inner force that drives individuals to attain personal and organizational goals (Hoskinson, Porter, & Wrench). Motivating factors are those aspects of the job that make people want to perform, and provide people with satisfaction, for example achievement in work, recognition, promotion opportunities. These motivating factors are considered to be intrinsic to the job, or the work carried out. Hygiene factors include aspects of the working environment such as pay, company policies, supervisory practices, and other working conditions.

While Herzberg's model has stimulated much research, researchers have been unable to reliably empirically prove the model, with Hackman & Oldham suggesting that Herzberg's original formulation of the model may have been a methodological artifact. Furthermore, the theory does not consider individual differences, conversely

predicting all employees will react in an identical manner to changes in motivating/hygiene factors. Finally, the model has been criticized in that it does not specify how motivating/hygiene factors are to be measured.

3.7.8 Job characteristics theory:

Hackman & Oldham proposed the job characteristics model, which is widely used as a framework to study how particular job characteristics impact job outcomes, including job satisfaction. The five core job characteristics can be combined to form a motivating potential score (MPS) for a job, which can be used as an index of how likely a job is to affect an employee's attitudes and behaviors. Not everyone is equally affected by the MPS of a job. People who are high in growth need strength (the desire for autonomy, challenge and development of new skills on the job) are particularly affected by job characteristics. A meta-analysis of studies that assess the framework of the model provides some support for the validity of the JCM (yosaf.slatfm 2014)

3.8 Environmental factors:

One of the most important aspects of an individual's work in a modern organization concerns the management of communication demands that he or she encounters on the job. Demands can be characterized as a communication load, which refers to "the rate and complexity of communication inputs an individual must process in a particular time frame." Individuals in an organization can experience communication over-load and communication under- load which can affect their level of job satisfaction. Communication overload can occur when "an individual receives too many messages in a short period of time which can result in unprocessed information or when an individual faces more complex messages that are more difficult to process." Due to this process, "given an individual's style of work and motivation to complete a task, when more inputs exist than outputs, the individual perceives a condition of overload which can be positively or negatively related to job satisfaction. In comparison, communication under load can occur when messages or inputs are sent below the individual's ability to process them." According to the ideas of communication over-load and under-load, if an individual does not receive enough input on the job or is unsuccessful in processing these inputs, the individual is more

likely to become dissatisfied, aggravated, and unhappy with their work which leads to a low level of job satisfaction.

3.8.1 Superior-subordinate communication:-

Superior-subordinate communication is an important influence on job satisfaction in the workplace. The way in which subordinates perceive a supervisor's behavior can positively or negatively influence job satisfaction. Communication behavior such as facial expression, eye contact, vocal expression, and body movement is crucial to the superior-subordinate relationship (Teven). Nonverbal messages play a central role in interpersonal interactions with respect to impression formation, deception, attraction, social influence, and emotional. Nonverbal immediacy from the supervisor helps to increase interpersonal involvement with their subordinates impacting job satisfaction. The manner in which supervisors communicate with their subordinates non-verbally may be more important than the verbal content (Teven). Individuals who dislike and think negatively about their supervisor are less willing to communicate or have motivation to work whereas individuals who like and think positively of their supervisor are more likely to communicate and are satisfied with their job and work environment. A supervisor who uses nonverbal immediacy, friendliness, and open communication lines is more likely to receive positive feedback and high job satisfaction from a subordinate. Conversely, a supervisor who is antisocial, unfriendly, and unwilling to communicate will naturally receive negative feedback and create low job satisfaction in their subordinates in the workplace.

3.8.2 Strategic employee recognition:

A Watson Wyatt Worldwide study identified a positive outcome between a collegial and flexible work environment and an increase in shareholder value. Suggesting that employee satisfaction is directly related to financial gain. Over 40 percent of the companies listed in the top 100 of Fortune magazines, "America's Best Companies to Work For" also appear on the Fortune 500. It is possible that successful workers enjoy working at successful companies, however, the Watson Wyatt Worldwide Human Capital Index study claims that effective human resources practices, such as employee recognition programs, lead to positive financial outcomes more often than positive financial outcomes lead to good practices.

Employee recognition is not only about gifts and points. It's about changing the corporate culture in order to meet goals and initiatives and most importantly to connect employees to the company's core values and beliefs. Strategic employee recognition is seen as the most important program not only to improve employee retention and motivation but also to positively influence the financial situation. The difference between the traditional approach (gifts and points) and strategic recognition is the ability to serve as a serious business influencer that can advance a company's strategic objectives in a measurable way. "The vast majority of companies want to be innovative, coming up with new products, business models and better ways of doing things. However, innovation is not so easy to achieve. A CEO cannot just order it, and so it will be. You have to carefully manage an organization so that, over time, innovations will emerge.

3.9 Individual factors:

3.9.1 Emotion:

Mood and emotions at work are related to job satisfaction. Moods tend to be longer lasting but often weaker states of uncertain origin, while emotions are often more intense, short-lived and have a clear object or cause.

Frequency of experiencing net positive emotion will be a better predictor of overall job satisfaction than will intensity of positive emotion when it is experienced.

Emotion work (or emotion management) refers to various types of efforts to manage emotional states and displays. Emotion management includes all of the conscious and unconscious efforts to increase, maintain, or decrease one or more components of an emotion. Although early studies of the consequences of emotional work emphasized its harmful effects on workers, studies of workers in a variety of occupations suggest that the consequences of emotional work are not uniformly negative.

It was found that suppression of unpleasant emotions decreases job satisfaction and the amplification of pleasant emotions increases job satisfaction.

The understanding of how emotion regulation relates to job satisfaction concerns two models:-

A-Emotional dissonance:-Emotional dissonance is a state of discrepancy between public displays of emotions and internal experiences of emotions that often follows the process of emotion regulation. Emotional dissonance is associated with high emotional exhaustion, low organizational commitment, and low job satisfaction.

B- Social interaction model: Taking the social interaction perspective, workers' emotion regulation might beget responses from others during interpersonal encounters that subsequently impact their own job satisfaction. For example: The accumulation of favorable responses to displays of pleasant emotions might positively affect job satisfaction.(Al ani 2007)

Chapter four

Analysis and Discussion

Chapter four

Analysis and Discussion

4-1 Introduction to the Field Study:-

Study design:

This is a descriptive exploratory questionnaire based study.

A pre-structured, open to answer, self-administered and pre-piloted questionnaire consisting of (34) questions was used to collect data.

The first five (5) questions are about the demographic characteristics of the participants. There are (6) axis that consists of total of (34) are closed ended questions.

Study area (setting):

The study was carried out at (50) Engineers in Khartoum State, Sudan.

Variables:

Age, Qualification, Years of Experience, Place of work, Employment sector.

Sample size and sampling:

The sample size was calculated at 95% confidence level and 5% confidence interval. Fifty (50) potential participants' engineers are randomly selected from all the companies (private or governmental) in Khartoum state.

All the potential participants were pre -informed by the researcher herself, of the main objective of the study and were clearly assured of its anonymity, and kindly requested to participate.

4.2 Study subject: selection and definition:

Data collection method and tools:

The pretested, pre-structured and pre-piloted questionnaire forms were used as the data collection tools. The questionnaire ,was handed over and collected back by the researcher herself, to all the randomly selected potential participant engineers hand-to-hand from selected from all the companies (private or governmental) in Khartoum state in the period from (July –November /2017) .The researcher used to distribute the questionnaire forms and collected them back if immediately filled. If not, then, she usually comes back at the time chosen by the potential participant, him/or herself. All potential participants were informed of the objectives of the study, and they were informed that they have the absolute freedom of decision, to participate or refrain. They were also informed that their participation, by filling the questionnaire form, will be considered as a free informed consent. The questionnaire was composed of two main parts:

1. Part one which consists of six (5) questions is used to collect demographic characteristics of the engineers (Architect).
2. Part two, Axis which consisted of thirty four (34) questions, was used to collect participants' engineers on the administrative motivation, the financial rewards, non-financial rewards, Incentives that effect on productivity and job satisfaction.

Criteria of inclusion

All the registered Engineers at Sudan Engineering Council.

Criteria of exclusion

None.

4.3 Data management and statistical analysis.

Data was analyzed using Statistical Package for Social Sciences (SPSS) version (20) for windows. Association between participants' demographic

characteristics variables, and variables related to participant participants' engineers(Architect)administrative motivation, the financial rewards, non-financial rewards, Incentives that effect on productivity and job satisfaction were assessed using Chi-Square Tests. Values were compared by independent sample t- test and $P < 0.05$ was considered as significant.

4.4 Ethical Considerations:

The entire number of the randomly selected engineers (Architect) included in the study was informed of the objectives and the nature of the research, and was strongly requested to participate. They were also informed that participation is absolutely free. Verbal informed consent was obtained from all the potential participants' engineer, prior to handing over of the questionnaire forms.

- **First :personal Data:**

Table (1) shows frequency Distribution according to the age:

Age	Frequency	Percent
less than 30	18	36
31 and less than 40	27	54
41 and less than 50	3	6
50 and above	2	4
Total	50	100

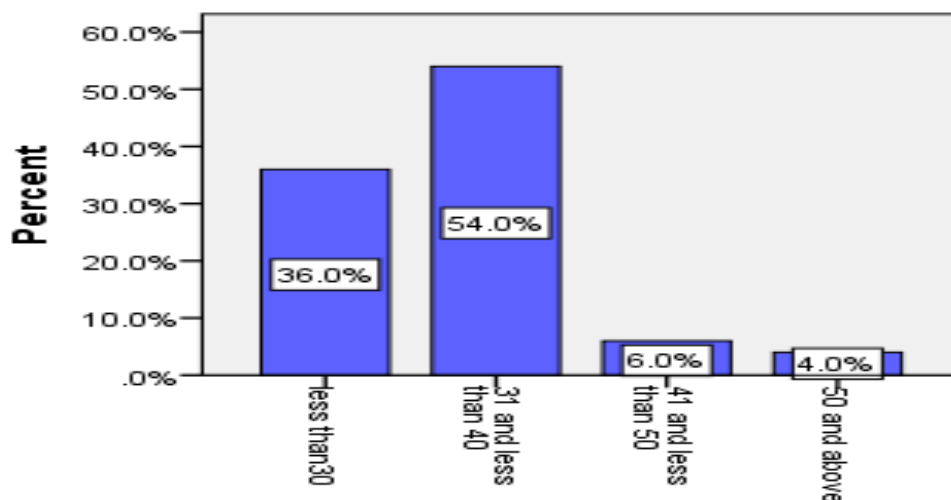


Fig (1)

Table & Fig (1) shows frequency distribution of sample according to Age. 18 out of 50 (36%) their age (less than 30) , 27 Out of 50 (54%) their age (31 and less than 40), 3 out of 50 (6%) their age (41 and less than 50) and 2 Out of 50 (4%) their age (50 and above).

Table (2):- shows frequency Distribution according to the qualification.

Qualification	Frequency	Percent
Diploma	2	4
Bachelor	24	48
Master	23	46
PhD	1	2
Total	50	100

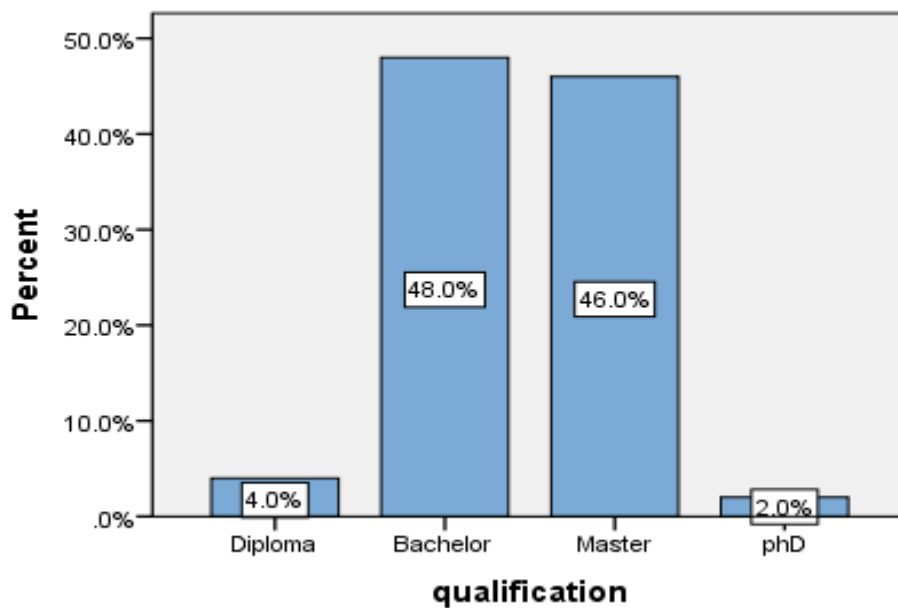


Fig (2)

Table & Fig (2) shows frequency distribution of sample according to qualification. 2 out of 50 (4%) have (Diploma), 24 Out of 50 (48%) have (Bachelor), 23 out of 50 (46%) have (Master) and 1 Out of 50 (2%) have (PhD).

Table (3): shows frequency Distribution according to the year of experience.

Experience	Frequency	Percent
Less than 5 years	10	20
6 To 11 years	22	44
11 To 15 years	15	30
More than 15 years	3	6
Total	50	100

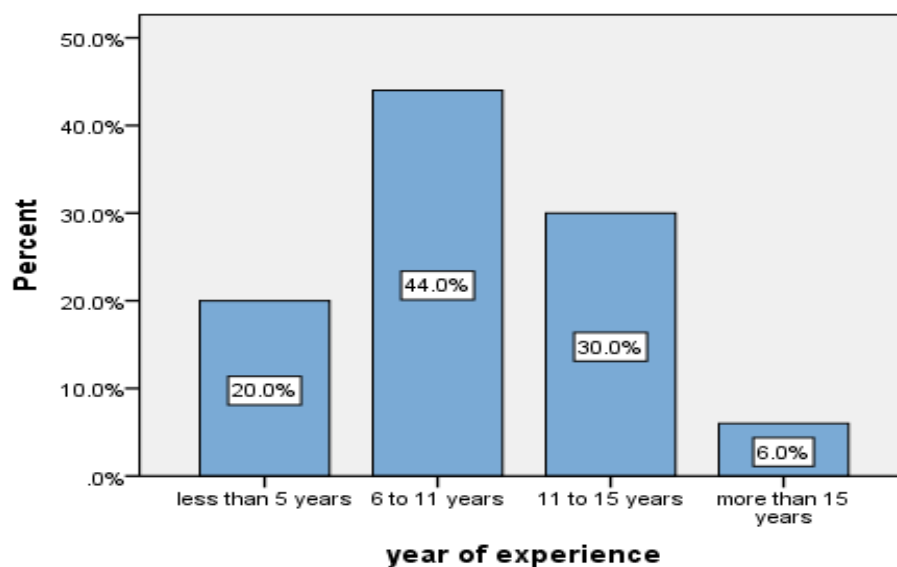


Fig (3)

Table & Fig (3) shows frequency distribution of sample according to year of experience. 10 out of 50 (20%) their experience (less than 5 years), 22 Out of 50 (44%) their experience (6 to 11 years), 15 out of 50 (30%) their experience (11 to 15 years) and 3 Out of 50 (6%) their experience (more than 15 years).

Table (4): shows frequency Distribution according to the Type of work.

Type of work	Frequency	Percent
Governmental	5	10
Private	45	90
Total	50	100

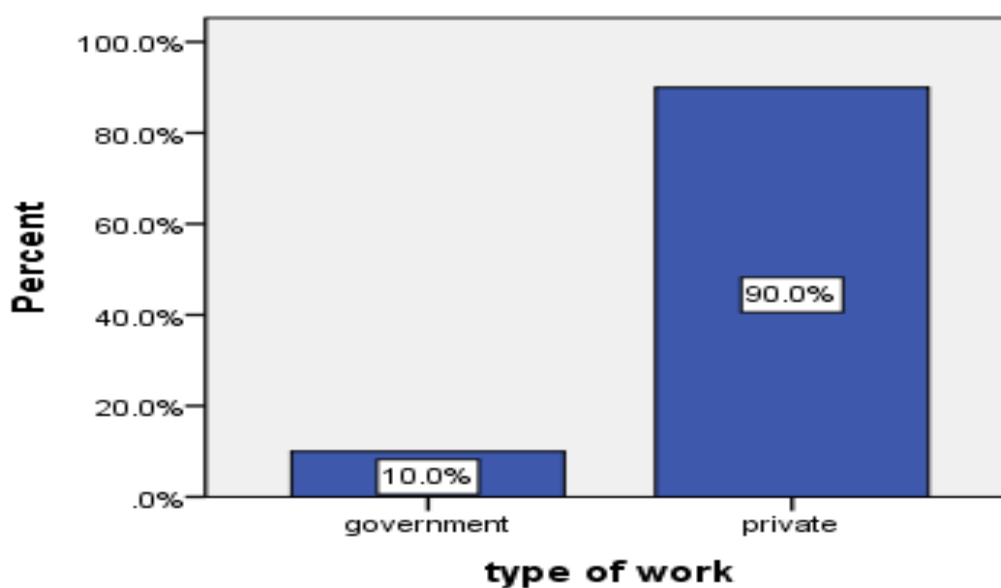


Fig (4)

Table & Fig (5) shows frequency distribution of sample according to type of work . 5 out of 50 (10%) work in (Governmental) sector and 45 Out of 50 (90%) work in (Private) sector.

Table (5): shows frequency Distribution according to the work place.

Type of work	Frequency	Percent
Site	8	16
Office	39	78
Other	3	6
Total	50	100

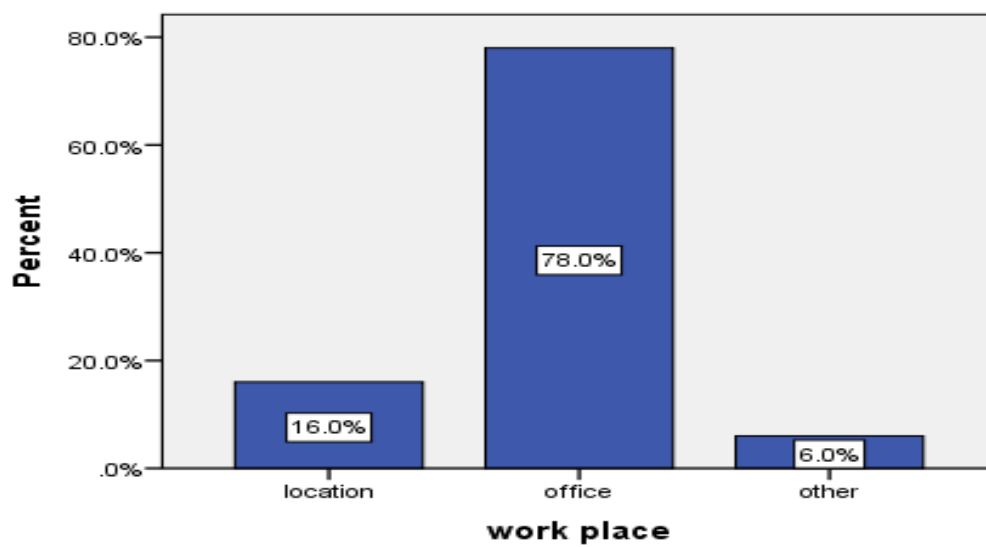


Fig (5)

Table & Fig (5): shows frequency distribution of sample according to work place. 8 out of 50 (16%) were work in site), 39 Out of 50 (78%) were work in (office) and 3 out of 50 (6%) were work in (other).

Second: Analysis of Axis:

**Table (6): shows Frequency distribution for the first Axis
(Administrative motivation)**

Answer	YES		NO	
	N	%	N	%
Is there an official part of the motivation within your organization	3	6	47	94
Do you think the motivation has a psychological impact on the employee	48	96	2	4
Do you think the motivation increases the productivity of employee thus the productivity of the institution	49	98	1	2

Table (6) show the answer for responses about the first axis (Administrative motivation) as follow:

- For (Is there an official part of the motivation within your organization) 3 out of 50 (6%) their answer (yes) and 47 out of 50 (94%) their answer (No).
- For (Do you think the motivation has a psychological impact on the employee) 48 out of 50 (96%) their answer (yes) and 2 out of 50 (4%) their answer (No).
- For (Do you think the motivation increases the productivity of employee thus the productivity of the institution) 49 out of 50 (98%) their answer (yes) and 1 out of 50 (2%) their answer (No).

Table (7): shows Frequency distribution for the second axis (the financial motivation).

Answer	Always		Sometimes		NO	
	N	%	N	%	N	%
Does your the institution gives transportation allowance or provide transportation for you?	18	36	6	12	26	52
Does your organization gives you a housing allowance?	4	8	1	2	45	90
Does your organization gives you travel tickets allowance?	2	4	4	8	44	88
Is your organization gives you a periodic bonuses?	2	4	42	84	6	12
Does your organization provide you with health insurance?	39	78	1	2	10	20
Does your organization gives you incentive to work accomplished?	0	0	30	60	20	40
Does your organization provide you loan service?	22	44	19	38	9	18
Is there in your job an additional work?	38	76	7	14	5	10

Table (7): show the answer for responses about the second axis (physical motivation) as follow:

- For (Does your institution gives transportation allowance or provide transportation for you), 18 out of 50 (36%) their answer (always), 6 out of 50 (12%) their answer (sometimes) and 26 out 50 (52%) their answer (no).
- For (Does your organization gives you a housing allowance), 4 out of 50 (8%) their answer (always), 1 out of 50 (2%) their answer (sometimes) and 45 out 50 (90%) their answer (no).
- For (Does your organization gives you travel tickets allowance), 2 out of 50 (4%) their answer (always), 4 out of 50 (8%) their answer (sometimes) and 44 out 50 (88%) their answer (no).
- For (Is your organization gives you a periodic bonuses), 2 out of 50 (4%) their answer (always), 42 out of 50 (84%) their answer (sometimes) and 6 out 50 (12%) their answer (no).
- For (Does your organization provide you with health insurance), 39 out of 50 (78%) their answer (always), 1 out of 50 (2%) their answer (sometimes) and 10 out 50 (20%) their answer (no).

- For (Does your organization gives you incentive to work accomplished), 0 out of 50 (0%) their answer (always), 30 out of 50 (60%) their answer (sometimes) and 20 out 50 (40%) their answer (no).
- For (Does your organization provide you loan service), 22 out of 50 (44%) their answer (always), 19 out of 50 (38%) their answer (sometimes) and 9 out 50 (18%) their answer (no).
- For (Is there in your job an additional work), 38out of 50 (76%) their answer (always), 7 out of 50 (14%) their answer (sometimes) and 5 out 50 (10%) their answer (no).

Table (8): shows Frequency distribution for the third axis (the moral motivation).

Answer	Always		Sometimes		NO	
	N	%	N	%	N	%
Do you think your current job is Suitable for you?	11	22	17	34	22	44
Are you involved in the decision-making within your organization?	31	62	18	36	1	2
Does the door is open for submission of proposals within your organization	29	58	20	40	1	2
Is your name written before in the board of honor	2	4	9	18	39	78
Do you get any medals?	1	2	1	2	48	96
Do you Nominated to internal or external training courses?	1	2	7	14	42	84

Table (8) shows the answer for responses about the second axis (moral motivation) as follow:

- For (Do you think your current job is Suitable for you) \, 11 out of 50 (22%) their answer (always), 17 out of 50 (34%) their answer (sometimes) and 22 out 50 (44%) their answer (no).
- For (Are you involved in the decision-making within your organization), 31 out of 50 (62%) their answer (always), 18 out of 50 (36%) their answer (sometimes) and 1 out 50 (2%) their answer (no).
- For (Does the door is open for submission of proposals within your organization), 29 out of 50 (58%) their answer (always), 20 out of 50 (40%) their answer (sometimes) and 1 out 50 (2%) their answer (no).

- For (Is your name written before in the board of honor), 2 out of 50 (4%) their answer (always), 9 out of 50 (18%) their answer (sometimes) and 39 out 50 (78%) their answer (no).
- For (Do you get any medals), 1out of 50 (2%) their answer (always), 1 out of 50 (2%) their answer (sometimes) and 48out 50 (96%) their answer (no).
- For (Do you Nominated to internal or external training courses), 1out of 50 (2%) their answer (always), 7 out of 50 (14%) their answer (sometimes) and 42out 50 (84%) their answer (no).

Table (9): shows Frequency distribution for the fourth axis (motivations affect productivity).

Answer	Always		Sometimes		NO	
	N	%	N	%	N	%
Do you think that you take appropriate salary?	3	6	6	12	41	82
Do you think the appropriate incentive salaries motivating a sufficient productivity?	44	88	6	12	0	0
Do you think that there is justice in the treatment of employees?	6	12	40	80	4	8
Does your organization provide you with the appropriate atmosphere to work, e.g (lighting, ventilation and other services)?	42	84	5	10	3	6

Table (9) shows the answer for responses about the fourth axis (motivations affect productivity) as follow:

- For (Do you think that you take appropriate salary), 3out of 50 (6%) their answer (always), 6 out of 50 (12%) their answer (sometimes) and 41 out 50 (82%) their answer (no).
- For (Do you think the appropriate incentive salaries motivating a sufficient productivity), 44 out of 50 (88%) their answer (always), 6 out of 50 (12%) their answer (sometimes) and 0 out 50 (0%) their answer (no).
- For (Do you think that there is justice in the treatment of employees), 6 out of 50 (12%) their answer (always), 40 out of 50 (80%) their answer (sometimes) and 4 out 50 (8%) their answer (no).
- For (Does your organization provide you with the appropriate atmosphere to work e.g. (lighting, ventilation and other services), 42 out of 50 (84%) their

answer (always), 5 out of 50 (10%) their answer (sometimes) and 3 out 50 (6%) their answer (no).

Table (10): shows Frequency distribution For the Fifth axis (job satisfaction).

Answer	Very satisfied		Satisfied to some extent		Dissatisfied	
	N	%	N	%	N	%
Are you satisfied with the style of supervision and leadership in the work?	5	10	28	56	17	34
Are you satisfied with the working hours?	16	32	32	64	2	4
Are you satisfied with the work environment?	18	36	30	60	2	4
Are you satisfied with your current job?	19	38	30	60	1	2
Are you satisfied with the basics and regulations work?	3	6	32	60	18	34
Are you satisfied with the financial incentives?	2	4	29	58	19	38
Are you satisfied with the moral incentives?	4	8	31	62	15	30
Are you satisfied with motivation opportunities?	4	8	29	58	17	34

Table (10): shows the answer for responses about the fifth axis (job satisfaction) as follow:

- For (Are you satisfied with the style of supervision and leadership in the work), 5 out of 50 (10%) their answer (Very satisfied), 28 out of 50 (56%) their answer (Satisfied to some extent) and 17 out 50 (34%) their answer (Dissatisfied).
- For (Are you satisfied with the working hours), 16 out of 50 (32%) their answer (Very satisfied), 32 out of 50 (64%) their answer (Satisfied to some extent) and 2 out 50 (4%) their answer (Dissatisfied).
- For (Are you satisfied with the work environment), 18 out of 50 (36%) their answer (Very satisfied), 30 out of 50 (60%) their answer (Satisfied to some extent) and 2 out 50 (4%) their answer (Dissatisfied).
- For (Are you satisfied with your current job), 19 out of 50 (38%) their answer (Very satisfied), 30 out of 50 (60%) their answer (Satisfied to some extent) and 1 out 50 (2%) their answer (Dissatisfied).
- For (Are you satisfied with the basics and regulations work), 3 out of 50 (6%) their answer (Very satisfied), 32 out of 50 (64%) their answer (Satisfied to some extent) and 16 out 50 (32%) their answer (Dissatisfied).

- For (Are you satisfied with the financial incentives), 2 out of 50 (4%) their answer (Very satisfied), 29 out of 50 (58%) their answer (Satisfied to some extent) and 19 out 50 (38%) their answer (Dissatisfied).
- For (Are you satisfied with the moral incentives), 4 out of 50 (8%) their answer (Very satisfied), 31 out of 50 (62%) their answer (Satisfied to some extent) and 15 out 50 (30%) their answer (Dissatisfied).
- For (Are you satisfied with motivation opportunities) , 4 out of 50 (8%) their answer (Very satisfied) , 29 out of 50 (58%) their answer (Satisfied to some extent) and 17 out 50 (34%) their answer (Dissatisfied).

Third: Test of correlation between variables:

Table (11): show correlation test between age and administrative motivation.

Pearson's r	Sig
0.069	0.636

Table (11) showed non-significant differences from Correlation test (p=0.636) between age and administrative motivation.

Table (12): show correlation test between qualification and financial motivation

Pearson's r	Sig
0.498	0.000

Table (12) showed significant differences from Correlation test (p=0.000) between qualification and financial motivation.

Table (13): show correlation test between experience and motivations affect productivity

Pearson's r	Sig
0.061	0.675

Table (13) showed non- significant differences from Correlation test (p=0.675) between experience and motivations affect productivity.

Table (14): show correlation test between Types of work the financial motivation.

Pearson's r	Sig
0.108	0.454

Table (14) showed non- significant differences from Correlation test (p=0.454) between Type of work the financial motivation.

Table (15): show correlation test between Types of work the moral motivation.

Pearson's r	Sig
0.078	0.588

Table (15) showed non- significant differences from Correlation test (p=0.588) between Type of work the non-financial motivation.

Table (16): show correlation test between year of experience job satisfaction

Pearson's r	Sig
0.090	0.536

Table (16) showed non- significant differences from Correlation test (p=0.536) between year of experience job satisfaction.

Table (17): show correlation test between types of work motivations affect productivity

Pearson's r	Sig
0.166	0.250

Table (17) showed non- significant differences from Correlation test (p=0.250) between type of work motivations affect productivity

Chapter Five

Conclusion and Recommendations

Chapter five

Conclusion and Recommendations

5.1: Conclusion:

In this study analysis shows that is no specific department motivation management in companies in Sudan but there is a quit some financial motivating gave to the employee without measuring and the come in delimited times in some government and private institutions, but it's not enough to settle and discharge their needs and requires, and not considered valuates for the employees.

Therefore the financial motivations should be measured and studied carefully for the employees considering their needs and requires, also to know their desires so accordingly leads to increasing the production and desire to work in very noticeable and accurate way, for the immaterial motivations there in not enough of it and not valuable as it should be, because it's also covers the morals of the employees that help them to mentally and spiritually ready to work hard to continue accomplishing because they are valued and respected by their mangers and other co-workers so the company or the firm earn their loyalty.

5.2 Recommendations:

The most successful construction companies will be those that Implement sophisticated motivation programs and that maintain good communications between managers and employees.

Motivation programs should be designed with consideration given to the following aspects:

1. Find ways to learn about the employees. Learn what needs They have and develop an understanding of their personality, skills, and abilities.
2. Establish quality circles.
3. Provide ample training opportunities.
4. Identify goals and objectives, Provide feedback and Link organizational objectives with individual needs.
5. Structure jobs so that they are challenging, provide variety, and lead to self-regulation.

6. Improve productivity measurement indexes and Keep the work force informed as to productivity.
7. Attempt to group crews according to worker preference.
8. Where possible provide flexible working hours.
9. Provide worker and crew recognition.
10. Exercise caution when using financial incentive programs above all, in regards to money, insure that pay and fringe benefits are at least adequate.
11. Provide profit sharing opportunities as an incentive program, the profits can be prorated based on the crew's performance, crews that had a positive impact on the project schedule and delivered a quality product free from rework or warranty claims would share in the cost savings and generated profit, the program would be similar in fashion to contracts that provide time incentives.
12. On union type projects, work closely with the unions to establish job security, the various construction firms can work with the local unions to establish a minimum workforce that is guaranteed employment on construction projects in the geographical area. Workers would be accepted into this work force based on demonstrated performance.
13. Query the work force through use of surveys to identify demotivates affecting the work.

5.3 Recommendations for Future Study:

Job security is a human need that has been detailed in all the need theories. Providing for job security in the construction industry is difficult. Often construction workers are required to pick up their belongings and their families and move to a new location that provides construction job opportunities. New methods to improve this shortfall should be developed and analyzed. This will have to be a common effort among owners, contractors, and unions.

Another area that needs to be evaluated is the restructuring of unions in the construction industry. Unions serve an important purpose that cannot be and should not be discontinued. Unions have the potential to eliminate demotivates and provide for the development of one area that will continue to present a problem on the motivation cycle is job effective motivation programs. In the construction industry, more so than in other industries, unions are the means of hiring. They are a means to

providing job security. They can be structured to work closely with project management to develop work schedules, implement motivation programs, and provide for job security. The practicality of this proposal is uncertain. The only way to view its merits is to establish a prototype program and monitor it over a period of time, probably a five year period.

5.4 References:

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Appendix

Sudan University of Science and Technology
College of Engineering
Department of architecture
Master of Building Services
Questionnaire

Good Greetings:

I request you to fill in the questionnaire attached to the information requested, which aims To determine{ Impact of motivation on engineers productivity in Construction industry in Khartoum state- Sudan}, note that this study is a supplementary search for a master's degree in Building Services.

First: Personal data

Please put sign (√) in front of the correct answer: -

1- Age:

- a / Less than 30 b/31 and less than 40
c / 41 and less than 50 d / 50 and above

2- Qualification:

- a / Diploma b/ Bachelor c / Master
d / PhD e/ Other

3- Years of Experience:

- a/ less than 5 years b / From 6 to 11 years
c / From 11 years up to 15 years d / More than 15 years

4- Place of work:

- a/ Office b / Site c/ Other

5-Employment Sector:

- a / a governmental b/ private

Second resolution:

Put sign (√) in front of option you see fit through the following options:

No.	The first axis: Administrative motivation	Yes	No
1-	Is there an official part of the motivation within your organization?		
2-	Do you think the motivation has a psychological impact on the employee?		
3-	Do you think the motivation increases the productivity of employee thus the productivity of the institution?		

No	The second axis: the financial rewards	Always	Sometimes	No
1-	Does your the institution gives transportation allowance or provide transportation for you?			
2-	Does your organization give you a housing allowance?			
3-	Does your organization give you a travel tickets allowance?			
4-	Is your organization gives you a periodic bonuses?			
5-	Does your organization provide you with health insurance?			
6-	Does your organization gives you incentive to work accomplished?			
7-	Does your organization provide you loan service?			
8-	Is there in your job an additional work?			

No	Axis III: non-financial rewards	always	sometimes	No
1-	Do you think your current job is suitable for you?			
2-	Are you involved in the decision-making within your organization?			
3-	Does the door is open for submission of proposals within your organization?			
4-	Is your name written before in the board of honor?			
5-	Do you get any medals?			
6-	Do you Nominated to internal or external training courses?			

No	Axis IV: Incentives that affection productivity?	Always	sometimes	not
1-	Do you think that you take appropriate salary?			
2-	Do you think the appropriate incentive salary is motivating a sufficient productivity?			
3-	Do you think that there is justice in the treatment of employees?			
4-	Does your organization provide you with the appropriate atmosphere to work, e.g. (lighting, ventilation and other services)?			

No.	Axis V: job satisfaction	Very satisfied	Satisfied to some extent	Not satisfied at all
1-	Are you satisfied with the style of supervision and leadership in the work?			
2-	Are you satisfied with the working hours?			
3-	Are you satisfied with the work environment?			
4-	Are you satisfied with your position job?			
5-	Are you satisfied with the basics and regulations work?			
6-	Are you satisfied with the financial rewards?			
7-	Are you satisfied with the non-financial rewards?			
8-	Are you satisfied with promotion opportunities?			