Sudan University of Science and Technology

College of Graduate Studies

Optimum Utilization of Human Recourses by Construction Companies in Sudan

التوظيف الأمثل للكادر البشري في شركات التشييد في السودان

A Thesis Submitted in Partial Fulfilment of M.Sc Degree in

Civil Engineering

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الآية

قال الله تعالى:

[... رَى ٱللَّهُ عَمَلَكُمْ وَرَسُولُهُ وَٱلْمُؤْمِنُونَ ... ٱلْغَيْبِ وَٱلشَّهَادَةِ فَيُنَبِّئُكُم بِمَا كُنتُمْ تَعْمَلُونَ]

صدق الله العظيم

سورة التوبة الآية "105"

I

Dedication

To my husband, who supports me for moving forward always.

To my mother, the main source of my power.

To the spirit of my father that always flapping around me and gives me the safety.

To my kids, whom I have beautiful life with them.

Acknowledgment

Thanks to everyone who teach me and thank everyone

Contributed to success of this research and thank my Teacher

Dr. Sal ah El dEEn A.AZIZ AGBAn

To accept supervision of this research.

Abstract

In this research was to highlight the most important sources possessed by any organization to achieve its desired image and increase their rate of production and increase their profits and expand their activities, making the construction industry in Sudan industry with many benefits such as opening business opportunities for human cadres in various specializations and take advantage of them and their energy and experience to the labor market in Sudan and work the establishment of projects that were infrastructure development or construction of any other increase of the country's economy and therefore projects and brought prosperity.

The most important factors that have been focused on the house around the focus of our study is to take advantage of the human cadre in construction companies in Sudan, which in turn leads to customer satisfaction, "the customer" and this can only be achieved by satisfying the employee and ensure institutional loyalty and satisfaction than to play and meet basic Aanaajth from food, drink and training and treatment, security and otherwise to ensure the purity of mind and increased productivity and a better representation of the enterprise when dealing with the client or "client," which deals with the institution which increases their profits and guarantee Continuity and by placing an administrative system that allows employees to know their rights and obligations in a clear and placing a functional structure ensures his career sequence without taking into account or favoritism and the work of the structure of my salary guarantees take what he deserves from salary and bonuses and allowances, each according to his qualifications and years of experience and the type of work done by pre-Mdi bear the

responsibility for that is his social status and work performance reports give everyone his right.

It was through the work of a questionnaire in Arabic and English were distributed the questionnaire in Arabic in order to be answers in the questionnaire are clear and not subject to the possibility of lack of understanding of the question of the receiver and the number of distributed questionnaires number 75 questionnaire was obtained on 69 questionnaire analyzed by Statically Package program of Social Science (SPSS)

All the sections of the questionnaire about the research hypotheses, namely: -

1. The evolution of the organization depends on the strong structure system and clarity the job description for employees.
2. The evolution of the organization depends on the clarity of the rights and obligations of an employee's by legal contract.
3. If available basic employee's needs of food, drink, accommodation, the deportation and training lead to employee loyalty to the institution.
4. If available the basic needs of the employee lead to the development of vocational.
5. If available the basic needs of the employee lead to please him, which increases the rate of production.
6. Development of the country obliquely, the evolution of institutions

Questionnaires were distributed to all groups working in the field of construction industry in Sudan, particularly in the capital Khartoum, it was limited to only search for engineers because it targets the most important sources of the institution which is the workforce.

ملخص الرسالة

في هذا البحث تم تسليط الضوء علي أهم المصادر التي تمتلكها أي مؤسسة لتحقيق أهدافها بالصورة المرجوة وزيادة معدلات إنتاجها وزيادة أرباحها وتوسع نشاطها مما يجعل من صناعة التشييد بالسودان صناعة ذات فوائد عديدة كفتح فرص عمل للكوادر البشرية بمختلف تخصصاتها والاستفادة منهم ومن طاقاتهم وخبراتهم بسوق العمل بالسودان والعمل علي إنشاء مشاريع ان كانت بنية تحتية أو أي مشاريع تشييد تنموية أخري تزيد من اقتصاد البلاد وبالتالي ازدهارها ورفعتها .

ومن اهم العوامل التي تم التركيز عليها ودار حولها محور دراستنا هو الاستفادة من الكادر البشري في شركات التشييد بالسودان وهو يؤدي بدوره الي إرضاء العميل "الزبون" وذلك لا يتم إلا عن طريق إرضاء الموظف وضمان ولائه المؤسسي والرضا مما يؤديه وتلبية إحتياجته الأساسية من ماكل ومشرب وتدريب وعلاج وأمن وخلافه لضمان صفاء ذهنه وزيادة إنتاجيته ويمثل المؤسسة خير تمثيل عند تعامله مع العميل أو "الزبون" الذي يتعامل مع المؤسسة مما يزيد من أرباحها وضمان إستمراريتها وذلك بوضع نظام إداري يسمح للموظف بمعرفة حقوقه وواجباته بصورة واضحة وذلك بوضع هيكل وظيفي يضمن له تسلسله الوظيفي دون مراعاة أو محسوبية وعمل هيكل راتبي يضمن أخذ ما يستحقة من مرتب وعلاوات وبدلات كل حسب مؤهلاته وسنين خبرته ونوع الأعمال التي قام بها مسبقا ومدئ تحمله للمسؤولية التي تقع علي عاتقه وحالته الإجتماعية وعمل تقارير اداء تعطي كل ذي حق حقه .

وكان ذلك من خلال عمل استبيان باللغتين العربية والانجليزية وتم توزيع الاستبيان باللغة العربية حتي تكون الإجابات في الاستبيان واضحة وغير خاضعة لاحتمال عدم فهم السؤال من المتلقي وكان عدد الاستبيانات الموزعة عددها75 استبيان تم التحصل علي69 استبيان خضعت للتحليل بواسطة برنامج Statically Package of Social Science (SPSS)

وكانت جميع أقسام الاستبيان تدور حول فرضيات البحث وهي :-

1. تطور المؤسسة يعتمد علي وضع هيكلة وظيفية واضحة
2. تطور المؤسسة يعتمد علي وضوح حقوق والتزامات الموظف بصورة مكاتبيه قانونية
3. تلبية الاحتياجات الأساسية من مأكل ومشرب وسكن وترحيل وتدريب تؤدي الي ولاء الموظف للمؤسسة

4. تلبية الاحتياجات الأساسية للموظف تؤدي الي تطوره المهني

5. تلبية الاحتياجات الاساسية للموظف تؤدي الي إرضائه مما يزيد من معدل إنتاجه

6. تطور البلاد يتأتى بتطور مؤسساتها

وتم توزيع الاستبيانات علي جميع الفئات العاملة بمجال صناعة التشييد بالسودان وتحديدا بالعاصمة الخرطوم ولم ينحصر البحث فقط علي المهندسين لأنه يستهدف أهم مصادر المؤسسة وهي القوي العاملة.

Table of Content

CHAPTER 1: Introduction

CHAPTER 2: Literature Review

CHAPTER 3: Research Methodology

CHAPTER 4: Result Analysis

CHAPTER 5: Conclusions and Recommendations

List of Table

List of Figure

CHAPTER 1

Introduction

1-1 <u>Introduction</u>

The construction industry has come into existence since the early days of civilization. The existence of construction industry began when people trade their services for something else with great value. As the years passed the trading of services become popular until such time that they accept money for payment in doing construction work. Even during the end of World War II the construction industry has flourished.

Also find Momentous Advancement of the Construction Industry because of the technological development the industrial revolutions begin as well as the tremendous growth of the population all over the world. However, due to the global recession the growth of the construction industry was stunted. Nevertheless, it does not mean that it will not again flourish in the future because it is a significant part of the development of the society. Obviously, factories will not come into existence without the construction industry. It serves as the backbone of the different factories that producing various products. In like manner, the construction industry is also associated to the advancement of the architectural sector.(11)

On the other hand, advancement of one sector of the industry directly affects the construction industry. In addition, the industry covers different business activities and interests. Likewise, the industry is composed of clients, designers, suppliers as well as contractors. These all play important role so that the construction industry will survive. That is why the construction industry also contributes big share in the economy of the nation. Nowadays, there are lots of businessmen who want to get into the construction industry. This is because they foresee that they can generate huge profit being in the business. Nevertheless, it is not enough just to have startup capital to get into

the industry. Unless you know its history only then you can deal with the competition in the industry.

Moreover, the history of the construction industry is the basis of the different nations and governments in setting the rules and regulations about any transactions in the industry. Obviously, the nation will not prosper without the construction industry even in today's modern world. That is why if you are planning to start a new business you can choose to get into the construction industry. You can expect for great return of investments in this venture as it is a lucrative industry. As long as you know and understand the necessary information about the construction industry you will surely be successful.

And so that we can through the industry to achieve all the goals of the elevation and development of the country must be the industry implements under the shadow of the construction of specialized companies working on producing a product according to satisfying the customer.

And these companies must be enjoying a strong and well thought out systems to reach the desired results.

1-2 Problem of the study

-In Sudan, the awareness and management don't care and no idea how to achieve the objectives of your institution.

- In Sudan, the managers' don't care about the psychological and social aspects and the basic needs of the employee.

- If follow the correct administrative foundations and structure of the organization of work suitable for the job increases the productivity of the organization and evolution.

1-3 Research Goals

The main goal of the study is to increase the awareness of the general

managers and institutions of Sudan to work with high professionalism and

knowledge to clarify the duties and rights of every individual in the

organization to increase productivity and growth and development of the

country.

This type of research Popular in the world, but in Sudan institutions do not

care about these aspects because not touching what can add those

methods to increase productivity and advancement of reviving construction

market in Sudan and the evolution of institutions and the country.

In this study, as aim to:

- Increase awareness among business owners access to the goals of the institution by the appropriate choice for employees.

- Help business owners reach their goals desired.

- Managers urged to pay attention to the psychological and social aspects and to meet the basic needs of employees to ensure continuity in the work in the organization.

1-4 Importance of The Research

Research topic is one of the most important researches in the field of management , because it focusing for human recourse and how to utilization to achieve the maximum goals and we can development of the idea research by make to an organization structure and salary structure and design format for evaluate the performance to make the evolution of the employee and promoted based on what the effort provided by the institution and not based on nepotism and favoritism and personal motives.

1-5 Hypotheses

1. The evolution of the organization depends on the strong structure system and clarity the job description for employees.
2. The evolution of the organization depends on the clarity of the rights and obligations of an employee's by legal contract.
3. If available basic employee's needs of food, drink,

accommodation, the deportation and training lead to employee loyalty to the institution.

4. If available the basic needs of the employee lead to the development of vocational.

5. If available the basic needs of the employee lead to please him, which increases the rate of production.

6. Development of the country obliquely, the evolution of institutions

CHAPTER 2

Literature Review

Recently, a management study has come to view organizations from a new perspective: a systems perspective. This systems perspective may seem quite basic. Yet, decades of management training and practices in the workplace in Sudan have not followed from this perspective. Only recently, with tremendous changes facing organizations and how they operate, have educators and managers come to face this new way of looking at things. This interpretation has brought about a significant change (or paradigm shift) in the way management studies and approaches organizations.

What is a System?

Very simply, a system is a collection of parts (or subsystems) integrated to accomplish an overall goal (a system of people is an organization). Systems have input processes, outputs and outcomes, with ongoing feedback among these various parts. If one part of the system is removed, the nature of the system is changed. (2)
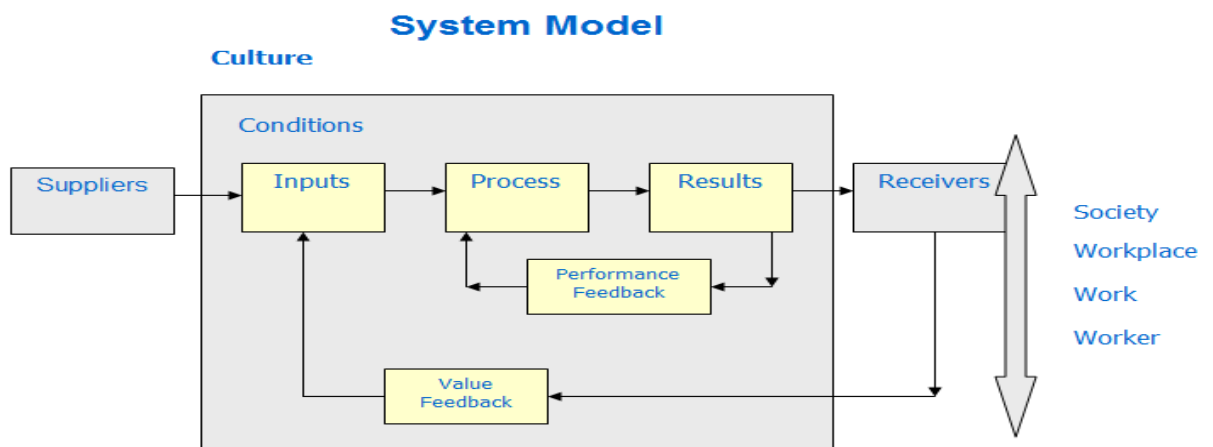
Fig 2-1: System Model

2-1 Schools Of Management:- (3)

2-1-1 <u>The Classical School of Management Thought and Practice:-</u>

  2-1-1-1 <u>The Scientific Management Movement</u>

- Management which conducts a business or affairs by standards established by facts or truths gained through systematic observation, experiment, or reasoning.
- Focused on increasing labor efficiency and productivity primarily by managing the work of employees in the organization's technical core (i.e., shop floor).

Characterized by close forms of supervision and control-oriented management practices

  2-1-1-2   <u>Scientific Management Pioneers</u>
      2-1-1-2-1 <u>Charles Babbage (1792–1871)</u>
- Advocated division of labor and job specialization.
- Promoted time studies to establish performance standards and rewards for exceeding standards.

      2-1-1-2-2 <u>Frederick Taylor (1856–1915)</u>
- Considered the "father of scientific management."
- Believed in the "science of work"—the underlying laws, or principles, that govern various work activities.
- Believed in the economically-motivated "mutuality of interest" of employees and managers.

2-1-1-3 <u>Fredrick Taylor's Scientific Management Prescriptions</u>
- Develop the science of work ("one best way").
- Emphasize an absolute adherence to work standards.
- Scientifically select, place, and train workers
- Apply a financial incentive system.
- Utilize specialized functional supervision.
- Develop and maintain friendly labor-management relations.

2-1-1-4 <u>The Gilbreths</u>

    2-1-1-4-1 <u>Frank Gilbreth (1868–1924)</u>

    Focused on improving work methods such as bricklaying to improve effectiveness and efficiency.

    2-1-1-4-2<u>Lillian Gilbreth (1878–1972)</u>

    pioneered modern human resource management.

    -Developed a classification scheme to describe the motions used in the performance of a job.

2-1-1-5 <u>Henry Gantt (1861–1919)</u>

- Developed the *Gantt* chart to summarize work activities and identify those tasks that should be performed simultaneously or sequentially.
- Advocated a minimum-wage-based incentive system and bonuses for work above and beyond the expected standard by employees.
- Proposed a bonus system for supervisors to encourage them to manage subordinates effectively.

2-1-2 <u>Administrative Management and the Bureaucratic Organization</u>

- Organizations were viewed as giant machines created to achieve goals.
- A basic set of universal laws, or principles should govern organization design and allow managers to run those "machines" effectively.

  2-1-2-1 <u>Henri Fayol (1841–1925)</u>

- Believed that all managers perform five managerial functions:
  - *Planning*
  - *Organizing*
  - *Commanding*
  - *Coordinating*
  - *Controlling*

<u>Fayol's Fourteen Principles</u>

1. Division of labor
2. Authority
3. Discipline
4. Unity of command

5. Unity of direction
6. Subordination of individual interest for common good
7. Remuneration
8. Centralization
9. Scalar chain
10. Order
11. Equity
12. Stability of tenure
13. Initiative
14. Esprit de corps

2-1-3 The Bureaucratic Organization

2-1-3-1 Max Weber (1864–1920)

- Envisioned an organization managed on an impersonal and rational basis.
- Goals of the bureaucratic model:
    1. *Speed*
    2. *Precision*
    3. *Order*
    4. *Unambiguity*
    5. *Continuity*
    6. *Predictability*

Structure of the Bureaucratic Model

- Division of labor (functional specialization)
- Well-defined hierarchy of authority (centralization of authority)
- Systems of rules for employees and work procedures
- Impersonal organizational relationships
- Selection and promotion solely on competence
- Career employment and well-defined promotion path to top of organization
- Organizational transactions extensively documented

Contributions and Limitations of the Classical School

Contributions

- Prescriptions for how to manage organizations

- Search for "one best way" to manage to lead to greater organizational efficiency
- Spurred additional research into management and organizational systems

Limitations

- Limited view of employees as resources without social needs
- Pursuit of "one best way" (universal principles) to manage
- "Control-oriented" approach creates an inflexible, mechanistic organization

2-1-4 The Hawthorne Studies

- Worker productivity studies (1924–1933) carried out at Western Electric.
  - Focused on the relationship of workers' productivity and changes in their work environment.
  - Strongly influenced by behavioral management theory.
  - Researchers concluded that social factors were powerful determinants of worker productivity.
    - ➤ *Results were inconsistent with expectations: Productivity improved under adverse conditions.*
    - ➤ *Informal work groups with leaders and norms*
      - "Rate busters" and "chiselers"

2-2 Behavioral School of Management

- An organization was viewed as a social system of people-to-people and people-to-work networks in which employees have both social needs and the desire to make meaningful contributions toward the accomplishment of organizational goals.

Behavioral School Contributors

1. Robert Owen (1771–1858)
   a. Progressive industrialist who recognized need for good overall management of an organization's human resources.

2. <u>Hugo Munsterberg (1863–1916)</u>
   a. Father of industrial psychology and its use to enhance organizational effectiveness.
3. <u>Walter Dill Scott (1869–1955)</u>
   a. Advocated improving employee attitudes and motivation as a means to increase worker productivity.
4. <u>Mary Parker Follett (1868–1933)</u>
   a. Asserted that managers' influence and power should flow from their knowledge and skill.
5. <u>Chester Barnard (1886–1961)</u>
   a. Provided insight into the concept of formal (consciously created) and informal (spontaneous) organizations within firms.

<u>The Human Relations Model</u> (5)

Worker Satisfaction

leads to . . .

Enhanced Worker Performanc
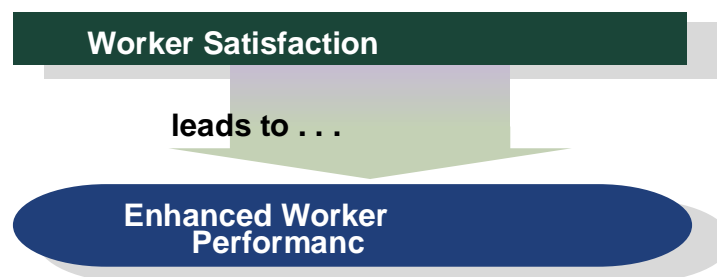
Fig 2-2: Human Relation Model

A management model that views the employee as socially motivated and operates from the assumption that a social need-satisfied worker is a productive worker.

2-3 The Behavioral Science Influence [7]

➢ **Behavioral science movement**
• A movement that stressed the need to conduct a systematic and controlled field and laboratory studies of workers and their motivation, attitudes, and behavior.
• Introduced the growth model of the employee.

11

- The movement eventually gave rise to organizational behavior as a discipline.

1. **Abraham Maslow (1908–1970)**
   - Identified sets of basic human needs and suggested that they could be arranged in a hierarchy based on their importance to the individual.

2. **Douglas McGregor (1906–1964)**
   - Developed the Theory X (traditional—negative—management approach) and Theory Y (positive management approach) to workers and work motivation.

3. **Chris Argysis**
   - Believed that the conflict between mature individuals and bureaucratic organizations could be avoided by the development of open and flexible organizations.

4. **Rensis Likert**
   - Stressed teamwork and a group approach to organizational design and management, which he called System 4.

2-4 Organizational Humanism

1. A system that promoted an interest in understanding the psychological forces tying individuals to organizations.
2. A system that also promoted management practices that lead to employee satisfaction and well-being.

The Human Resources Model

```
Employee  →  Involvement  →  Performance
   ↑                              ↓
        Satisfaction
     Commitment and a
      Willingness to
```
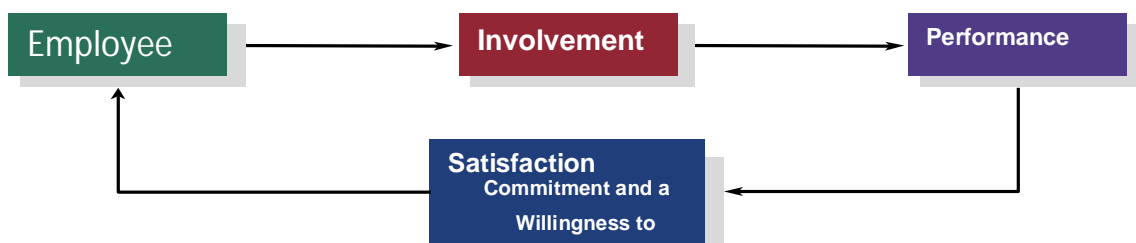
Fig 2-3: Human Resources Model

The belief that through employee involvement in organizational decision making performance would be enhanced, leading to employee satisfaction, commitment and motivation for further involvement.

> ➤ High-involvement management and organization (Edward E. Lawler, III)
>> 1. A participative process (everyone at all levels) that uses the entire capacity of workers, is designed to encourage employee commitment to organizational success.
>> 2. Depends upon management providing the necessary information, skills, empowerment and reward systems for organizational members.

Contributions and Limitations of the Behavioral School

Contributions
1. Raised awareness of the need to design open, flexible organizations
2. Introduced the growth needs model of the employee

Limitations
1. Lacks a language for communicating its ideas to managers
2. Haven't gotten top management's attention and respect
3. Persistence in the belief that there is "one best way" to manage

2-5 Involvement-oriented management practices organization design:-

organization is a social system (human community)

involvement-oriented organization
1- flexible structure
2- dynamic tasks, loosely defined
3- consultative communications
4- authority flows from knowledge
  and expertise vs. position
5- low levels of standardization

6- extensive use of groups/teams

7- open system

Model of the employee (10)

human relations movement—social being

human resource movement—growth being

NEEDS

General Examples | Organizational Examples

Achievement — Self-actualization — Challenging job

Status — Esteem — Job title

Friendship — Belongingness — Friends at work

Stability — Security — Pension plan

Food — Physiology — Base salary
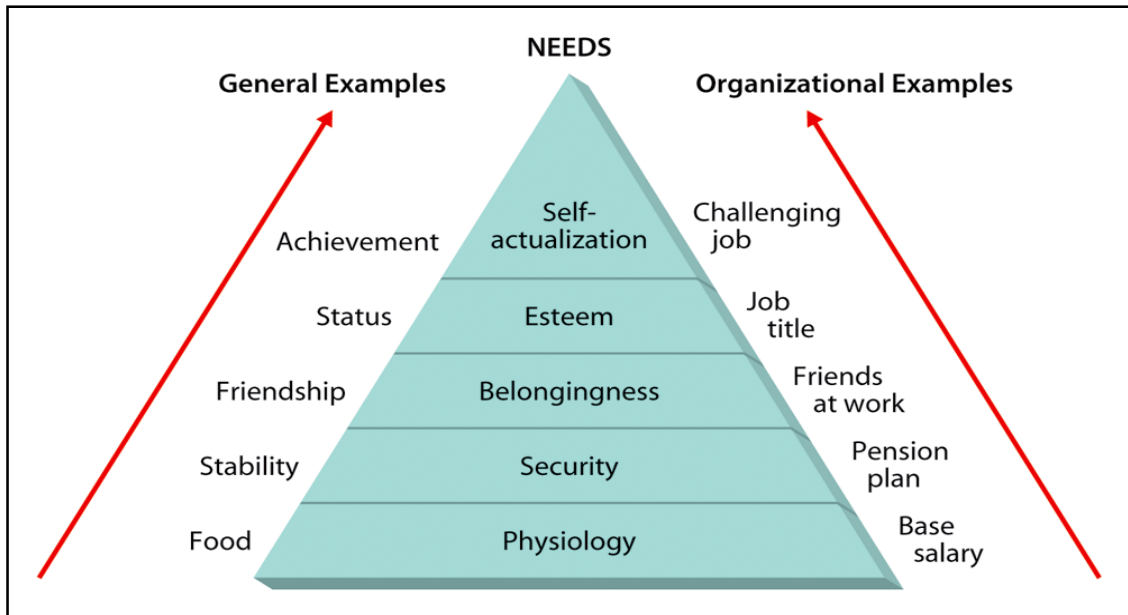
Fig 2-4: Model of the employee

2-6 Other Management Perspectives

The belief that the techniques appropriate for a manager to use depend (are contingent) on the specific situation.

Contingency perspectives

- Total quality management
- Systems theory
- Theory Z
- McKinsey 7-S framework

Demands on Effective Management: Contingency Perspectives
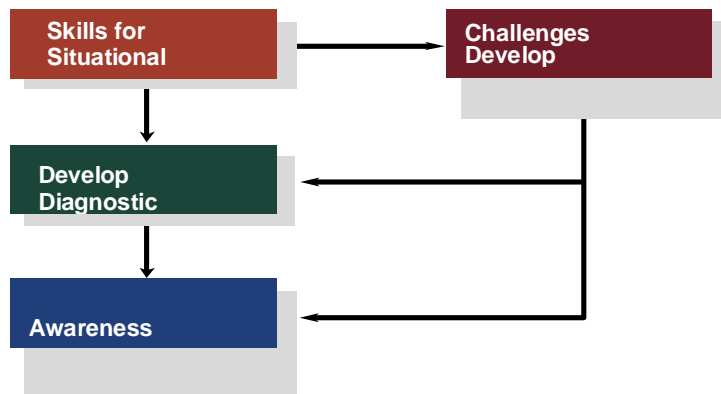
Fig 2-5: Model of the effective management

2-6-1 Total Quality Management Perspective
- **Quality management perspective**
  - ❖ An approach to management that has as its goal the achievement of customer satisfaction by providing high-quality goods and services.
- **Total quality management (TQM)**
  - ❖ A management philosophy and way of managing with the goal of getting everyone committed to quality, continuous improvement, and the attainment of customer satisfaction by meeting or exceeding customer expectations.

TQM pioneers: Deming, Juran, Ishikawa
- **TQM assumptions**
  - Quality products are less costly to produce than poor quality products.
  - People (employees) care about quality and improving the quality of their work.
  - Organizations are systems of interdependent parts and quality problems cut across functional lines.
  - Quality and continuous improvement are the responsibility of top (senior) management.
  - Continuous learning and improvement are vital to the long-term health and survival of an organization.

2-6-2 The Systems Perspective
- **Systems theory**
  - A view of an organization as made up a number of interrelated elements, each functioning to contribute to the purpose of the whole organization which exists in an interdependent relationship with the external environment.

2-6-3 The McKinsey 7-S Framework (13)
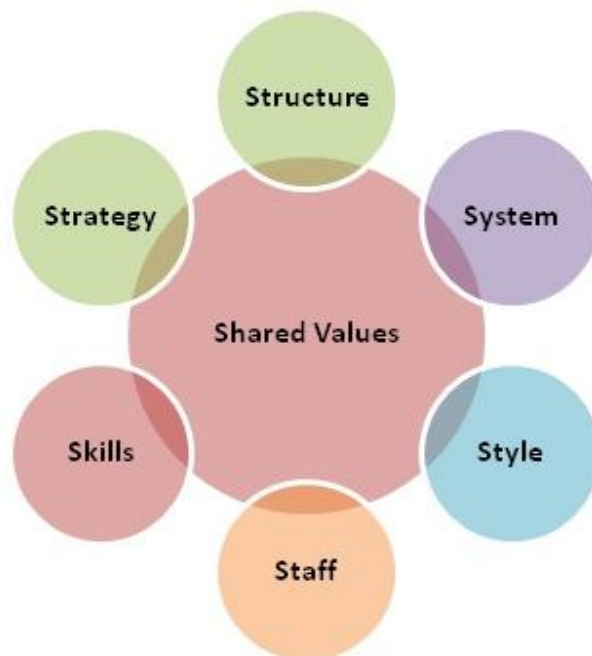
Fig 2-6: The McKinsey 7-S Framework Model

The McKinsey 7- S framework is a popular model used in organizations to analyze the environment to investigate if the company is achieving its intended objectives.

The name of the model can be explained by the fact that the model was developed by Tom Peters & Robert Waterman, consultants at the McKinsey & Company consulting firm.

The model proposes 7 interdependent factors – 3 hard 'S' i.e. strategy, structure, systems; and 4 soft 'S' i.e. shared values, skills, style and staff.

The hard 'S' are more tangible, easily to define and easy to influence than the soft 'S'.

- Strategy – It refers to the intended sequence of actions taken by a company to achieve its goals and objectives. It deals with resource allocation and includes competition, customers and the environment.
- Structure – It refers to how the various business units are structured and how they communicate with each other. A company's structure may be centralized or decentralized or may take many other forms depending on the company's culture and values.
- Systems – This includes a host of systems within an organization that define its processes and routines. It includes performance appraisal system, financial systems, IT systems etc.
- Shared values – These are the core values of the company that connect all the other 6 factors. These are the fundamental ideas or guiding principles that lay the foundation of businesses.
- Skills – These define the core competencies of the employees.
- Style – This spans the core beliefs, norms and management style in the organization.
- Staff – It refers to the number and type of employees in the organization. It is very important for an organization to manage its human capital to create competitive advantage.

2-6-4 <u>A Comparison of American, Japanese, and Theory Z Organizations</u>

Ouchi first wrote about Theory Z in his 1981 book, "Theory Z: How American Management Can Meet the Japanese Challenge." He created the theory after conducting research designed to help American companies compete with Japanese businesses. It takes the best of the Japanese management philosophy, and the best of traditional US management philosophy, and combines the two.

According to Ouchi, the benefits of using Theory Z include reducing employee turnover, increasing commitment, improving morale and job satisfaction, and drastically increasing productivity.

To realize these benefits, he argued that an organization should have the following:

- **A Strong Company Philosophy and Culture:** The company philosophy and culture needs to be understood and embodied by all employees, and employees need to believe in the work they're doing.

- **Long-Term Staff Development and Employment:** The organization and management team has measures and programs in place to develop employees. Employment is usually long-term, and promotion is steady and measured. This leads to loyalty from team members.
- **Consensus in Decisions:** Employees are encouraged and expected to take part in organizational decisions.
- **Generalist Employees:** Because employees have a greater responsibility in making decisions, and understand all aspects of the organization, they should be "generalists." However, employees are still expected to have specialized career responsibilities.
- **Concern for the Happiness and Well-Being of Workers:** The organization shows sincere concern for the health and happiness of its employees, and for their families. It puts measures and programs in place to help foster this happiness and well-being.
- **Informal Control with Formalized Measures:** Employees are empowered to perform tasks the way they see fit, and management is quite "hands off." However, there should be formalized measures in place to assess work quality and performance.
- **Individual Responsibility:** The organization recognizes the contributions of individuals, but always within the context of the team as a whole.

Contributions and Limitations of the Contemporary Schools

- **Contributions**
  - Unified the technical side (classicists) and the social elements of organizations (behaviorists). Showed that there is no "one best way" to manage in all circumstances
- **Limitations**
  - Contemporary approaches to management are more complex than the classical and behavioral approaches.
  - No contemporary management approach has been thoroughly researched.

2-7 Nine Performance Variables System Model

Whether an organization is concerned with customer satisfaction, quality, productivity, cycle time or cost, the underlying issue is performance. In order to improve performance, it is necessary to understand the variables that influence performance at the organization, process and individual job/performer levels.

Rummler and Brache, in their book, Improving Performance: How to Manage the White Space on the Organization Chart, introduced a matrix that identifies nine different concerns that anyone trying to change processes in an organization must consider. "The Rummler-Brache methodology has helped everyone involved in business process change to understand the scope of the problem, and it provides the foundation on which all of today's comprehensive process redesign methodologies are based." (Business Process Change, Paul Harmon)

All organizations are systems and the Rummler-Brache model describes all of the things that a mature organization must master.

An organization's strategic and operational effectiveness is the product of three levels of performance – the organizational level, the process level, and the job/performer level. As a result, every improvement effort must be seen through the lens of the three levels.

- Three performance needs must be met at each level: goals, design, and management.
- Failure to manage the nine performance variables is failure to manage the business holistically.
- Cross-functional processes are particularly critical to the customer satisfaction, quality, productivity, cycle time and cost performance of any business.
- Managing people should include addressing the needs of all components of the human performance system (performance specifications, task support, consequences, feedback, skills/knowledge, and individual capacity) in which they work.

- At each of the three levels, there are tools that can help in documenting, analyzing, and improving performance.
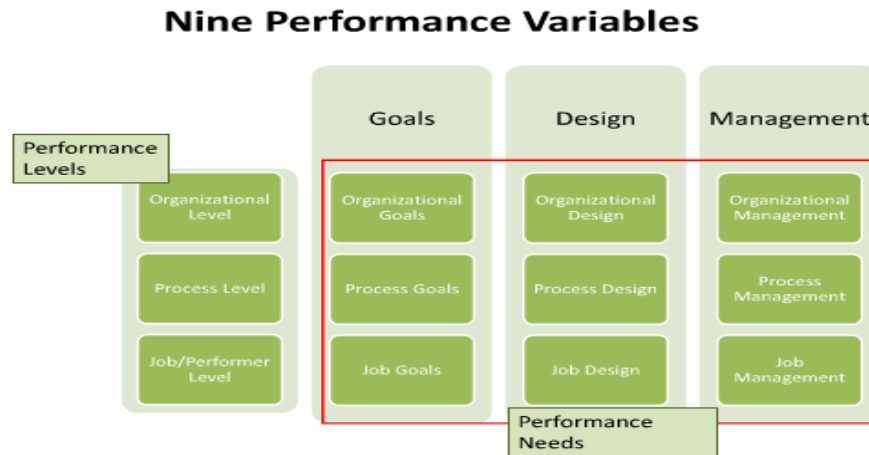
Table 2-1: Nine Performance Variables

Performance Needs ->	GOALS	DESIGN	MANAGEMENT
Organizational Level	**Organization Goals** -Is the strategy/direction articulated and communicated? -Does the strategy make sense, in terms of external threats and opportunities and internal strengths and weaknesses? -Have the required outputs and level of performance been set and communicated?	**Organization Design** -Are all relevant functions in places? -All necessary? -Is flow of inputs and outputs between functions appropriate? -Does formal organization structure support the strategy and enhance efficiency and effectiveness of the system?	**Organization Management** -Have appropriate functional goals been set? -Is relevant performance measured? -Are resources appropriately allocated? -Are interfaces between functions aligned and managed?
Process Level	**Process Goals** -Are goals for key processes aligned with customer/organization requirements?	**Process Design** -Is it the most effective and efficient process for accomplishing the process goals?	**Process Management** -Have appropriate process sub-goals been set? -Is process performance managed? -Are sufficient resources allocated to each process? -Are the interfaces between process steps being managed?
Job/Performer Level	**Job Goals** -Are job outputs aligned with process requirements, which are aligned with customer/organization requirements?	**Job Design** -Are process requirements reflected in the appropriate jobs? -Are the job steps in a logical sequence? -Have supportive policies and procedures been developed? -Is the job environment ergonomically sound?	**Job Management** -Performance Specifications? -Task Support? -Consequences? -Feedback? -Skills/Knowledge? -Individual Capacity?

Table 2-2: Details of Nine Performance Variables

2-8 Designing Organizational Structure

- Organizing
  - The process by which managers establish working relationships among employees to achieve goals.

20

- Organizational Structure
  - Formal system of task and reporting relationships showing how workers use resources.
- Organizational design
  - The process by which managers create a specific type of organizational structure and culture so that a company can operate in the most efficient and effective way. (12)

Organizational Structure

- Organizational Architecture

The organizational structure, control systems, culture, and human resource management systems that together determine how efficiently and effectively organizational resources are used.

Factors Affecting Organizational Structure
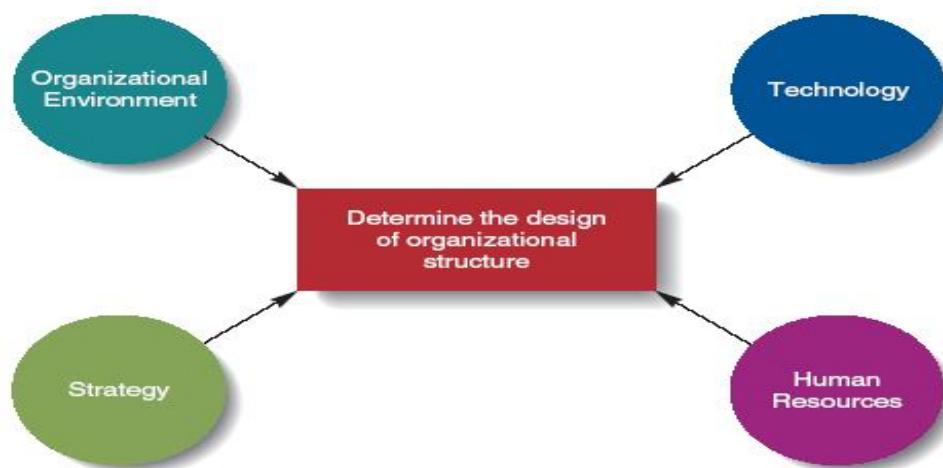
Fig 2-7: Factors Affecting Organizational Structure Model

The Organizational Environment

- The quicker the environment changes, the more problems face managers.
- Structure must be more flexible (i.e., decentralized authority) when environmental change is rapid.

Strategy

- Different strategies require the use of different structures.

- A differentiation strategy needs a flexible structure, low cost may need a more formal structure.
- Increased vertical integration or diversification also requires a more flexible structure.

Technology

- The combination of skills, knowledge, tools, equipment, computers and machines used in the organization.
- More complex technology makes it harder for managers to regulate the organization.
- Technology can be measured by:
  - Task variety: the number of new problems a manager encounters.
  - Task analyzability: the availability of programmed solutions to a manager to solve problems.

Human Resources

- Highly skilled workers whose jobs require working in teams usually need a more flexible structure.
- Higher skilled workers (e.g., CPA's and doctors) often have internalized professional norms and values.
- Managers must take into account all four factors (environment, strategy, technology and human resources) when designing the structure of the organization.

The way an organization's structure works depends on the choices managers make about:

1. How to group tasks into individual jobs
2. How to group jobs into functions and divisions
3. How to allocate authority and coordinate functions and divisions

Job Design

1. The process by which managers decide how to divide tasks into specific jobs.
2. The appropriate division of labor results in an effective and efficient workforce. [1]

- **Job Simplification**
    - The process of reducing the tasks each worker performs.
        - Too much simplification and boredom results.
- **Job Enlargement**
    - Increasing the number of different tasks in a given job by changing the division of labor
- **Job Enrichment**
    - Increasing the degree of responsibility a worker has over a job\

Job Enrichment

1. Empowering workers to experiment to find new or better ways of doing the job
2. Encouraging workers to develop new skills
3. Allowing workers to decide how to do the work
4. Allowing workers to monitor and measure their own performance

The Job Characteristics Model
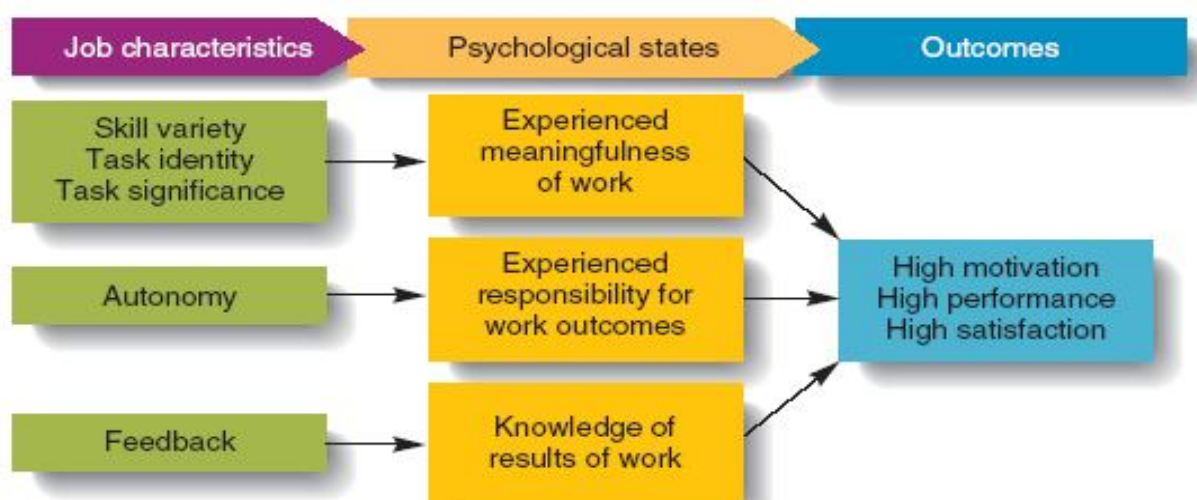
Fig 2-8: The Job Characteristics Model

Job Characteristic	
Skill variety	Employee uses a wide range of skills.
Task identity	Worker is involved in all tasks of the job from beginning to end of the production process
Task significance	Worker feels the task is meaningful to organization.
Autonomy	Employee has freedom to schedule tasks and carry them out.
Feedback	Worker gets direct information about how well the job is done.

Table 2-3: Job Characteristic

Grouping Jobs in to Functions

- **Function**
  - Group of people, working together, who possess similar skills or use the same kind of knowledge, tools, or techniques to perform their jobs. (6)
- **Functional Structure**
  - **An organizational structure composed of all the departments that an organization requires to produce its goods or services.**

- **Advantages**
  - Encourages learning from others doing similar jobs.
  - Easy for managers to monitor and evaluate workers.
  - Allows managers to create the set of functions they need in order to scan and monitor the competitive environment

- **Disadvantages**
  - Difficult for departments to communicate with others.
  - Preoccupation with own department and losing sight of organizational goals.
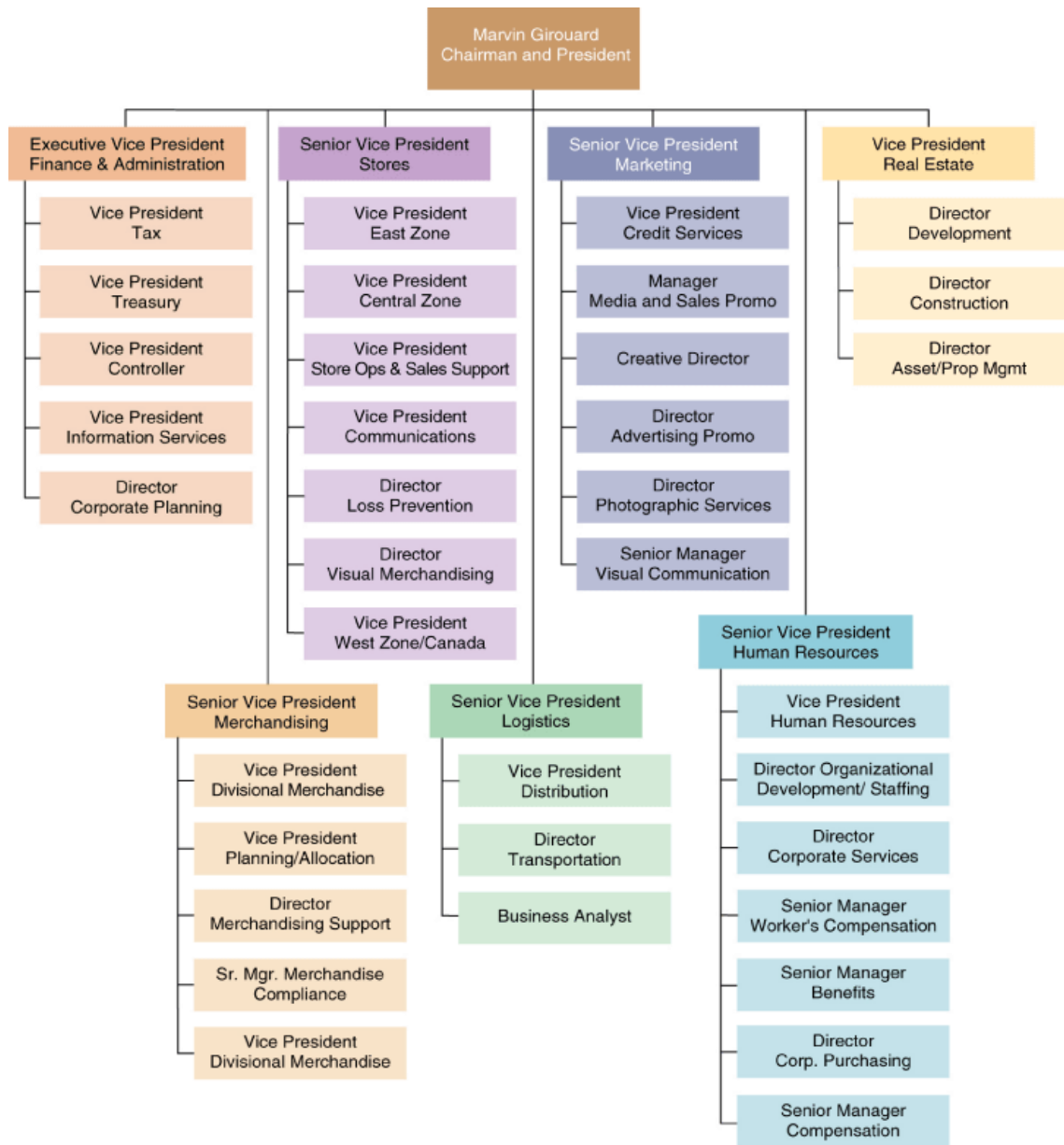
Fig 2-9: The Functional Structure Model

- **Divisional Structure**
  - Managers create a series of business units to produce a specific kind of product for a specific kind of customer

2-9 What Managers Do

Individuals who achieve goals through other people

Managerial Activities
- Make decisions
- Allocate resources
- Direct aies of others to attain goals

Where Managers Work
Organization
A consciously coordinated social unit composed of two or more people that functions on a relatively continuous basis to achieve a common goal or set of goals.

Management Functions

1. **Planning**
   A process that includes defining goals, establishing strategy, and developing plans to coordinate activities.

2. **Organizing**
   Determining what tasks are to be done, who is to do them, how the tasks are to be grouped, who reports to whom, and where decisions are to be made.

3. **Leading**
   A function that includes motivating employees, directing others, selecting the most effective communication channels, and resolving conflicts.

4. **Controlling**
   Monitoring activities to ensure they are being accomplished as planned and correcting any significant deviations.

2-10 Why is it Important to Look at Organizations as Systems?

The effect of this systems theory in management is that writers, educators, consultants, etc. are helping managers to look at organizations from a broader perspective. Systems theory has brought a new perspective for managers to interpret patterns and events in their organizations. In the past, managers typically took one part and focused on that. Then they moved all attention to

another part. The problem was that an organization could, e.g., have wonderful departments that operate well by themselves but don't integrate well together. Consequently, the organization suffers as a whole.

Now, more managers are recognizing the various parts of the organization, and, in particular, the interrelations of the parts, e.g., the coordination of central offices with other departments, engineering with manufacturing, supervisors with workers, etc. Managers now focus more attention on matters of ongoing organization and feedback. Managers now diagnose problems, not by examining what appear to be separate pieces of the organization, but by recognizing larger patterns of interactions. Managers maintain perspective by focusing on the outcomes they want from their organizations. Now manager's focus on structures that provoke behaviors that determine events -- rather than reacting to events as was always done in the past. (8)

2-11How to Design Effective Organizational Structures in Construction Company

An organizational structure is the framework in which a company manages its hierarchical structure and authority lines. The management may choose to keep all the authority and decision-making powers or share some of those powers with employees. Businesses have several different types of organizational structures from which to choose. A construction company's choice of organizational structure is based on evaluations of the nature of contracts it undertakes, the expertise levels of its employees, the monetary value of the contracts and the levels of customization needed in each individual contract.

Instructions

- o 1 Understand the company's mission and vision statement completely. This provides you a window into how the company operates and what it wishes to accomplish. Also, analyze the domain of the company. Some companies choose to have a national presence and others operate only in a particular state or county. Evaluate the company's financial position and standing in the construction industry.
- o 2 Decide on how the management wishes to manage its authority and accountability. Assess if your management is willing to delegate authority and decision-making powers to its employees

27

or whether it wishes to make all the decisions. Make the choice based on the number of roles and functions that need to be performed. It is practical and feasible for the management of a small company to manage everything by itself. As the magnitude of operations and function grow, the management would not be able to control everything.

- o 3 Define the chains of command for the entire organization. Delineating all the roles, jobs and authority will help you outline the power and workflows for the company. If the company decides on vesting the employees with decision-making rights, it should divide its functions. Every function in the company should have a separate department or division. The authority lines would establish who reports to whom. In the construction company, hierarchy begins with the owners, followed by project managers, supervisors and the construction workers.
- o 4 Prepare job descriptions for every position. Job descriptions define the duties that every job is required to fulfill. For example, the duties that a technician performs are different from those of an accountant. Make sure that no job requirements overlap.

2-12 **Organizational Effectiveness Objectives**

Organizational effectiveness objectives are an outgrowth of your company's core mission.

Organizational effectiveness speaks to the heart of a company's purpose -- why it was formed, who it serves, what its vision of success is, what products or initiatives help to achieve that success and how operations support that success. There's a natural flow across all of these elements. If your company is willing to ask the right questions and can arrive at practical solutions, it's well on its way to achieving organizational effectiveness.

1. **Establishing Outcomes**
   - o Organizational goals have to do with why your company exists – such as "to improve health care for the underserved" or "to develop efficient commercial real estate technology." Organizational effectiveness objectives are concrete actions you take to achieve those goals. For example, "to launch three primary care clinics during the next two years that target uninsured and under-insured patients in Northwest Baltimore" or

"to design and patent a prototype for green CRE technology that reduces energy utilization rates." Like your company's goals, objectives are aimed at improving conditions. Objectives should not be too narrow in scope; use the largest building blocks that will help to achieve your organization's overall ambitions.

Determining Measurements

o An important step in developing organizational effectiveness objectives is deciding how to measure progress. These measures have a number of functions: they let you know when your efforts are complete, they give you checkpoints that reveal how the process has unfolded and they give you an indication of whether you have achieved total success. In some cases, you'll have standard measures in place that you wish to apply – like an existing technique for measuring energy utilization patterns. In others, you'll need to develop new measures. In general, organizational effectiveness measures should be objective such as quantitative data on the frequency of patient visits. At times, subjective measures may serve – for instance open-ended surveys that capture employees' and clients' satisfaction.

Assessing Value

o Determine the potential value resulting from the effectiveness objectives your company has set. What could the outcomes of your efforts mean for your organization? Yields can show up in a number of areas, from profits and savings to improved work environment and policy changes. There's also a sphere of impact which may include the general public, customers, staff and other stakeholders. Weigh possible benefits against risks if your objectives fail. For example, if you invest in a network of low-cost health care clinics and those clinics fail to break even in the period stated in your business plan, the organization's bottom line might take a significant hit.

Operating for Success

o Once you have established outcomes, measures and the probable value of your objectives, it comes down to operating your organization for success. If you cannot develop products, or run

programs and services, then you'll never achieve your effectiveness objectives. According to Kirk Kramer and Daniel Stid of The Bridge span Group, there are five functional areas that can make or break your organization when it comes to achieving full impact: leadership, decision making and structure, people, work processes and systems, and culture. (12)

CHAPTER 3

Research Methodology

Will be the geographical boundaries of the Sudan and temporal study of the third millennium and that the importance of the application of such studies in a country like Sudan and so to promote to keep up with developments in the world.

3-2 Method of sample selection

Was the work of a questionnaire was launched on the construction company In sudan, particularly in khartoum state institutions, because the idea of seeking means by force working institutions, which is one of the most important source that contribute to increasing the productivity and profits of the enterprise was put questionnaire to all staff not just engineers category and the number of questionnaires that were distributed 75 questionnaires and the recipient and subjected to a questionnaires study 69.

3-3 Questionnair Design

First, the questionnaire began with an introduction and personal data to the

recipient questionnaire.

And Find a questionnaire to be three faces so that the researcher know see

all the views of the people who fill in the questionnaire by clear idea being

able to extract the correct result serve search.

First phase: (Personal Response)

In this section contained six questions about a variety of hypotheses with a choice to answer them contain:

- Strongly agree
- Agree
- Do not agree
- Strongly disagree

<u>Second phase:</u> (Category)

In this section eight hypotheses have been put on the person who fill in the questionnaire with optional put him ratios ranging from 0% to 100% as follows

0%	20%	40%	60%	80%	100%

<u>Third phase:</u> (Open questions)

In this section have been three open questions researcher believes it serves the research hypotheses

CHAPTER 4

Result Analysis

4-1 Questionnaire Analysis

After taking questionnaires and analyzed, by Statistical package of social science (SPSS) , found out follows:

4-1-1 Personal-data: -

Statistics

Gender

N	Valid	69
	Missing	0

Table 4-1: Gender statistics

Gender

Type	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	42	60.9	60.9	60.9
Female	27	39.1	39.1	100.0
Total	**69**	**100.0**	**100.0**	

Table 4-2: Gender statistics by details
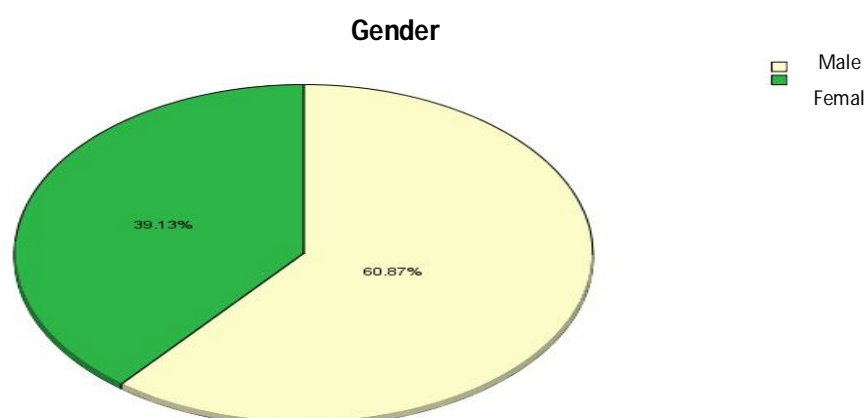
Fig 4-1: Gender pie chart

33

From the above pie chart the male employment rate in the field of construction industry in Sudan almost double rate for women's employment because this industry is very tough and hard and any women work in this field most have the desire, determination and perseverance.

Statistics

Job Description

N	Valid	69
	Missing	0

Table 4-3: Job description statistics

Job Description

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Architect	10	14.5	14.5	14.5
	Civil engineer	34	49.3	49.3	63.8
	Surveyor Engineer	5	7.2	7.2	71.0
	Administrative	14	20.3	20.3	91.3
	Electrical Engineer	3	4.3	4.3	95.7
	Planning Engineer	2	2.9	2.9	98.6
	Forman	1	1.4	1.4	100.0
	Total	**69**	**100.0**	**100.0**	

Table 4-4: Job description statistics by details
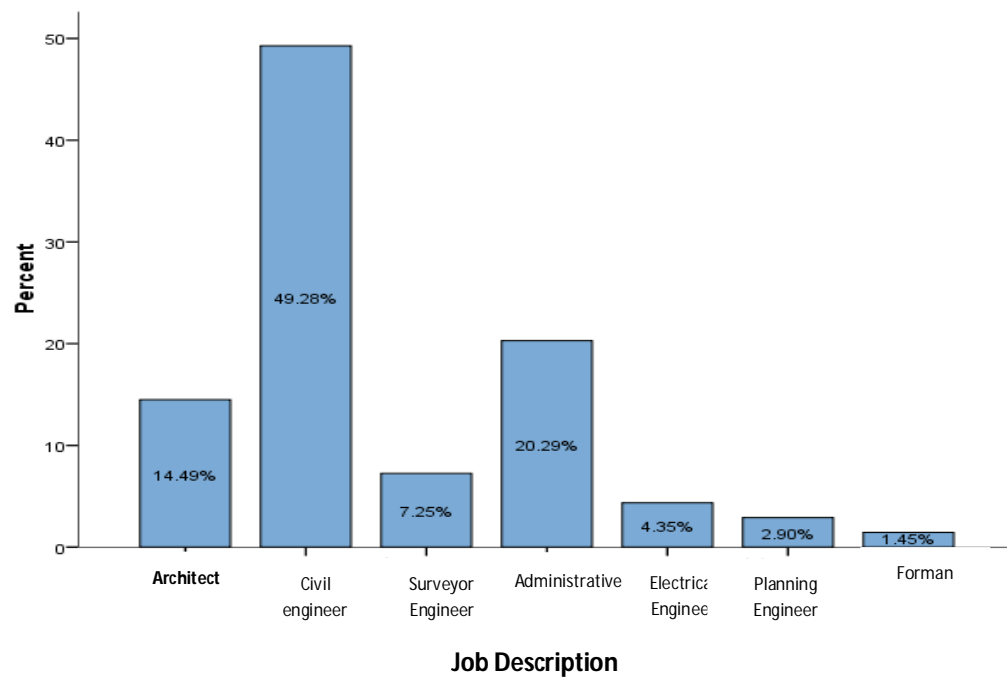
Fig 4-2: Job description column chart

From the above column chart the civil engineer highest percentage

Statistics

Qualifications

N	Valid	69
	Missing	0

Table 4-5: Qualification statistics

Qualifications

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Diploma	10	14.5	14.5	14.5
	Bachelor	47	68.1	68.1	82.6
	Master	8	11.6	11.6	94.2
	Secondary	4	5.8	5.8	100.0
	Total	**69**	**100.0**	**100.0**	

Table 4-6: Qualification statistics by details
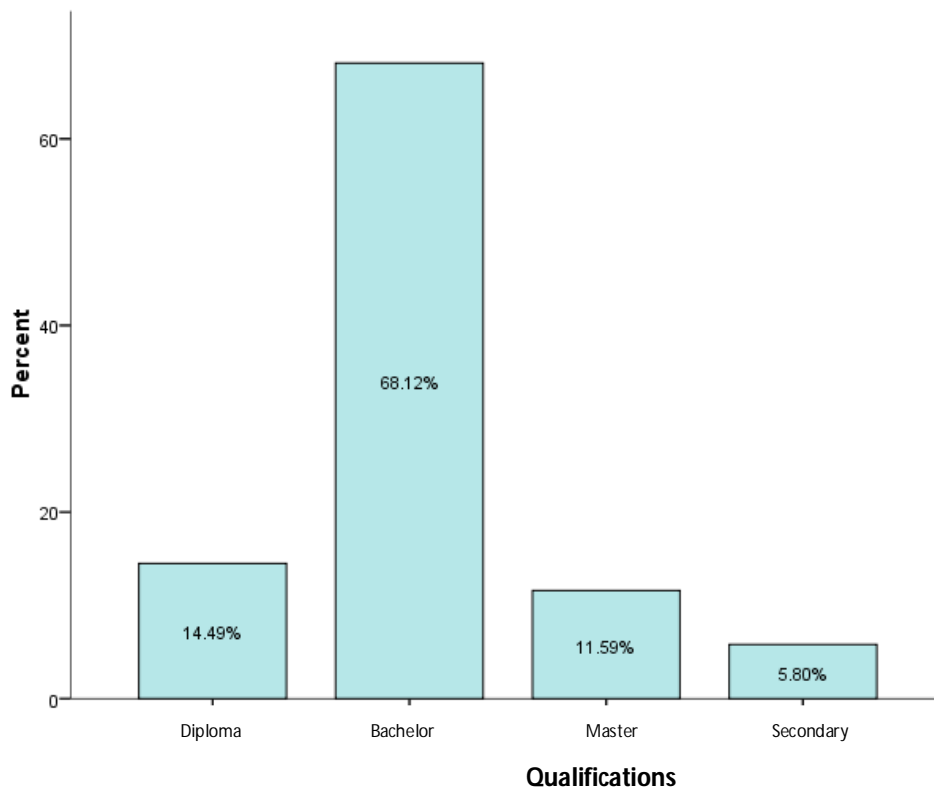
Fig 4-3: Qualification column chart

From the above column chart is clear that the proportion of people receiving Graduate proportion weak so as to two reasons :-

1- The institutions in Sudan interested to reduce exchange, because the employee has a graduate certificate gets a higher salary from other .

2-According to economic in sudan this classification work outside

Statistics

Years of Experience

N	Valid	69
	Missing	0

Table 4-7: Years of experience statistics

Years of Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0-5 Years	19	27.5	27.5	27.5
	6-10 Years	24	34.8	34.8	62.3
	11-15 Years	12	17.4	17.4	79.7
	More than 16 years	14	20.3	20.3	100.0
	Total	**69**	**100.0**	**100.0**	

Table 4-8: Years of experience statistics by details
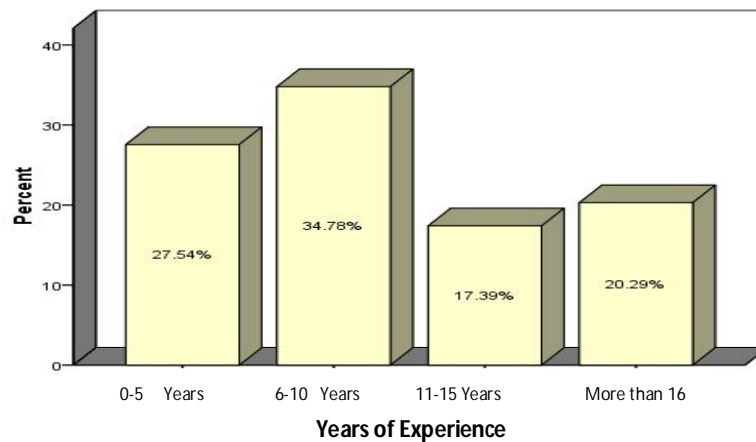
Fig 4-4: Years of experience column chart

It is clear from the column chart above that the largest proportion is experience ranging from graduate to 10 years and this logical, because as we mentioned earlier that the area of the construction industry is difficult and needs to fitness, but to a large experience in leadership positions.

38

4-1-2 Personal Response

Statistics

Attitude	Std. Deviation	Mean	Missing	Valid	
				N	
Strongly agree	.442	1.26	0	69	• The evolution of the organization depends on the strong structure system and clarity the job description for employees
Strongly agree	.494	1.30	0	69	• The evolution of the organization depends on the clarity of the rights and obligations of an employee's by legal contract
Strongly agree	.521	1.39	0	69	• Meet the basic employee's needs of food, drink, accommodation, the deportation and training lead to employee loyalty to the institution
Strongly agree	.609	1.48	0	69	• Meet the basic needs of the employee lead to the development of vocational
Strongly agree	.457	1.29	0	69	• Meet the basic needs of the employee lead to please him, which increases the rate of production
Strongly agree	.556	1.32	0	69	• Development of the country obliquely, the evolution of institutions
Strongly agree	**.16899**	**1.0290**	**0**	**69**	**As General**

Table 4-9: Personal Response statistics

مقياس ليكارد الرباعي

Weighted Mean Level:
From 1.00 to 1.74   strongly agree
From 1.75 to 2.49   Agree
From 2.50 to 3.24   do not agree
From 3.25 to 4.00   Strongly Disagree

From above table and according to analysis by SPSS , the 6 hypotheses depending in this research is strongly agree.

Frequency Table

- The evolution of the organization depends on the strong structure system and clarity the job description for employees

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	51	73.9	73.9	73.9
	agree	18	26.1	26.1	100.0
	Total	**69**	**100.0**	**100.0**	

Table 4-10: Frequency table – personal response - question 1

The evolution of the organization depends on the strong structure
system and clarity the job description for employees
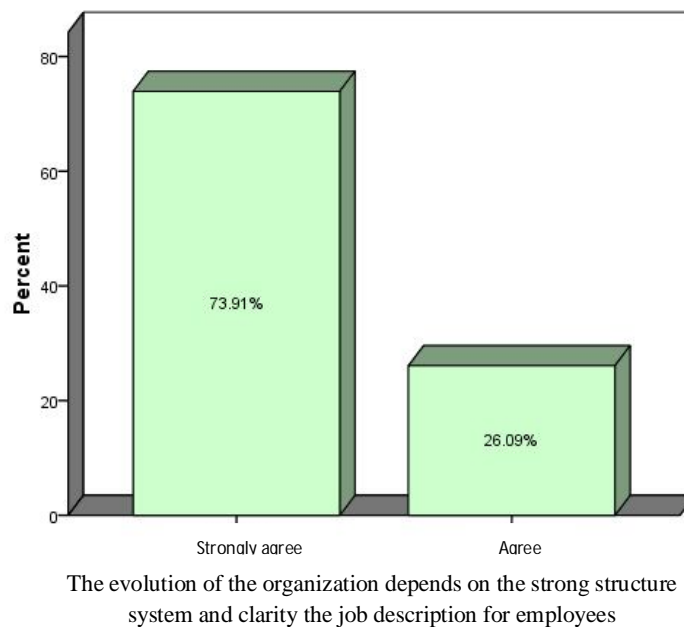
Fig 4-5: Frequency column chart – personal response - question 1

100% degree the evolution of the organization depends on the strong
structure system and clarity the job description for employees and the big
percentage strong agree .

• The evolution of the organization depends on the clarity of the rights and obligations
of an employee's by legal contract

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	49	71.0	71.0	71.0
	agree	19	27.5	27.5	98.6
	disagree	1	1.4	1.4	100.0
	Total	**69**	**100.0**	**100.0**	

From above table, you find 1 person choice disagree for (evolution of the organization depends on the clarity of the rights and obligations of an employee's by legal contract), because you are see the morality is more important than the legal contract.

Table 4-11: Frequency table – personal response - question 2
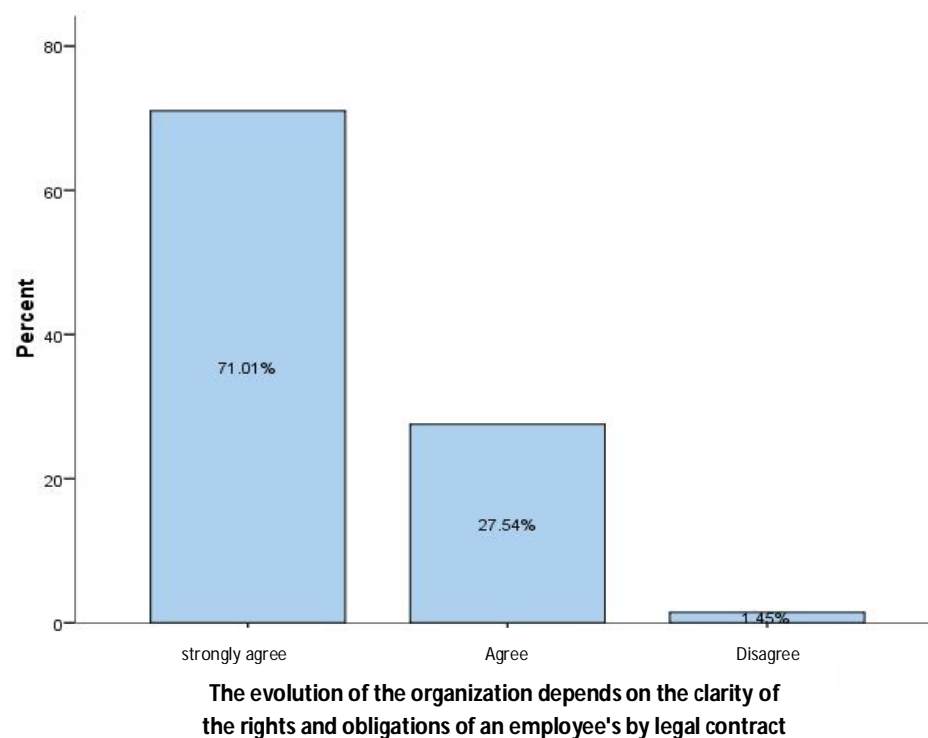
Fig 4-6: Frequency column chart – personal response - question 2

Almost 99% degree the evolution of the organization depends on the clarity of the rights and obligations of an employee's by legal contract and the big percentage strong agree.

• Availability the basic employee's needs of food, drink, accommodation, the deportation and training lead to employee loyalty to the institution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	43	62.3	62.3	62.3
	agree	25	36.2	36.2	98.6
	disagree	1	1.4	1.4	100.0
	Total	**69**	**100.0**	**100.0**	

Table 4-12: Frequency table – personal response - question 3
From above table, you find 1 person choice disagree for (Availability the basic employee's needs of food, drink, accommodation, the deportation and training lead to employee loyalty to the institution), because you are see the morality only sufficient to achieve institutional loyalty.

Availability the basic employee's needs of food, drink, accommodation, the deportation and training lead to employee loyalty to the institution
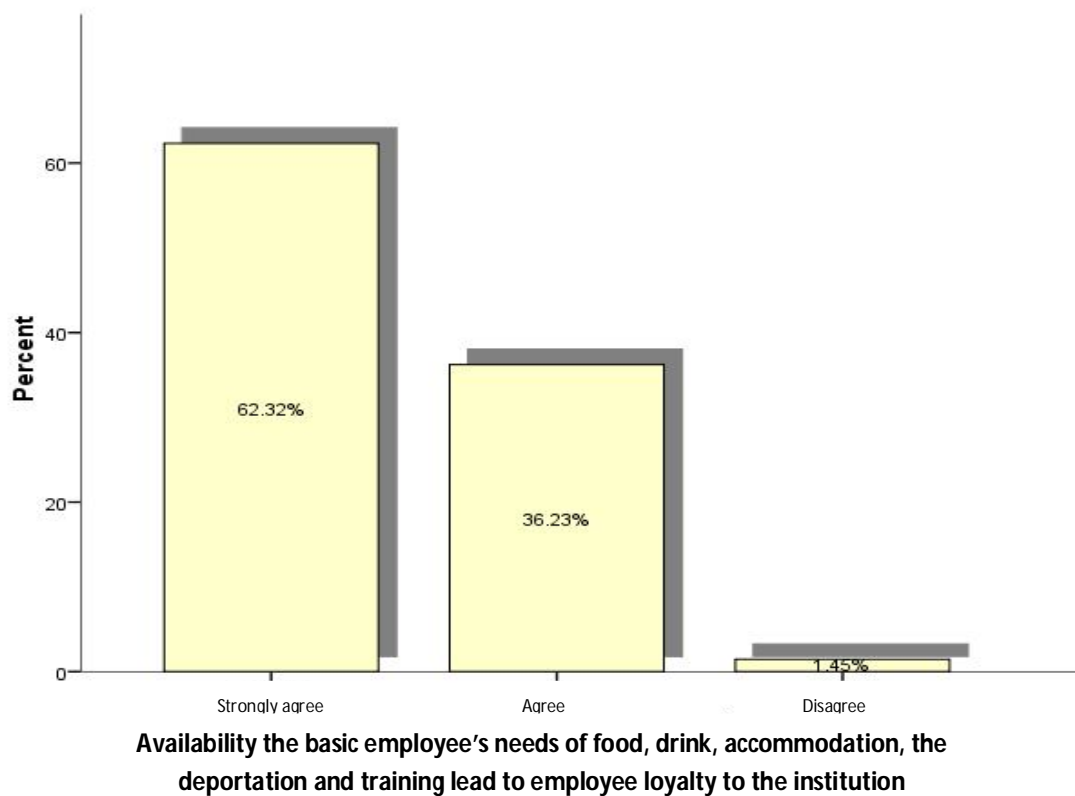
Fig 4-7: Frequency column chart – personal response - question 3
    Almost 99% degree Availability the basic employee's needs of food, drink, accommodation, the deportation and training lead to employee loyalty to the institution and the big percentage strong agree.

42

- Availability the basic needs of the employee lead to the development of vocational

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	40	58.0	58.0	58.0
	agree	25	36.2	36.2	94.2
	disagree	4	5.8	5.8	100.0
	Total	**69**	**100.0**	**100.0**	

Table 4-13: Frequency table – personal response - question 4
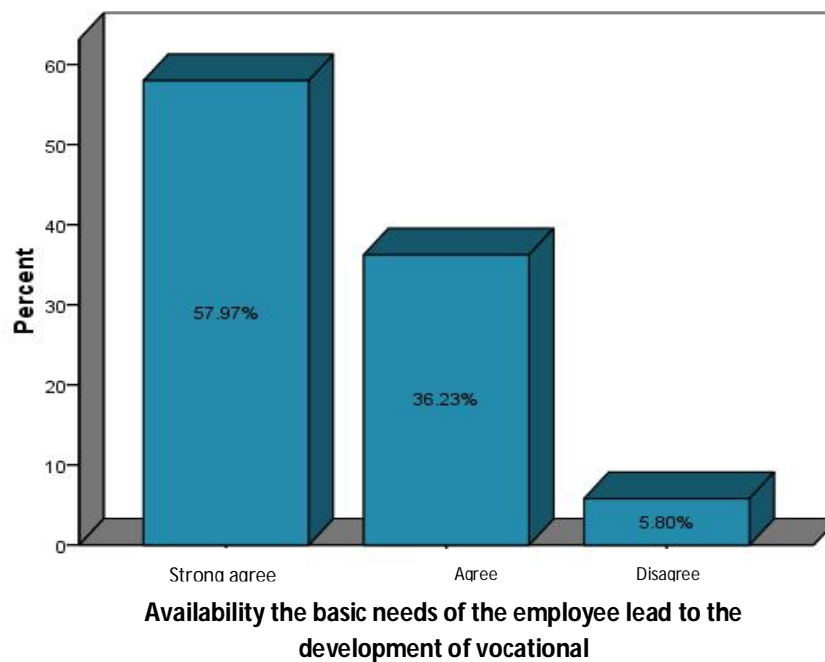
Fig 4-8: Frequency column chart – personal response - question 4

Almost 95% degree Availability the basic needs of the employee lead to the development of vocational and the big percentage strong agree.

43

- Availability the basic needs of the employee lead to please him, which increase rate of production

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	49	71.0	71.0	71.0
	agree	20	29.0	29.0	100.0
	Total	**69**	**100.0**	**100.0**	

Table 4-14: Frequency table– personal response - question 5

Availability the basic needs of the employee lead to please him, which increases the rate of production
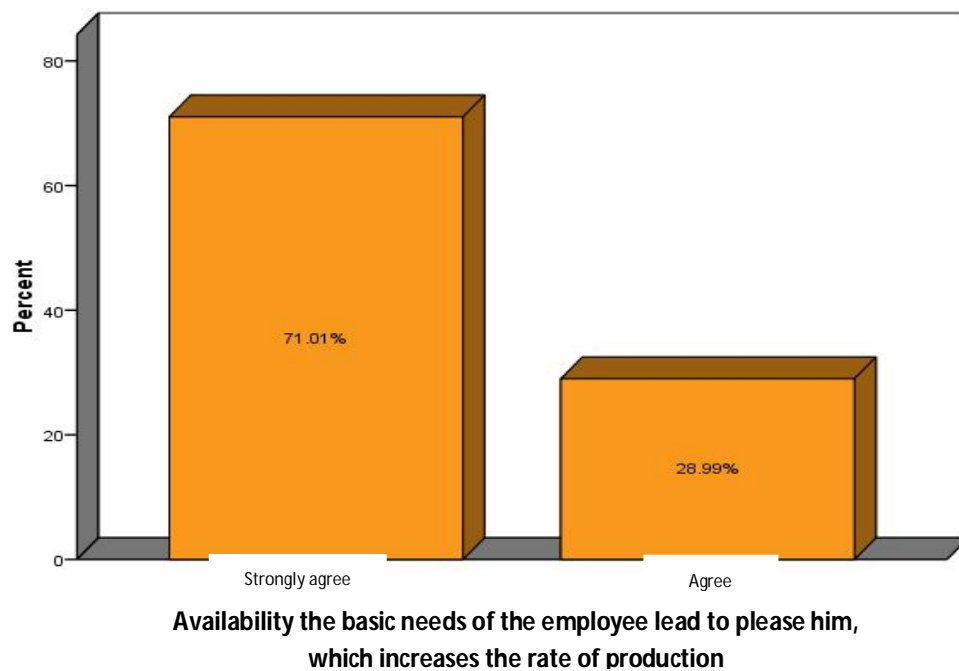
Fig 4-9: Frequency column chart – personal response - question 6

100% degree Availability the basic needs of the employee lead to please him, which increases the rate of production and the big percentage strong agree.

- Development of the country obliquely, the evolution of institutions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	strongly agree	49	71.0	71.0	71.0
	agree	19	27.5	27.5	98.6
	strongly disagree	1	1.4	1.4	100.0
	Total	**69**	**100.0**	**100.0**	

Table 4-15: Frequency table – personal response - question 6

Development of the country obliquely, the evolution of institutions
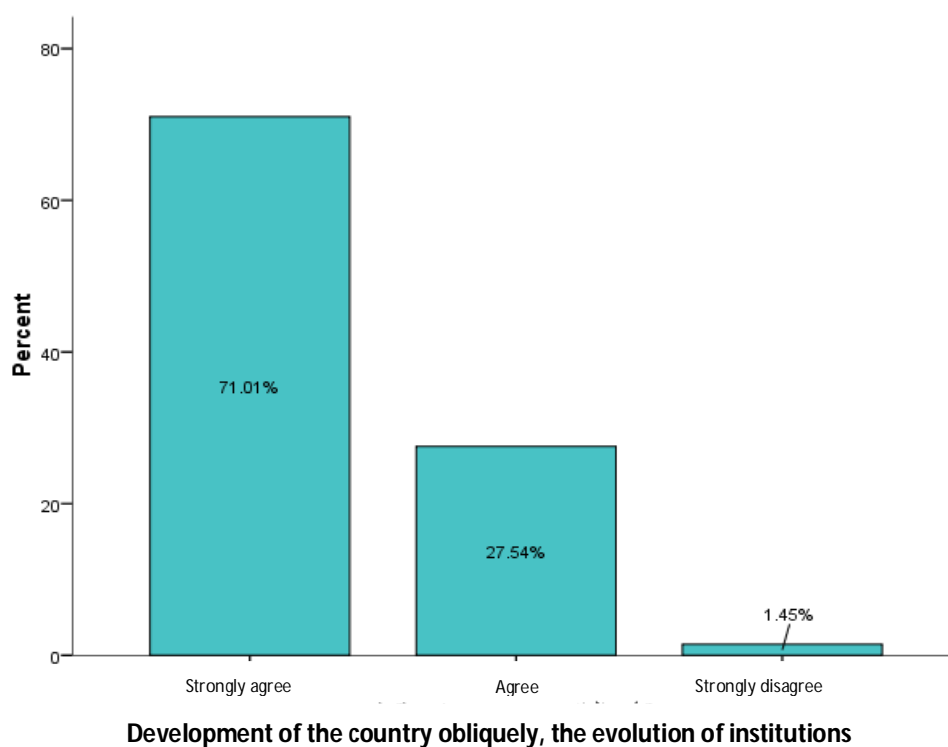
Fig 4-10: Frequency column chart – personal response - question 6

Almost 99% degree Development of the country obliquely, the evolution of institutions and the big percentage strong agree.

4-1-3 Category

Statistics

	N				
Attitude	**Std. Deviation**	**Mean**	**Missing**	**Valid**	
40 %	.966	2.91	0	69	• Ratio follows the administrative systems that lead to employee pleasing anthem institutions in Sudan
40 %	1.150	3.00	0	69	• Ratio correspondence Construction legal institutions in Sudan, which describes the duties and rights of the employee
60 %	1.1451	3.536	0	69	• Percentage of employee awareness of the institutions of Construction Sudan rights and duties
40 %	1.069	3.06	0	69	• proportion of consciousness departments institutions in Sudan setting clear goals of the institution and work to achieve them
40 %	1.141	3.14	0	69	• adoption of the employee institutions Construction Sudan promoted him based on his performance career
20 %	1.014	2.64	0	69	• proportion of Construction in Sudan that follow the structure salaries their own and status salary for employee based on graduation year, qualification and experience without favoritism
20 %	.797	2.46	0	69	• Proportion of Construction in Sudan that follow the functional structure that ensures the employee to get on the upgrade, each according to his performance without favoritism
20 %	.937	2.35	0	69	• Proportion of Construction in Sudan that follow secret reports rotating system to assess the performance of the employee
20 %	**.75718**	**1.9855**	**0**	**69**	**As General**

Table 4-16: Frequency table – Category - statistics

Weighted Mean Level:

From 1.00 to 1.83   0 %
From 1.84 to 2.67   20 %
From 2.68 to 3.50   40 %
From 3.51 to 4.33   60 %
From 4.34 to 5.17   60 %
From 5.18 to 6.00   60 %

Frequency Table

•Ratio follows the administrative systems that lead to employee pleasing anthem
Institutions in Sudan

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 %	3	4.3	4.3	4.3
	20 %	23	33.3	33.3	37.7
	40 %	23	33.3	33.3	71.0
	60 %	17	24.6	24.6	95.7
	80 %	3	4.3	4.3	100.0
	Total	**69**	**100.0**	**100.0**	

Table 4-17: Frequency table – Category - hypotheses 1

aw`
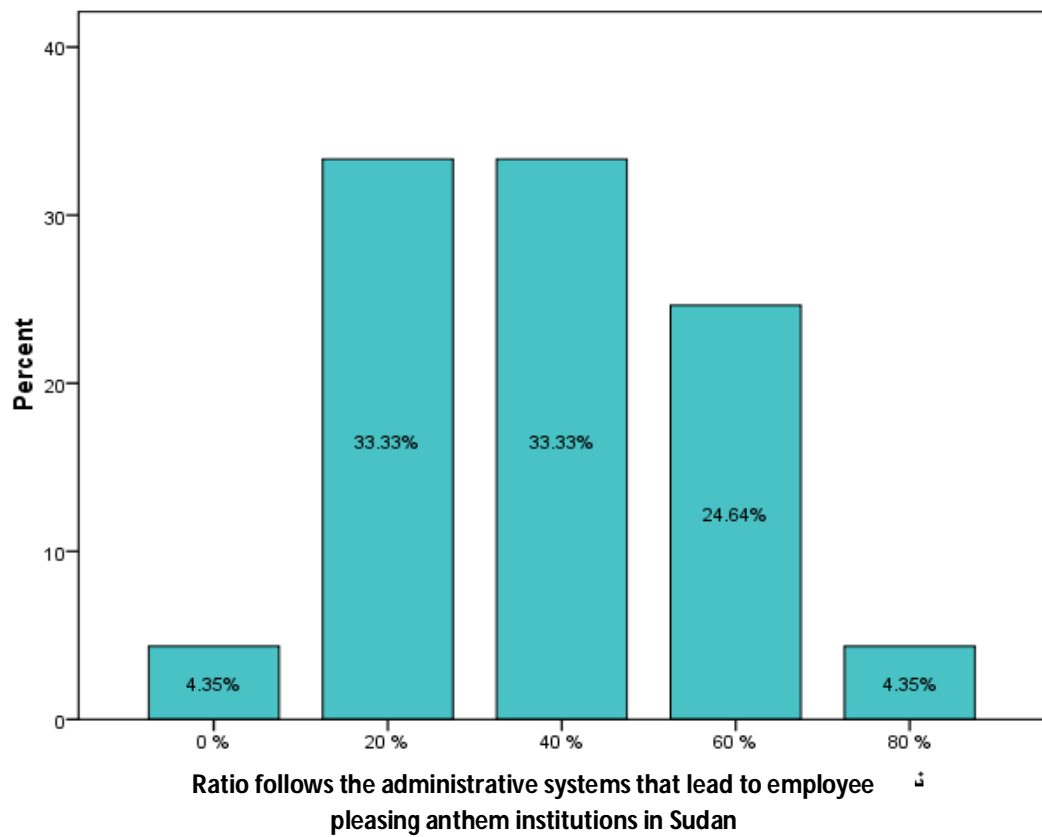
Fig 4-11: Frequency column chart – category – hypotheses 1

- Ratio correspondence Construction legal institutions in Sudan, which describes the duties and rights of the employee

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 %	6	8.7	8.7	8.7
	20 %	19	27.5	27.5	36.2
	40 %	21	30.4	30.4	66.7
	60 %	15	21.7	21.7	88.4
	80 %	8	11.6	11.6	100.0
	Total	**69**	**100.0**	**100.0**	

Table 4-18: Frequency table – Category – hypotheses 2

48

Ratio correspondence Construction legal institutions in Sudan, which describes the duties and rights of the employee
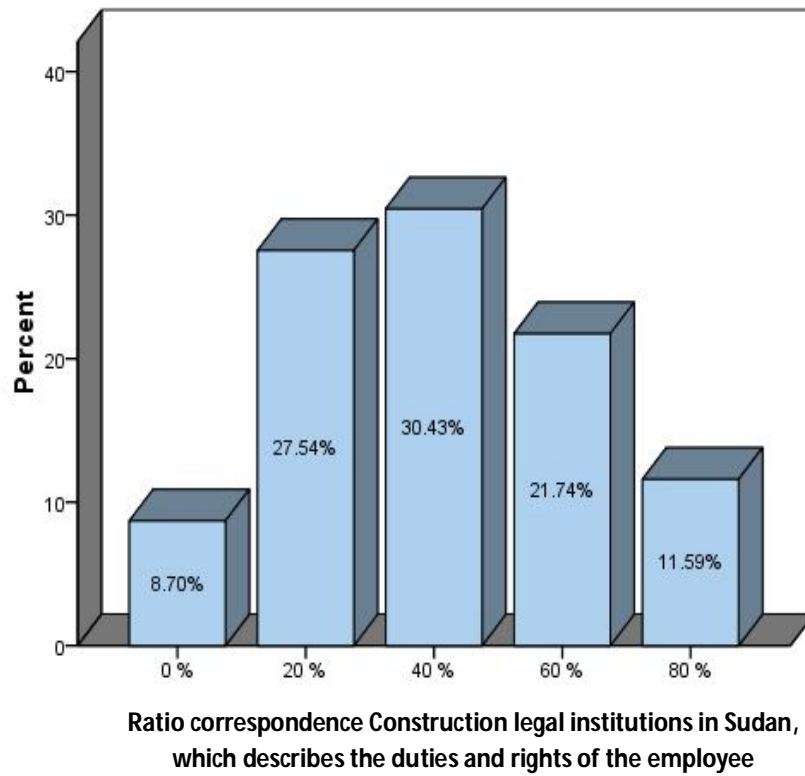
Fig4-12: Frequency column chart – category – hypotheses 2

• Percentage of employee awareness of the institutions of Construction Sudan rights and duties

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 %	2	2.9	2.9	2.9
	20 %	12	17.4	17.4	20.3
	40 %	19	27.5	27.5	47.8
	60 %	20	29.0	29.0	76.8
	80 %	15	21.7	21.7	98.6
	100 %	1	1.4	1.4	100.0
	Total	**69**	**100.0**	**100.0**	

Table 4-19: Frequency table – Category – hypotheses 3
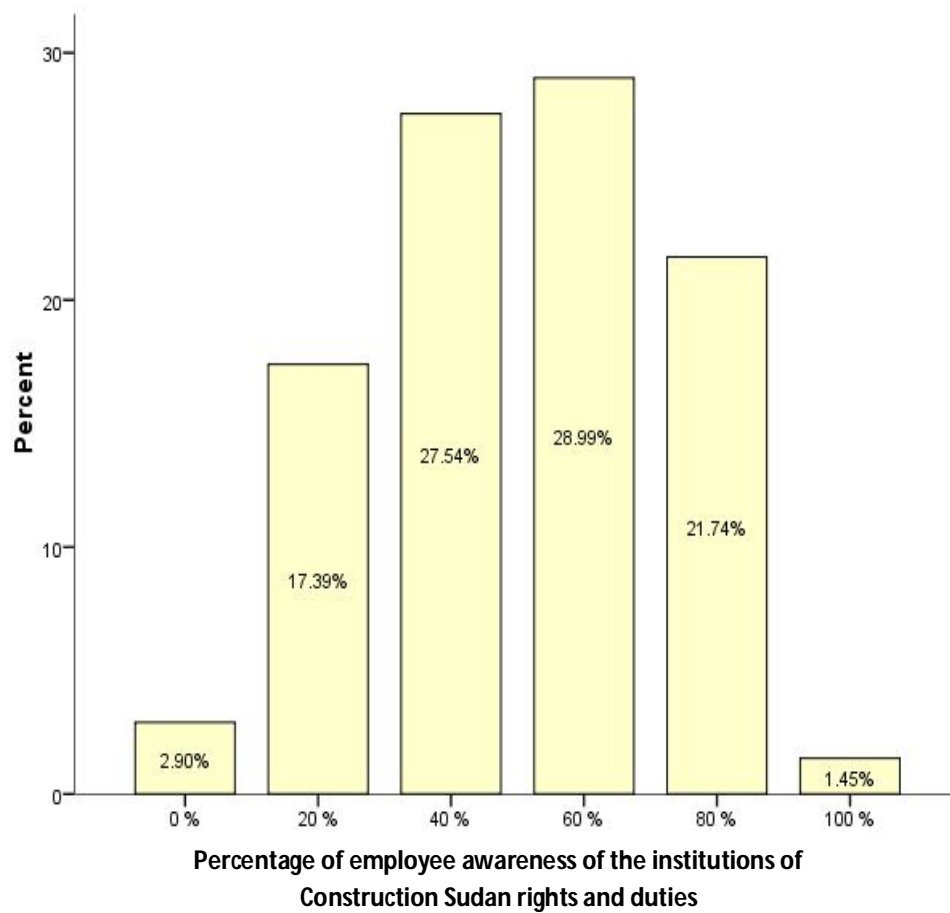
Fig4-13: Frequency column chart – category – hypotheses 3

- proportion of consciousness departments institutions in Sudan setting clear goals of the institution and work to achieve them

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 %	3	4.3	4.3	4.3
	20 %	23	33.3	33.3	37.7
	40 %	15	21.7	21.7	59.4
	60 %	23	33.3	33.3	92.8
	80 %	5	7.2	7.2	100.0
	Total	**69**	**100.0**	**100.0**	

Table 4-20: Frequency table – Category – hypotheses 4

Proportion of consciousness departments institutions in Sudan setting
clear goals of the institution and work to achieve them
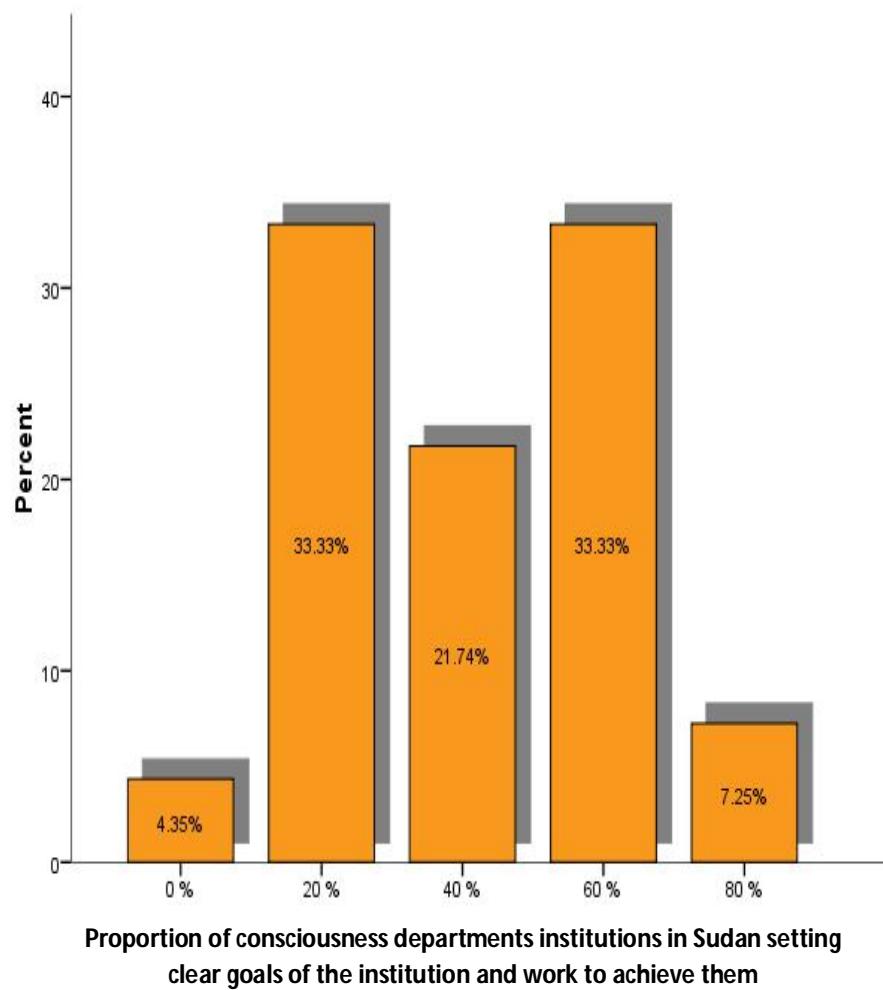
Fig4-14: Frequency column chart – category – hypotheses 4

• adoption of the employee institutions Construction Sudan promoted
him based on his performance career

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 %	3	4.3	4.3	4.3
	20 %	19	27.5	27.5	31.9
	40 %	23	33.3	33.3	65.2
	60 %	14	20.3	20.3	85.5
	80 %	9	13.0	13.0	98.6
	100 %	1	1.4	1.4	100.0
	Total	69	100.0	100.0	

Table 4-21: Frequency table – Category – hypotheses 5
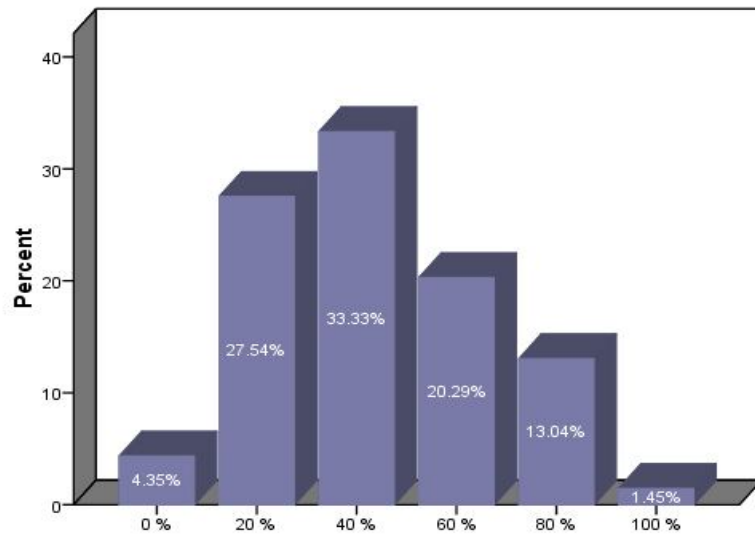
51

Adoption of the employee institutions Construction Sudan promoted him based on his performance career

- proportion of Construction in Sudan that follow the structure salaries their own and status salary for employee based on graduation year, qualification and experience without favoritism

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 %	9	13.0	13.0	13.0
	20 %	22	31.9	31.9	44.9
	40 %	26	37.7	37.7	82.6
	60 %	9	13.0	13.0	95.7
	80 %	3	4.3	4.3	100.0
	Total	**69**	**100.0**	**100.0**	

Table 4-22: Frequency table – Category – hypotheses 6
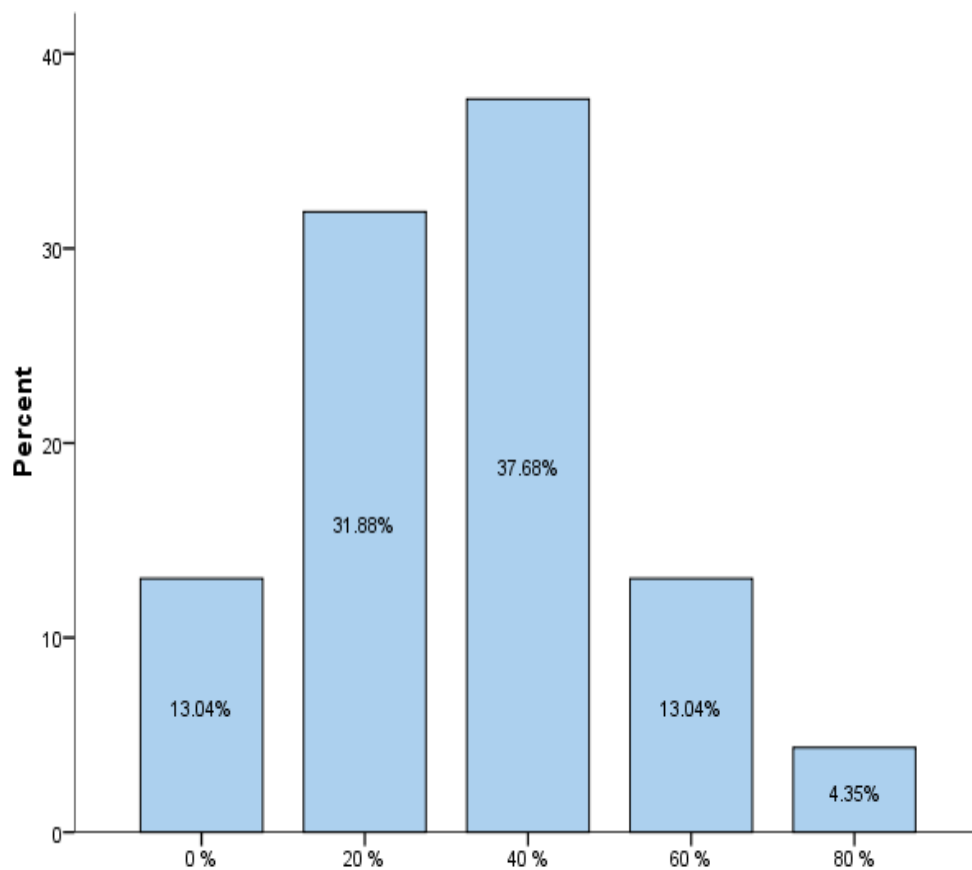
Proportion of Construction in Sudan that follow the structure salaries their own and status salary for employee based on graduation year, qualification and experience without favoritism

- Proportion of Construction in Sudan that follow the functional structure that ensures the employee to get on the upgrade, each according to his performance without favoritism

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 %	3	4.3	4.3	4.3
	20 %	40	58.0	58.0	62.3
	40 %	18	26.1	26.1	88.4
	60 %	7	10.1	10.1	98.6
	80 %	1	1.4	1.4	100.0
	Total	**69**	**100.0**	**100.0**	

Table 4-23: Frequency table – Category – hypotheses 7

Proportion of Construction in Sudan that follow the functional
structure that ensures the employee to get on the upgrade,
each according to his performance without favoritism

54

- Proportion of Construction in Sudan that follow secret reports rotating system to assess the performance of the employee

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 %	9	13.0	13.0	13.0
	20 %	37	53.6	53.6	66.7
	40 %	16	23.2	23.2	89.9
	60 %	4	5.8	5.8	95.7
	80 %	3	4.3	4.3	100.0
	Total	**69**	**100.0**	**100.0**	

Table 4-24: Frequency table – Category – hypotheses 8

Proportion of Construction in Sudan that follow secret reports rotating system to assess the performance of the employee
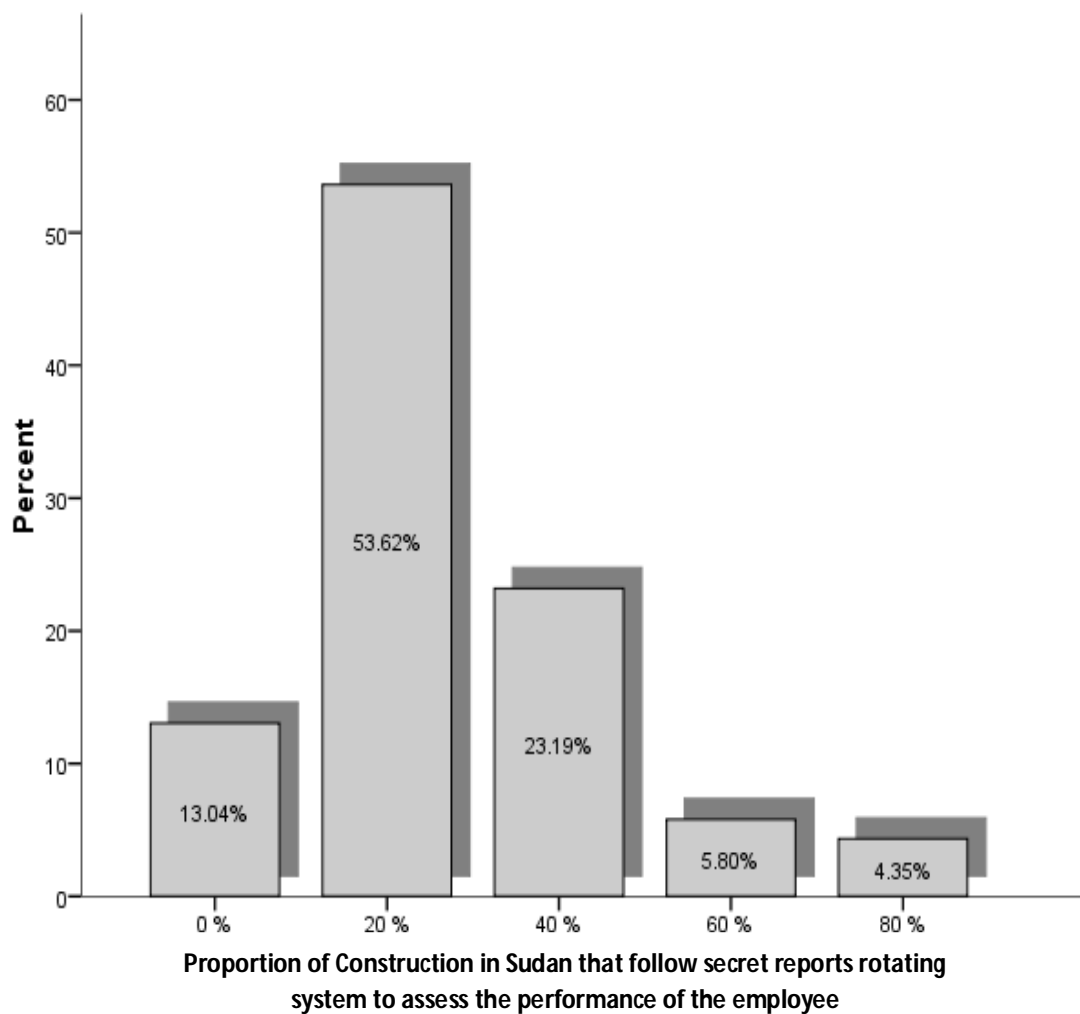
4-1-4 Open questions

Almost the answer around for

1. **What are the advantages of using the salary structure in institutions Construction Sudan depending on your perspective?**

- Justice among employees in rights and duties, and ensure that no favoritism.
- Create availed colostrum work.
- Employee satisfaction and a sense of physical security to your obligations, which increases loyalty to the institution.
- Encourage employees to improve their qualifications and abilities in their respective fields.
- To assist the institution codetermine the value of their fees and profits account for each project.

2. **What are the advantages of using the functional structure in institutions construction Sudan depending on your perspective?**

- Organization of work and the knowledge of each employee the responsibility and the direct manager very clear.
- Organization issuing directives, instructions and determine the functional tasks.
- Reflect other views over the professional work of the Foundation and its divisions.
- General sense of security to the employee and his job.
  - Help develop the institutions.

3. **What are the advantages of using f confidential reports to evaluate the performance of the employee's career in institutions Construction Sudan depending on your perspective?**

- Create a competitive atmosphere increases production rates.
- Applied depends on transparency, honesty and supplement deficiencies in the performance of another.
- Employee motivation to work characteristically helping to develop performance.
- Identification of the employee training courses.
- How best to reach the desired goals of the institution.
- Management helps to know the institution by staff performance.
- Give everyone his right.

CHAPTER 5

Conclusions and Recommendations

5-1 The Conclusions

It is clear from the foregoing that the basic in construction that have been studied in this research that there is full awareness of the worker rights and duties towards the institution in which it operates and the lack of a valid work environment and that the proportion of the lack of justice in the distribution of salaries and job title depends on favorites. The most important on which this study is:

1. The evolution of the organization depends on the strong structure system and clarity the job description for employees.
2. The evolution of the organization depends on the clarity of the rights and obligations of an employee's by legal contract.
3. If available basic employee's needs of food drink, accommodation, the deportation and training lead to employee loyalty to the institution.
4. If available the basic needs of the employee lead to the development of vocational.
5. If available the basic needs of the employee lead to please him, which increases the rate of production.
6. Development of the country obliquely, the evolution of institutions.

It is proposed that the methodology research has in this study was based on the work of a questionnaire designed and distributed to all the individuals who contribute to the construction industry in Sudan and the results were as follows

1. **For the advancement of construction industry in Sudan and to ensure the progress and prosperity of the our country, we must follows**
   - Evolution of the organization depends on the strong structure system and clarity the job description for employees.
   - Evolution of the organization depends on the clarity of the rights and obligations of an employee's by legal contract.
   - Availability basic employee's needs of food, drink, accommodation, the deportation and training lead for increase the productivity and satisfy of employee and customer.

2. To create valid work environment to increase productivity and employee and customer satisfaction, we follow follows

- Using the salary structure in institutions Construction Sudan depending on qualification and years of experience and skills of employee.

- Using the functional structure in institutions Construction Sudan depending on qualification and years of experience and skills of employee.

- Using f confidential reports to evaluate the performance of the employee's career in institutions Construction Sudan depending on qualification and years of experience and skills of employee.

5-2 The Recommendations

From the above, we hope that the construction institutions in sudan concerned with the attention with the most important sources to increase productivity, a satisfaction employee and in ensure his loyalty by ensuring all needed life and rehabilitation and training and to provide a work environment valid work structure of the salary structure and functional depends on the employee qualification and the support of the institution of achievements without taking into account or favoritism.

As we hope you are studies there the filed of employment in sudan and the work of controls to ensure the employee to obtain their rights and full knowledge of his duties clearly and also studies working to help work the institutions of construction owners of the work of the follow-up system is easy to apply, through the study designed the structure of salary and the structure of functional and follow-up reports taking into account the year of graduation and professional experience, qualifications, personal factor and the tolerance of the responsibility and classification of the institution by the size of their business and the size and type of equipment owned and classified in the Consolidated Contractors.

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Appendixes

6-Appendixes:-

6-1 Questionnaire
6-1-1 English Questionnaire

Sudan University of Scienceand Technology
Collegeof Graduate Studies -Faculty of Engineering
Department of Civil Engineering
MSc. in Construction Management

1. Introduction : -

Submitted to you a questionnaire about " Organization System In Construction CompanyIn Sudan" to conduct a study to obtain a master's degree in construction management for the student,

2. personal-data: -

Name: .... "Non-mandatory"

Gender: ....

Job Description: ....

Qualifications: ....

Years of Experience: ....

3. The instructions to fill out the questionnaire: -

First: -

4.1: Personal Response

Tick √ to answer as it deems appropriate.

Second: -

4-2: Category

Tick√to box that has the percentage by which it deems appropriate.

Third: -

4-3: open questions

Fill in the blanks answers questions in the form of points.

4. questions: -

4.1: Personal Response

1. The evolution of the organization depends on the strong structure system and clarity the job description for employees.

• Strongly agree

• Agree

• Do not agree

• Strongly Disagree

2. The evolution of the organization depends on the clarity of the rights and obligations of an employee's by legal contract

• Strongly agree

• Agree

• Do not agree

• Strongly Disagree

3. Availability the basic employee's needs of food, drink, accommodation, the deportation and training lead to employee loyalty to the institution

• Strongly agree

• Agree

• Do not agree

• Strongly Disagree

4. Availability the basic needs of the employee lead to the development of vocational

• Strongly agree

• Agree

• Do not agree

• Strongly Disagree

5. Availability the basic needs of the employee lead to please him, which increases the rate of production

• Strongly agree

• Agree

• Do not agree

• Strongly Disagree

6. Development of the country obliquely, the evolution of institutions

• Strongly agree

• Agree

• Do not agree

• Strongly Disagree

4-2: Category

1. Ratio follows the administrative systems that lead to employee pleasing anthem institutions in Sudan

0%	20%	40%	60%	80%	100%

2. Ratio correspondence Construction legal institutions in Sudan, which describes the duties and rights of the employee

0%	20%	40%	60%	80%	100%

3. Percentage of employee awareness of the institutions of Construction Sudan rights and duties

0%	20%	40%	60%	80%	100%

4. Proportion of consciousness departments institutions in Sudan setting clear goals of the institution and work to achieve them

0%	20%	40%	60%	80%	100%

5. Adoption of the employee institutions Construction Sudan promoted him based on his performance career

%0	20%	40%	60%	80%	100%

6. proportion of Construction in Sudan that follow the structure salaries their own and status salary for employee based on graduation year, qualification and experience without favoritism

0%	20%	40%	60%	80%	100%

7. Proportion of Construction in Sudan that follow the functional structure that ensures the employee to get on the upgrade, each according to his performance without favoritism

%100	%80	%60	%40	%20	%0

8. Proportion of Construction in Sudan that follow secret reports rotating system to assess the performance of the employee

0%	20%	40%	60%	80%	100%

4-3: open questions

1. What are the advantages of using the salary structure in institutions Construction Sudan depending on your perspective?

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2.What are the advantages of using the functional structure in institutions Construction Sudan depending on your perspective؟

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3. What are the advantages of using f confidential reports to evaluate the performance of the employee's career in institutions Construction Sudan depending on your perspective?

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....

Thank you

6-1-2 Arabic Questionnaire

جامعة السودان للعلوم والتكنولوجيا

كلية الدراسات العليا ــ كلية الهندسة

قسم الهندسة المدنية

ماجستير إدارة تشييد

2- مقدمة :-

مقدم لكم إستبيان لبحث لنيل درجة الماجستير في إدارة التشييد بعنوان

"***Organization System In Construction Company In Sudan***"

ملحوظة :-

هذا الإستبيان بغرض البحث العلمي وستكون كل المعلومات في سرية تامة.

3- بيانات الشخص المشارك :-

الاسم :..   "غير إلزامي"

الجنس :...

الوظيفة :..

المؤهل العلمي :..

عدد سنوات الخبرة:..

4- الإرشادات والتعليمات لملئ الإستبيان:-

أولا :-

1-4 : الإستجابة الشخصية

ضع علامة √ علي الإجابة التي تراها مناسبة.

4-2 : التصنيف

ضع علامة √ علي المربع الذي توجد به النسبة المئوية التي تراها مناسبة.

4-2 : الأسئلة مفتوحة

ملئ الفراغات أسفل الأسئلة باجابات مقتطبة في شكل نقاط.

5- الأسئلة:-

4-1 : الإستجابة الشخصية

1. تطور المؤسسة يعتمد علي وضع هيكلة وظيفية واضحة

☐ لا أوافق بشدة   ☐ لا أوافق   ☐ أوافق   ☐ أوافق بشدة

2. تطور المؤسسة يعتمد علي وضوح حقوق والتزامات الموظف بصورة مكاتبية قانونية

☐ لا أوافق بشدة   ☐ لا أوافق   ☐ أوافق   ☐ أوافق بشدة

3. تلبية الإحتياجات الأساسية من مأكل ومشرب وسكن وترحيل و تدريب تؤدي الي ولاء الموظف للمؤسسة

☐ لا أوافق بشدة   ☐ لا أوافق   ☐ أوافق   ☐ أوافق بشدة

4. تلبية الإحتياجات الأساسية للموظف تؤدي الي تطوره المهني

☐ لا أوافق بشدة   ☐ لا أوافق   ☐ أوافق   ☐ أوافق بشدة

5. تلبية الإحتياجات الأساسية للموظف تؤدي الي إرضائه مما يزيد من معدل إنتاجه

☐ لا أوافق بشدة   ☐ لا أوافق   ☐ أوافق   ☐ أوافق بشدة

6. تطور البلاد يتأتي بتطور مؤسساتها

☐ لا أوافق بشدة   ☐ لا أوافق   ☐ أوافق   ☐ أوافق بشدة

4-2 : التصنيف

1. نسبة إتباع النظم الإدارية التي تؤدي الي ارضاء الموظف بمؤسسات التشيد بالسودان

%100	%80	%60	%40	%20	%0

2. نسبة المكاتبات القانونية بمؤسسات التشيد بالسودان التي توضح واجبات وحقوق الموظف

%100	%80	%60	%40	%20	%0

3. نسبة وعي الموظف بمؤسسات التشيد بالسودان بحقوقه وواجباته

%100	%80	%60	%40	%20	%0

4. نسبة وعي الإدارات بالمؤسسات بالسودان بوضع أهداف واضحة للمؤسسة والعمل علي تحقيقها

%100	%80	%60	%40	%20	%0

5. إعتماد الموظف بمؤسسات التشيد بالسودان بتتطوره الوظيفي بناء علي ادائه

%100	%80	%60	%40	%20	%0

6. نسبة مؤسسات التشيد بالسودان التي تتبع الهيكل الراتبي الخاص بها ووضع المرتبات بناء علي سنة التخرج والمؤهل والخبرة التي تلقاها الموظف طيل حياته العملية بعيدا عن المحسوبية

%100	%80	%60	%40	%20	%0

7. نسبة مؤسسات التشيد بالسودان التي تتبع الهيكل الوظيفي الذي يضمن للموظف الحصول علي الترقية كل حسب اداؤوه دون محسوبية

%100	%80	%60	%40	%20	%0

8. نسبة مؤسسات التشيد بالسودان التي تتبع نظام التقارير السرية الدورية لتقيم اداء الموظف

%100	%80	%60	%40	%20	%0

4-3 : الأسئلة مفتوحة

1. ماهي مميزات إتباع نظام الهيكل الراتبي بمؤسسات التشيد بالسودان حسب وجهة نظرك

....
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....
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....

2. ما هي مميزات إتباع نظام الهيكل الوظيفي بمؤسسات التشيد بالسودان حسب وجهة نظرك

....
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....

3. ما هي مميزات إتباع نظام التقارير السرية لتقيم اداء الموظف الوظيفي حسب وجهة نظرك

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والله الموفق،،،