THE IMPACT OF CAPACITY BUILDING ON MANAGERIAL INNOVATION
A CASE STUDY OF GREATER NILE PETROLEUM COMPANY
2005-2015

THESIS SUBMITTED FOR THE AWARD OF THE DEGREE OF DOCTOR OF PHILOSOPHY (PhD) IN BUSINESS ADMINISTRATION.

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الإستهلال

قال تعالى:
{فَبَعَثَ اللَّهُ عُرَابًا يَحْثُ فِي الأَرْضِ كَيْفَ يُوَارِي سَوْءَةَ أَخِيهِ قَالَ يَا وَيْلَتَا
أَعُجَرْتُ أَن أَكُنَّ مِثَلَ هَذَا العَرَابِ فَأَوَارَي سَوْءَةَ أَخِي فَأَصَبْحَ مِن النَّادِمِينَ}

صدق الله العظيم
سورة المائدة الآية (31)

“If you plan for one year, sow seeds. If you plan for ten years, plant a tree. If you plan for hundred years, do capacity building.”

A Chinese Proverb
Dedication

To my mother, she bears my frequent and unintentional absence due to life and its demands. I ask almighty God to keep her from harmful things and make her happy with health and wellbeing, and seal her life with virtuous deeds. Amen.

To the soul of my father who taught me how I can tolerate life and its hardships in searching out for knowledge. I ask almighty God to accept and reside him in his limitless paradise with the martyrs and the righteous. Amen.

To my wives (almighty God keep them from harmful words and deeds) who always stand nearby me, and have taken full responsibility in the time of my absence in doing this research. They have been true mothers in protecting, educating, socializing and acculturating my children.

To those who fill my house with joy and laughter, my cute children God keep them among those who memorize his Quran and raise the flag of “there is no God, except Allah”. Amen.

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Abstract
The study deals with the "The impact of capacity building on managerial innovation", Greater Nile Petroleum Company as a case, during the period 2005-2015. The problem of the research is expressed in the phrase "it was observed that the lack of capacity-building has become a stumbling block in the development of many companies". Thus the research aims to know the impact of capacity-building in achieving managerial innovation and to investigate the designs and implementation of training programs in Greater Nile Petroleum Company. The research main hypothesis: Capacity-building applications are implemented to enhance managerial innovation. This hypothesis is divided into the following two sub-hypothesis: there is a statistical significance between the implementation of capacity building applications and managerial innovation in Greater Nile Petroleum Company; and there is a statistical correlation between training and managerial innovation in Greater Nile Petroleum Company. To verify the main hypothesis achieve that end the researcher followed descriptive and analytical approaches, and used field study as a tool for data gathering. The researcher reached a number of results, the most important of which are: Institutionalization is helpful to the process of innovation that takes place in an organization. The autonomy, empowerment and communication are supportive elements to the progression of managerial innovation in an organization. Training programs have a positive impact; hence, it serves as a source for managerial innovation in an organization, and obtaining unique capabilities is crucial to developing in having managerial innovation in an organization. These findings there must be a policy, which clearly addresses the issue of innovation so as to keep the momentum of the innovative forces in the company, through introducing steps that urge the company’s leadership to fulfill the basic necessities and compel the employees to contribute their best in achieving innovation. There must be a committee or a council that consists of knowledgeable and experienced employees to supervise, encourage and evaluate the performance of the employees and thereby identify and commend those who have done well by giving recognition to their innovation. Such encouragement may be done by arranging events (e.g. festivals or exhibitions) for the innovative people to display their findings/innovations. This may help them get more feedback on how they can upgrade and excel in what they have invented. Moreover, such events may also help innovative employees commercialize their products or services. Establishing a fund and soliciting a budget is another precondition for having effective capacity-building programs, and creating enabling environment to achieve greater innovation in the company.
المستخلص


توقف الباحث إلى عدد من النتائج أهمها: أن النهج المؤسس عامل مساعد في تحقيق الإبداع الإداري في المنظمة. وأن الاستقلالية، والتمكين، والتواصل هي عوامل مساعدة في رفع عملية الإبداع في المنظمة. كما أن البرامج التدريبية لها تأثير إيجابي، ويمكن أن تكون مصدرا من مصادر الإبداع الإداري. ثمن أن وجود قدرات خاصة مهمة للغاية لوجود الإبداع الإداري في الشركة. ومن توصياته البحث أنه ينبغي أن توجد سياسات تخطيط موضوع الإبداع وتحافظ على وتبره فيه الشركة، وذلك من خلال إدخال الخدمات التي تشجع القيادة وتعينهم في الأفكار بمتطلبات الموظفين لكي يبنوا قصائى جهدهم لتحقيق الإبداع الإداري في الشركة. ينبغي أن تكون هناك لجنة أو مجلس يتكون من المتخصصين وأصحاب الخبرات للمتابعة، والتشجيع وتقييم أداء الموظف المبدع، ومن ثم تحديده والإشادة به والإهانة بما قد من إبداع. على الشركة تنظيم حدث معين (سواء كان مهرجانا أم معرض) ويمكن المبدعين من عرض إبداعاتهم. وهذا من شأنه أن يؤهلهم للحصول على المزيد من التغذية المرتدة لتطوير إبداعاتهم، ومن ثم تسوق منتجاتهم وخدماتهم. لتأسيس صندوق لدعم العمل الإبداعي يشترط وجود برامج لبناء القدرات وخلق بيئة مواطنة لمساعدة العاملين على الإبداع، وأن يكون هناك منهج تدريبي مفصل يأخذ التحديات الداخلية للشركة بعين الإعتبار، وبهبه إمكانية الاستفادة من الفرص التي تتوفر في البيئة الخارجية للشركة.
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CHAPTER ONE
Research Basics

1.0 Introduction

The concept and applications of capacity building have been in continuous evolution since the seventies of the past 20th century. Most of the advanced countries have been implementing the concepts of capacity building for a long time. This has added positive dimensions to the institutional work in different levels of administration. As a result, the countries that have adopted the concept and applications of capacity building have achieved development in various life styles: education, health, agriculture, industry and that have led them to achieve autonomy in decision-making, self-satisfaction, food security and prosperity. However, it can be stated that, practicing of administration with close reference to the capacity-building applications, will in the far end furnish for the well-off society, which is very independent of its government.

On the other hand, and as far as the development of the working force is concerned, the implementation of capacity-building applications as institutional work, constitutes a point of departure towards innovation in general and managerial-innovation in particular. In this sense, managerial-innovation is one of the top targets administrators should arrive at.

Various institutions and concerned scholars believe in the powerful role of capacity-building applications and therefore seek to improve the levels of administration through scientific research. In this respect, this research is an attempt to explore the implementation of capacity-building applications and its impact on managerial-innovation in the Sudanese institutions whereas, the Greater Nile Petroleum Company is chosen as case study.

1.1 Research Problem

According to previous studies and researchers experience, the lack of capacity-building applications is observed as a stumbling block for many companies.
Companies regardless of their sizes and types are facing myriad challenges, like high rate of turnover of employees, procrastinating of jobs, and high frequency of absenteeism and overall their employees characterized with lack of skills and short sightedness because of the total absence of capacity building interventions. The lack of capacity building programs affect the companies harmfully from having aware, loyal, productive, committed and innovative workforce.

By implication these chronic disease that depicted as “lack of capacity building” will lead the companies either to lose their big shares of the market segments and entering into deep quagmire of finance crisis, employee redundancy and legal complications, hence living in vicious circle, or to total liquidation or shutdown once and forever.

Therefore, to what extent capacity-building applications implemented to contribute in enhancing managerial innovation.

1.2 Research Questions

This research seeks to answer the following main question:

- To what extent capacity-building applications are implemented to contribute in enhancing managerial innovation in the Greater Nile Petroleum Company?

This question is divided up into the following sub-questions:

1. Is there a statistical significance between the implementation of capacity building applications and managerial innovation in Greater Nile Petroleum Company?

2. Is there a statistical correlation between training and managerial innovation in the Greater Nile Petroleum Company?

1.3 Importance of the Research

The research draws its importance from the values embodied in capacity building concepts. Accordingly, usage of capacity building as a means of equipping employees with necessary skills regarded precursor for promoting
innovation. Many countries throughout the world applied capacity-building guidelines in their way to develop their economy and they achieved the wellbeing of their society.

Japan for instance, applied the concepts of Kaizen (continuous improvement), which have equal meaning with the concept of capacity building and $Ba$ that stands for place in which sharing ideas and exchanging views take place are behind the qualitative leap that confirmed in the Japanese private sectors. Therefore, Japan through understanding the philosophy of the term capacity building, recognizing its importance, emerge its economy from the circle of backwardness.

However, the application of capacity building in developing countries will be more crucial in remedying the economic and social loopholes. Particularly in Africa in which the concept of capacity building confined in a very narrow aspect like training, it needs great effort to herald about its meaning and importance to real fact.

This research undertaken to fill the knowledge gap, hence it is imperative to search out on how capacity-building applications being adopted by the companies as a tool of enhancing managerial innovation.

The significance of this research relies on its importance in providing new scope to the discipline of business management in general and capacity building programs in particular and enriches the public library with valuable body of knowledge.

Moreover, this research will provide valuable information in terms of conclusion, findings, and recommendations to the decision-making bodies to take sound and effective decisions regarding the current situations and future perspectives of their companies to bridge the gap between what they are and what they want to be, and to arouse interests of researchers in doing research in other dimensions of the subject.

### 1.4 Research Objectives

This research aims to achieve the following objectives
1. To explore the implementation of capacity-building applications in the Greater Nile Petroleum Company.

2. To investigate the designs and implementation of training programs in Greater Nile Petroleum Company.

3. To add to the scientific input in the field of knowledge.

1.5 Research Hypothesis

This research seeks to test the following main hypothesis:

- Capacity-building applications are implemented to enhance managerial innovation in the Greater Nile Petroleum Company (GNPC).

This hypothesis sub-divided into the following sub-hypotheses:

1. There is a statistical significance between the implementation of capacity building applications and managerial innovation in the Greater Nile Petroleum Company.

2. There is a statistical correlation between training and managerial innovation in the Greater Nile Petroleum Company.

1.6 Research Methodology

This research is conducted through the following methods:

a. The descriptive and analytical approaches.

b. Field study as a tool for data-collection.

1.7 Research Limitations

This research is limited in terms of:


b. Place: the researcher in this study focused on the company’s head quarters as a decision-making and command center, and its branches located in the capital city Khartoum. This means the research will not
include other branches of the company located in the other states, because of the limitations in time and budget.
d. Human limitation: are confined to people working in the Greater Nile Petroleum Company.

1.8 Research Structure
This research consists of five chapters and a conclusion that contains results, recommendations and suggestions for future studies. Chapter one is that states out the research basics including the methodology applied in doing this research. Chapter two is about reviewing Literature and assessment of the previous studies that related to the topic under discussion. Also, this chapter included the comparison that made between the various studies and this study. Chapter three deals with Capacity Building as an independent factor which presents the historical background of Human Resources Management/ Organizational Development, concepts and definitions of capacity building and the various schools of thoughts related to this area. Chapter four is about Managerial Innovation which is the dependent factor, this part discusses the various theories and experiences written and done in this area. Chapter five deals with the case study it introduces the Greater Nile Petroleum Company and its present experience in using capacity building for the sake of achieving managerial innovation and organizational excellency. Furthermore, the study is included field research and displays the data analysis and hypotheses test including results, recommendations and future studies needed.
CHAPTER TWO
Literature Review

2.0 Overview

A number of studies interested in the subject of capacity building and managerial innovation discussed it in various ways and explored its dimensions. Some of the authors of these studies discussed managerial innovation as a tool for having sound human resources performance, and others focus more on leadership and its role in bringing managerial innovation some concerned and discussed the various Human Resources (HR) functions and its impact on organizational innovation.

A few studies argue that the relation between training and capacity building could lead into innovation, where others see the importance of people with talents in achieving innovation.

Therefore, this chapter will display the previous studies that are relevant to the current study, putting into consideration that the researcher should start from where others have stopped.

Thereby, the researcher would present the summary of the various studies including the key questions, the research methodology, the hypothesis, the results and recommendations that the studies come up with, besides identifying more areas that need further research and studies.

2.1 Review of previous studies

- Mukhtar (2016)

Some contemporary organizations do not give opportunity for its employees to think innovatively in an effective manner as its demand. This is attributed
to the inability to manage the innovative thinking effectively. Therefore, the researcher molded his research problem in this way: what is the impact of innovative thinking on improving job performance and branced into the following sub-questions: what is meant by innovative thinking and what are its levels. In addition, to what extent it could affect the innovative thinking in improving job performance, and how can the positive innovative thinking enhance and can be used to improve the negative one.

The research dealt with objectives: acquainting an innovative thinking and understanding the relationship between innovative thinking and improving job performance. Moreover, the study investigated the innovative thinking and its role in improving job performance in Baraka Bank.

In performing his research, the researcher the analytical, descriptive, historical and case study methods for data collection and analysis.

The research formulated and tested the following hypothesis: there is a positive relationship between innovative thinking and its role in improving job performance, also there is a positive relationship between the following managerial supervision in the bank and the level of innovative thinking. Furthermore, the researcher tested the hypothesis that: there is a positive relation between the ability of thinking innovatively and achievement.

- **Sufwan (2016)**

This research covered and analyzed the evaluation of training programs in public institution and its effect on the performance of the employees. The research included training concepts, its importance, objectives and training methods. The research problem was based on the need to investigate the effect of evaluating programs on employee performance and the role of evaluating training programs in developing employees’ skills in public sectors. To make the statement problem clearer the researcher posed this main question: what is the impact of training programs’ evaluation on the employees’ work performance?
employees’ performance? This main question ramified into these sub questions: what is the role of training programs’ evaluation in developing employees’ skills working in the public sector? What are the barriers that encounter the implementation of training in the public sector? How can we evaluate the training programs in the public sector?

The research aimed at knowing the contentment level of management in the organization. It also, aimed at exploring the shortcomings and weaknesses in the current training programs in the university. Lastly, it aimed at investigating the follow up level of management in organization that affected the training program.

The research formulated and tested hypotheses that say: there is correlation between the interest and importance that the management gives to training evaluation, and the effectiveness in evaluating employee performance. In addition, there is a positive relationship between evaluating training program and employee performance. There is a relationship that is statistically significant between effectiveness in the evaluation of training programs and the use of modern ways in performance evaluation.

The research comes up with the results that: determining training needs leads to efficiency in performance and the high interest in training programs by the employees led to the development of their skills. It was also clear that the institution should determine who joined the training programs based on merits.

Also, recommended that the university must be more concerned with prior planning for the training programs, and concentrates more on developing employees’ skills, as this will help them to execute the duties assigned to them effectively.

- **Abdulfatah (2016)**

The researcher said that many companies suffer from a deficit in maintaining top talented staff in the company, therefore, how to understand the nature of

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1. عبدالفتاح عيسى عبدالله، الحفاظ على أصحاب المدارس العالمية وتأثيره على كفاءة أداء المنظمة، رسالة دكتوراه إدارة أعمال، غير منشورة، الخرطوم، جامعة إفريقيا العالمية، 2016.
the relationship between the retaining of outstanding talent and the improvement of the enterprise performance. This study is important because it dealt with an important issue in the insurance companies, and aimed to identify the role of human resources management in the preparation and retention of people with outstanding talents. The research follows the descriptive analytical method, and the method of case study. The research formulated and tested hypotheses that: there is no impact statistically significant for exercising strategic human resources management on the employees’ performance in the private universities in Jordan. Moreover, there is no impact statistically significant for exercising strategic human resources management on the private universities performance in Jordan. In addition, there is no impact statistically significant for exercising strategic human resources management on the private universities performance through the employees’ performance. The study reached a number of findings, the most important: to attract top talents is a strategic choice for the company and is a priority of the company’s goals, the company relies on external sources to attract the best talents.

The study had a number of recommendations included; the fair distribution of tasks among the talented employees, and to put the right staff at the right place.

- **Hashim (2015)**

The human element is the real driving force in achieving the objectives of the administrative management through the effort of managing all organizational elements; hence, many organizations are spending a lot of money and effort to prepare and train the human element and provide the appropriate work environment and advanced technology to reach the level of creativity in the work. The research aimed to address the question: what is
the impact of internal work environment factors on administrative innovation.
The research goal is to highlight the impact of supervisory method in the organizational environment to achieve administrative innovation. The study also aims to reach some conclusions that help in making the recommendations necessary to improve the working environment and then raise the efficiency of human performance and thus reach the required level of administrative innovation. The research follows the descriptive analytical method.

The research is based on a set of hypotheses: There is a positive relationship between the administrative supervision of Petrobash for multiple activities and administrative innovation. There is a positive relationship between the social services provided by the organization to the employees and the managerial creativity.

The finding shows that the availability of social services (treatment, housing, social services clubs (treatment, housing, social clubs and leisure trips) increases the managerial creativity of the employees. The study shows that the organizational environment with mutual trust such as confidence in the credibility of the information provided by the company. The study suggests that the process of administrative supervision by managers and supervisors affects positively on administrative innovation.

The research recommendations include among others: to strengthen the human relations between the employees of the Organization and to promote the concept of collective action and to emphasize the dissemination of a culture of affection and communication between employees. The adoption of standards based on efficiency, seniority and merit in the entertainment of employees.


This research was done to obtain a master degree in decentralization governance, and the research statement problem says, “There are weaknesses and setbacks in the training programs” therefore the
technological advancement and its continuous rejuvenation makes the organization to adopt training programs that enable it to survive and to have competitive advantage in the world businesses markets. The problem statement included among others: the training programs are not mutually inclusive to all employees in the organization, and the organization did not trace the employees’ performance after they finish the training programs.

The importance of the research emanated from the importance of training and human resources development. Moreover, the importance of this research indicated that the training programs and their sustainability are very crucial to cope up with changing environment and to improve the personal abilities, their knowledge, ideas, behaviors, attitudes and skills to be ready to face the challenging situations. The importance of the research can be included among others: the trainings play a pivotal role in developing the capacity of the trainees, and the institutionalized trainings that build on ambitious plans and policies that are congruent with the organizational current and future situation are elevating the capacity and skills of the trainees.

In addition, the research shed light on objectives that explain the importance of the training programs, which lead to increase the moral of the employees that implied to the increment of the capacity of the employees. In addition to that, the research identified the hindrances that encountered the organizational training programs and put the appropriate remedies to them.

The research follows the historical method, and descriptive analytical method, and method of case study.

To reach into proper and practical solutions for the problems, and for that end, the study tried to explore hypotheses that investigate the relationship between the training programs and the augmentation of the employees’ capacities and justify the notion that says, “Training leads to excel practices minimize errors and leads to high level of the employees’ performance. Furthermore, the research hypothesized the relationship between the various obstacles and bad training results.
The research comes up with certain results and recommendations that: the training provided to the subordinates implied positively in the employees’ behavior and able to take responsibility and fulfill their duties at their workplace. In addition, training leads to constructive competition among the employees in the organization.

The research recommended that training programs should be continuous and inclusive to all employees in the organization. Tight supervision should be avoided because it can be a barrier in the way of the employees’ innovation and there should be special attention to the evaluation and follow-up of the trainees after any given training.

- Asim (2014)\(^1\)

Today’s business organizations are facing a myriad and of and an ever continuing challenges, because of the knowledge boom due the revolution of information and communication. There is either an external or an internal factor affecting the managerial innovation levels of organizations. For example the psychological pressure, the compensation and motivation systems and training needs are mentioned as some influential factors. Therefore, organizations need effective transformational leadership to articulate a clearer vision and establish newer systems for the organization.

The research problem stems from the observation that the transformational leadership has become less than the ambition in some of the contemporary institutions this could be attributed to their failures in facing challenges and coping with the new developments and their inability to have creativity and innovative minds. Therefore, the main question: “what is the relation of transformational management with managerial innovation”, ramifies/leads to the following sub-questions: to what extent is the transformational leadership establishing the culture of participation and its impact on elevating the enthusiasm of the employees and enhancing their innovative

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\(^1\) عاصم عبد الله حسن يوسف، القيادة التحويلية وآثرها على الإبداع الإداري، رسالة ماجستير إدارة أعمال، غير منشورة، الخرطوم، جامعة إفريقيا العالمية، 2016.
capabilities? In addition, the researcher posed the question that: what is the role played by transformational leadership in connecting the members of the organization with the organizational vision and mission to achieve competitive merits for the organization.

The research aimed to evaluate and understand the influence of transformational leadership in fostering the culture of participation and its implication in elevating the morale of the employees. In addition, the researcher worked to clarify the objective that explains the eagerness of the transformational leadership in upgrading the employees’ level to explode their innovative capabilities. Furthermore, the research magnified the role of the transformational leadership in connecting the employees of the organization with the organizational vision and mission and achieving competitive advantage for the organization.

The study follows the historical method, and descriptive analytical method, and method of case study.

The research formulated and tested the following hypotheses: the establishment of the culture of participation by the transformational leadership led to increment in employees’ morale, which he argues that it enhances employees’ morale, and explodes their innovative capabilities. The research links these innovative capabilities to the organizational vision and mission and argues that it leads to competitive advantages for the organization.

The research comes up with the following results and recommendations: the transformational leadership has an effective role in providing new solutions for the problems that the employees encounter. In addition, the ability of transformational leadership in monitoring and supervising could facilitate the accomplishment of the financial institution processes.

Finally, the researcher recommended that: the transformational leadership should introduce controlling system to deliver a high quality of services to the clients.
Hadil (2014)\(^1\)

This research is done to fill the gap that is created due to the endless change in the business organization, and its environs. The fast informational and technological boom required generating new ideas and motivating innovation. Innovative ideas are considered the main characteristics of the successful organization that usually runs to achieve its stated objectives through improving employee performance. Therefore, the importance of this research emanated from the new ideas that are considered the essence of managerial innovation for any organization, and an innovative thinking, which contribute to the improvement of the employee’s capacity in generating ideas, and taking appropriate decisions at the appropriate time. Moreover, the contemporary organization is surviving an ever changing and complicated situation, which requires innovative thinking.

The research tried to explain the objectives that magnify the role of innovative thinking in improving the performance of the employees in the organization, and shed light on the barriers that impede employees from thinking innovatively.

In addition to that, the research tried to draw a vision for the organization through adopting innovative thinking and eliminating the routines and bureaucracies in the administrative jobs.

The study managed to answer questions related to the meaning of innovation and innovative ideas, and the barriers that hampered innovation. In addition, the research tried to evaluate the capacity of the organization to share and transfer the art and techniques of innovation internally. Moreover, the research tried to answer the question whether the innovative ideas are affected by the work environment, and how can eliminate the traditional methodology of administration and replace it by innovative ideas.

The research tried to investigate the hypotheses: innovative ideas contribute to the promotion of the employee performance in the organization, and help in disposing the negatives that are created by the traditional methodology in the administrative works. Furthermore, the challenges that face

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\(^1\) هديل عبدالعظيم، التفكير الإبداعي ودوره في ترغبة أداء الموظفين في المنظمة، رسالة ماجستير إدارة أعمال، غير منشورة، الخرطوم، جامعة أفريقيا العالمية، 2014.
administration require the usage of innovative ideas to contribute in solving problems and maximizing profits.

The researcher used the descriptive analytical method, and method of case study to reach his ends.

The research comes up with results and recommendations. The routine and bureaucracy in the administrative works consider setbacks created by the traditional methodology of the administration, which lead to stagnation, and backwardness that kills innovation. An innovative idea contributes to the development of managerial culture and liberation of ideas, innovation, and promoting the employees performance. Furthermore, innovative ideas are helpful in taking the appropriate decision at the appropriate time. The importance of creativity and innovation urges the top-level managements to give special attention to innovation through adopting effective plans.

- Ahmed (2013)\(^1\)

The research problem of this project relies on searching in the role that is played by the managerial innovation and its role in time management in Giad Company for heavy trucks and its implications in minimizing the cost of production and raising the effectiveness in productivity.

The researcher raised questions like: does the employee in the company use his time effectively, and does the managerial innovation help in reducing the scheduled time for processing the production.

The research tried to realize the following key objectives: the researcher attempts to acquaint about managerial innovation, and how become tangible. In addition, the researcher tried to find the relationship between managerial innovation and time management; and how it can use time effectively through benefiting managerial innovation.

The researcher formulated and tested the following hypothesis: managerial innovation helps in improving time management effectively and efficiently and its contribution in raising productivity via improving time management.

\(^1\) أحمد فضل أحمد، الإبداع الإداري ودوره في إدارة الوقت، رسالة ماجستير إدارة أعمال غير منشورة، الخرطوم، جامعة إفريقيا العالمية، 2016.
However, the researcher says that the company management does not give enough attention to managerial innovation. The researcher used the descriptive, analytical, deductive and inductive methodologies in his study of the case. The study found a number of important results that creativity within the company does not represent a sufficient source for improving the management of time in the right way that enables better job within the company, reduce wasted time, and contribute to the reduction of production costs.

It analyzed that the management of innovation will help the administration in carrying out its function efficiently and provided indicators used in the management of the time in the best way.

The research also comes up with recommendations that: giving attention for managerial innovation and set up specific body for nurturing innovation and giving more attention to time and motivate innovative personnel, furthermore, continuous training for the employees is one way to innovation.

- **Talal and Najem (2011)**

Pose a fundamental question in their research on Jordan’s commercial banks. They investigate: “Does being serious and more interested in innovation management could have an implication on improving human resources performance in the Jordan’s commercial banks?”

To understand the impact of managerial innovation in the performance of human resources deployed in the Jordan’s commercial banks, the researchers point out the need of linking this practice with objectives, aspirations and drives within the organizations with level of awareness on managerial innovation.

The study relied on descriptive approach; questionnaire has been designed as means to collect the necessary data.

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اطلال ناصر، نجم العزاوي، تأثير الإبداع الإداري في تحسين أداء القوة البشرية، رسالة دكتوراه، غير منشورة، جامعة حلب، 2011.
The researchers posed two main hypotheses: there is a relation of statistical significance between the impact of managerial innovation and effectives of human power in the company. Their finding suggests that there is a positive correlation between the material and non-material motivation systems and innovation among the employees of the company. Furthermore, their study points out that the behavior of the leadership and the style of the transformational leadership is both crucial for enhancing HR performance in the organization. Nonetheless, both researchers underscore the importance of certain human resource interventions like the role of motivation both material and nonmaterial motivational practices in enhancing human resources performance.

Both researchers provided a number of recommendations such as the banks should encourage employees to generate new ideas that increase their incomes and elevate the levels of providing good services to the customers. Furthermore, the banks should promote the culture of innovation, differentiation, and creativity that have positive impact on the performance of human resources.

In addition to that, the institutions must utilize the experiences and potentials of their managers and employees in the endeavors of influencing, and motivating the employees to be well prepared for solving problems, bringing changes and improving performance.

- Aqsam & Ruwayda; (2010)

This research discussed the level of exercising the various HR functions, and their impacts on organizational innovation. The research sought to realize a number of objectives such as: understanding the range of exercising human resources management functions in the Jordan’s Communication Company and acquaintance with the range of exercising organizational innovation in it. In addition to that, the research

أقسم ورويدا، تأثير وظائف إدارة الموارد البشرية على الإبداع التنظيمي، دراسة حالة شركة الإتصالات الأردنية، رسالة ماجستير إدارة عامة غير منشورة، عمان، جامعة البلقاء، 2010.
tried to assess the impact of human resources management functions on organizational innovation according to the views of the employees in the Company.

The research follows the historical method, and the method of case study.

The research tried to investigate the hypothesis that: “there is no statistical significance of the HR functions on the organizational innovation in the Jordan Communication Company”.

The researchers tried to answer the following research key questions: what is the range of practicing human resources functions according to the views of the employees in the Jordan’s Communication Company?, and what is the level of practicing organizational innovation according to the views of the employees in the Jordan’s Communication Company?

Furthermore, the research investigated the impact of age and occupation in the process of human resources management functions and organizational innovation besides providing theoretical framework about human resources management and organizational innovation in the company.

The research reached into the conclusion that: the levels of exercising of HRM functions and organizational innovation in the Jordan Communication Company were remarkably high. Furthermore, there is statistical significance for the HRM functions on the organizational innovation in the Jordan Communication Company.

The study came up with certain recommendations like; focusing on human resources planning as an important factor in boosting innovation. In addition, the research recommended the decisive role of the motivational factor in encouraging employees to play a pivotal role in enhancing organizational innovation.

- **Khawad El-shami (2010)**

A thesis done to obtain the PhD in public administration and it is a comparative study between the College of Leadership and Staffs, the...

This research focused mainly on the elements of the training process, which includes funds, efforts, and time, required in the process by the organization. In addition, the research concentrated on the other benefits connected with knowledge and skills’ transfer, and the impact of these trainings in shaping the behavior, attitude and practice of the trainees. Furthermore, the research tried to conceptualize the problems that could face organizations in the future. The research reiterated that if an organization is unable to measure its work and employees performance it could be difficult to manage the work requirement and working environment and this will have its negative implications on the training programs and their outcomes.

Hence, the research managed to understand the impact of identifying and specifying the training needs and measuring the impact and gains of the training in developing trainees’ performance and overall performance of the organization. The research was also guided by the objectives of displaying the concepts of training, measuring and evaluation, defining the needs of training, designing, execution, ways and mechanisms of training, and measuring the impact of training needs on the quality and effectiveness of the training.

It also focused on displaying the epistemology on how we lay down curriculum for training, ways of training, tools for training, their mechanism for utilizing effectively and efficiently, and integrating the whole processes of training (such as trainees, trainer, teaching materials, training tools, services and venues) together.

The research follows the historical method, and descriptive analytical method, and method of case study.

The research tried to investigate the hypotheses that explain the relationship between identifying the training needs and the gains achieved from the training (return on investment). Also, investigate the relationship between measuring the impact of performance and the quality of the training. Moreover, the research hypothesized the relationship between measuring the
impact of the training and improvement the processes of training, and the relationship between developing job performance and determining specifically the needs of the training and measuring the impact of training and its quality.

The research concluded that training programs should be given further consideration and more weight should be given to the expert instructors in the human resources development trainings.

Coordination among the training management agents, training designers and executers is very crucial. Since instructor plays a focal point in the success of training process, he or she should assessed better. Due attention and regular evaluation and development to the training programs are instrumental in registering progress and delivering quality training.

- **Al-azmi, (2006)**¹

This thesis was prepared as a partial fulfillment for master degree in management science. The researcher tried to discover and get a remedy for the main question that says: “what is the range of leadership between transformational leadership and in development of creative abilities for the civil staff in the ministry of interior”, kingdom of Saudi Arabia.

To make his question more clear the researcher raised further sub-questions regarding to: the extent, the characteristics, (of civil transformational leadership) ranges, and creative abilities that are available among civil employees in the ministry, beside the relationship between the availability of transformational leadership and the availability of management creativity.

The research sought to realize a number of objectives such as acquainting with the available characteristics of transformational leadership in the ministry of interior and their creative abilities of the employees in the ministry.

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¹ محمد بوزية العزمي، القيادة التحويلية و علاقتها بالإبداع الإداري، رسالة ماجستير إدارة أعمال، غير منشورة، الرياض، جامعة نايف للعلوم الأمنية، 2006.
The research reached the conclusion that “there is an inverted relationship between having transformational leadership traits among the leaders and the owning of their subordinates to the innovative skills”. Hence, the researcher recommended that the civil leadership should promote innovative skills among their subordinates. Furthermore, civil leadership in the ministry has enough innovative qualifications to lead and bring change in the ministry. In addition, the studied sample shows that there are 29 traits of transformational leaderships such as self-confidence, mutual respect, and high educational qualification, are available among the civil transformational leadership working within the ministry of interior.

- **Searle & Ball, (2003)**

This research focused on determining the relationship between the importance of innovation for an organization and HR policies. Using an exclusive method in studying the whole organization, the two researchers determined that the utilization of effective human resources, the implementation effective training programs and the application of human resources related policies could contribute in the improvement of the organizational performance. The research concluded that organizations gave priority to innovation but failed in transforming this into coherent human resources policies. Furthermore, the study revealed that the human resources policies motivated and supported the subordinates rather than those who are leading the process of innovation and working in the leadership echelon. Hence, these contradictions became the source for resistance in generating new ideas and its implementation throughout the organization.

### 2.2 COMPARISON BETWEEN THE PREVIOUS STUDIES AND THIS STUDY

**Study No 2.2.1** This research has similarities with the present topic because; both researches discussed the great role of innovation in an organization and its implication on performances of the employees. The research reviewed

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1 Searle & Ball., Supporting Innovation through HR Policy: Evidence from the UK, Creativity and Innovation Management, 2003, UK.
secondary data about training, motivation, concepts, phases and levels of innovation, etc... Some of which is discussed by the present study. In addition, the researcher used the historical, descriptive and analytical methods in collecting, analyzing and reporting data, whereas the same methodology was used by the present research.

However, there are dissimilarities between the two researches. This study used motivation as an independent factor, and the employees’ performance as dependent variable, whereas in the present research innovation is, used as dependent variable on capacity building. Moreover, the researcher exerted effort to justify the importance of innovation in ensuring high performance of the employees in the organization, whereas in the current research the well trained, skillful, equipped and bolstered by effective performance of the employees are more necessary to have managerial innovation.

**Study No 2.2.2** This study “the evaluation of training programs in the public institutions and their impact on the employee performance” has a relation with the present research topic in the independent (the impact of capacity building) variable mainly. Both studies underlined the importance of training in upgrading the employee’s capacity and bolstering their potentials to respond to the organizational priorities.

However, there is much dissimilarity between both researches. The previous research focused on evaluating training program and its impacts on performance, whereas the present research deals with capacity building as a whole and its role in bringing managerial innovation. However, the objectives of this study addressed part of the present research concerns in the areas of training and its impact on achieving managerial innovation.

**Study No 2.2.3** This study “Retaining People with Talent and the Impact of this on the Effectiveness of the Organization’s Performance” has a relation with the present research topic in the independent (the impact of capacity building) variable mainly, and relative with the dependent variable.

Both studies underlined the importance of innovative employee in achieving the overarching goals of the organization. Talented and well-skilled employees are preconditions for effective performance.
Both researchers argue that defining job descriptions and assigning the right staff and maintain the talented have an added value contrary to the prevailing traditional view that talent acquisition is always brought from outside of the organization. However, there are dissimilarities between these two researches. For the previous research, the term innovation was not raised at all, whereas in this research innovation is considered the main variable (dependent). Furthermore, Abdulfatah believed that human resources management did not have an impact on employees’ performance, whereas in this research the role of human element is a precondition for achieving managerial innovation.

**Study No 2.2.4** this research “the factors of internal environment and their impact on the managerial innovation” has common factors with the current research in both variables. These researches discussed the various factors that lead to managerial innovation. The two researches discussed the internal environment of the studies as a catalyst for managerial innovation. Despite the similarities, the first research paper focused more on the human aspect than other elements such as policies, technologies…etc. while the current research discusses the whole factors that lead to managerial innovation.

**Study No 2.2.5** This research “The innovative thinking and its role in improving job performance” has communality with this topic “the impact of capacity building on managerial innovation” in the sense that the former dealt with innovative thinking as an independent variable, whereas the latter used it as a dependent variable. In the present research, managerial innovation handled, as an objective to be realized, while innovative thinking in the above mentioned research is treated as a tool employed to realize job improvement. Furthermore, in the present research, innovative thinking (formation of ideas) is considered as a catalyst factor that leads to full-fledged managerial innovation. In general, both researches use the same research methodologies such as descriptive, analytical, deductive and inductive methods.
Study No 2.2.6 This study has a relation with the present research topic mainly in its dependent (capacity building) variable. Both studies underlined the importance of training in upgrading the employee’s capacity and bolstering their potentials to respond to the organizational priorities. Both researches connected and associated among training and capacity building, with training and improvement in the daily routines and the strategic dimension of the organization. This research came up with important results, like the fact that training raises the employees’ morals and enthusiasm, besides improving their way of doing things effectively and efficiently, and recommended that training should continue regularly and should be inclusive so as to allow all members of the organization to take part in the training. This is what the present research focused on.

As far as the methodological framework is concerned, both researches applied the same methodologies such as the historical, descriptive and analytical approaches in gathering, analyzing and reporting the findings. In addition to that, both researches have the nature of cause and effect relationship. In the previous research training is used as a cause whereas capacity development is considered an effect. In the present research capacity building is treated as a cause, while managerial innovation is used as an effect of the cause.

The differences that are magnified in both studies are the terminologies that are used in both studies. In the present research training is used as one element within the broad subject of capacity building, while the managerial innovation is the consequence for the application of capacity building programs.

Study No 2.2.7 This research has similarities with this study both in the tools of research and outcomes. However, there are clear differences and dissimilarities in the ways in which the dependent and independent variables are categorized. For instance, managerial innovation in this study is a dependent variable, while Talal and Najem (2011) consider them the other way round. The independent variable in the Talal’s and Nejem research is the human resources performance in its broad sense, while this research considers capacity building as a dependent variable.
Study No 2.2.8 This study “The impact of HRM functions in organizational innovation” has direct relation with the present research topic that “the impact of capacity building on managerial innovation” in both the dependent and the independent variables. Nevertheless, the reader may notice that, there is a slight difference in the context and the scope, which are covered in both researches. In the former, the researcher used “organization” whereas the researcher of the present study intended to use “managerial” but both terms complement each other. The research concluded that well qualified and motivated employee could be an effective tool to achieve innovation in an organization and this result is correlated with what the present research predicted in the hypothesis.

Study No 2.2.9 This study “Identification of Training Needs and the Measurement of Its Impact on Training Quality” has a relation with the present research topic “the impact of capacity building on managerial innovation” in the dependent variable in particular. The hypotheses of both researches have similarities, which clarified the relationship between training and improvement. This implies that, both researchers found that training is very imperative for an organization to succeed and achieve its overall goals. Both researchers believed that training by itself is not an end for the organizational capacity building programs that target their employees; however, training should be handled as a means to realize the values and principles that lead to innovation.

Furthermore, the research magnified the importance of training in shaping and molding employees to achieve the overall organizational goals, the idea which the current research believes in.

However, the two researches have dissimilarities, meaning that the previous research discussed training and its qualities, whereas the present research handled training as a sub component for the capacity building as a whole. The previous research did not deal with innovation directly, but indirectly discussed factors such as training that contributed in having managerial innovation.

Study No 2.2.10 this study does not have a direct relation with the main question observed by the researcher. However, it dealt with one part of this
research question that is the role of transformational leadership in promoting managerial innovation, because the present research topic is inclusive. It takes capacity building and relevant policies and practices in determining managerial innovation as one package, whereas the Alazmi’s research dealt merely with leadership characteristics in bringing creativity. Therefore, it excluded the other factors that could contribute to the result of the research topic.

This research reconsiders the conceptual variations of terminology used to describe the managerial innovations and/or creativity. For instance, while the above research deliberates that the managerial creativity is reflected in a novel and appropriate way of thinking as an end, this study puts the successful implementation of those novel ideas as an ultimate objective.

**Study No 2.2.11** This research “the transformational leadership and its impact on managerial innovation” has similarity with my topic “the impact of capacity building on managerial innovation” in the dependent variable. However, the independent variable of this research which is the transformational leadership, it would be addressed as main question in this research.

In this research, transformational leadership is the main source for bringing innovation in the organization. However, in the present research, capacity building considers a precondition for securing managerial innovation. Moreover, the participatory culture that imposed by the transformational leadership is considered the basis for managerial innovation, whereas in the current research capacity building activities lead to managerial innovation. Overall, both researches have similarities in both hypotheses and the questions that followed.

**Study No 2.2.12** This research has similarity with this research topic independent variable “managerial innovation”, while in the present research regarded as dependent variable. This research used managerial innovation as a means for minimizing cost and augmenting production as an end. However, in the current topic managerial innovation is used as a dependent variable that results from activating/implementing the capacity building programs in the organization.
At the objectives level, both researches discussed the meanings, types and advantages of managerial innovation in solving problems and improvement for doing things better. Both researches used the same research methodologies such as descriptive, analytical, deductive and inductive methods.

**Study No 2.2.13** Although there are differences in the formulation of the main question in both researches, there are similarities between them, which are implied in the variables of both studies with some differences in the location of dependent and independent variables. In addition to that, the scope of the above quoted research was at country level, but the present research was executed at a single firm level.

### 2.3 COMMENTS ON THE PREVIOUS STUDIES

The researcher throughout this chapter reviewed a number of studies conducted in the area of capacity building, managerial innovation and other mediatory variables either separately or jointly. In the course of reviewing these studies, the researcher tried to put his ideas and views through analyzing and identified the ability that the current study benefited from these studies, besides discovering the aspects that differentiate this study from the previous studies. Both variables of the recent study obtained the interest of many researchers, and they discussed, analyzed and came up with the following results and recommendations. Therefore, we can say that:

1. All these studies targeted to acquaint knowledge on one of the variables either capacity building or managerial innovation or another moderator variable that have a relation with the current study. These studies contributed many positive aspects in deepening the concept, meaning and the scopes of capacity building and managerial innovation through analysis and evaluation. Moreover, these studies covered the various thoughts and views that helped the researcher in understanding the topic under research and helped him in devising the various tools of data collection.
2. All these studies contributed additional benefit to the existing bodies of knowledge that call for the importance of managerial innovation in bringing
competences. Likewise, these studies also magnify the importance of capacity building in its general meaning such as individual, organizational, and institutional levels and their role in bringing managerial innovation.

3. All these studies were done under different topics, with diverse variables; hence, these disparities are conducive ground and an invitation in advance for many researchers to do further research.

4. All these studies help the researcher in molding his ideas and views that had a role in designing the statement of the problem and the hypotheses of the study.

5. Most of the studies focus on specific factor rather than multi-facet factors that could lead into managerial innovation; hence, this partiality was a hinder in giving the holistic features of the many causes that lead to managerial innovation.

6. Most of the studies did not come with clear cut ideas which could be the sources and causes for possessing managerial innovation

2.4 SUMMARY OF WHAT DISTINGUISHES THE CURRENT STUDY FROM THE PREVIOUS STUDIES

1. Most of the previous studies dealt with one factor such as training for example and ignored others that could lead to managerial innovation, whereas this study raised a holistic theme “capacity building” with all dimensions that targeted the individual, organization, institution, and the society as whole.

2. Previous studies covered under the above literature survey dealt with a single factor such as training for example, and argued for its importance in realizing managerial innovation, while ignoring other variables that contribute to managerial innovation. On the other hand, this study argues that capacity building includes many factors and covers a wide range of dimensions including training. Therefore, this study concentrated more on many elements such as the institutional capacity, the structure, the culture, the innovative skills, and training as imperative factors in attaining managerial innovation, and hopefully the researcher wishes the current study to bridge this identified gap of research.
CHAPTER THREE
CONCEPTUAL FRAMEWORK OF CAPACITY BUILDING

3.0 Overview
This chapter critically discusses and explores the stages and development of human resources and organizational development beside various definitions, concepts and theories adopted in this research. It also outlines the ways in which these are appropriated as conceptual and theoretical frameworks, and how they have been used to refine the variables of the research topic. In addition to that, this chapter locates the investigation and its subject matter within the broader research and theoretical endeavors, which covers various schools of thoughts, and practical experiences on capacity-building that contributed to the understanding of this concept and practice. This chapter, thus, offers exploration of the various themes, theoretical positions and ideas that underpin the research endeavors to be crowned with success.

3.1 The Development of Human Resources Management
Human Resources Management (HRM), as a means for transforming management practices has been known throughout its developmental continuum by myriad nomenclatures, definitions and illustrations, and yet developing and building capacities within an organization is central to their conception. On some point, it was identified as personnel management and, at another, as human resource management.

According to Armstrong, 1987\(^1\) Personnel Management (PM) is concerned with obtaining, organizing and motivating the human resources required by the enterprise”. Armstrong (1987) further notes that Human Resource Management (HRM) denotes “a strategic and coherent approach to the organization’s most valued assets – the people working there and are so crucial in achieving organizational objectives”.\(^2\) Another similar terminology

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\(^2\) ibid (1987) pp. 65-68
is Human Resource Capital (HRC), which represents “the human factor in the organization; the combined intelligence, skills and expertise that gives the organization its distinctive character” (Bontis1999). The human elements of the organization are those that are capable of learning, changing, innovating and providing the creative thrust. If properly motivated, human resources can ensure the long-term survival of the organization. To add one last, nomenclature to this, we have Strategic Human Resource Management (SHRM), which entails “the linking of HRM with strategic goals and objectives in order to improve business performance and develop organizational cultures that foster innovation and flexibility” (Dissler 2003). What is clear in these different terminologies used is where they place the emphasis.

HRM has always been considered as playing an important role in organization’s effectiveness and efficiency, and it has evolved through different stages in its history. The first stage is known as social reformer; it emerged in early 19th century along with growing concern with and criticism of the laissez-faire enterprise system and the adversities associated with its practices, such as reckless exploitation of labor in factory floors; certainly, such concerns are not obsolete yet. Employers were flouting the law; and the problem of organizational distance between decision-makers and those putting decisions into practice remained a source of alienation. HRM thus emerged in response to these conditions.

The second phase in the history of Human Resources (HR) is considered the late 19th century, a period when employers started to assume a “paternalistic outlook”; what this means is that employers were viewed as fatherly figure

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4 Lewis D and SargeantM, Essentials of Employment Law,/NA (NA, CIPD, 2002) p.18
in the organization. Within such conditions, employers began to appoint welfare officers to manage a series of new initiatives designed to make life less harsh for their employees. Hence, they took initiatives minimizing the various hardships that were faced by the employees during that period. These progressive schemes of unemployment benefit, sick pay and subsidized housing, among others, provided to augment productivity and curb the high rate of turnover of employees, besides attracting competitive and skilled job applicants.

The third one is the humane bureaucrat phase. ¹ This stage marks the beginnings of a move away from a sole focus on welfare issues towards the meeting of various other organizational objectives. This stage is influenced by the outcome of scientific management gurus such as F.W. Taylor (1856-1915) and Henri Fayol (1841-1925). Personnel managers began to gain responsibilities in the area of staffing, training and organizational design and pay incentives linked with productivity.

The fourth stage, in the account of human resources, is known as “consensus negotiator”²; here, the personnel manager starts to negotiate representing the employees and their repertoire of skills with the employers.

This development in the HR is known as “challenge from the below”. This term is an attempt to capture that growing tendency for the workforce to resist the threat and exploitation posed by the employers, by forming coalition with trade unions; and this in turn led to emergence of joint consultation committees, joint production committees and suggestion schemes set up in order to accommodate the new realities. Considered as a progressive move, with such managerial turns we have seen the employees and their representatives pushing and encouraging the state to appoint personnel officers and set up Ministry of Labor and Human Welfare. All these led to the formation of tripartite structure -which includes the state, capital (employers) and trade unions (the representative of the employees) - of negotiated management.

The fifth period was what is known as the era of the “organization man”, which takes the human resources management science away from dealing

² Ibid, 2000 pp. 32-33
with rank-and-file toward the integration of managerial activities. It was characterized by the development of career path and job succession; this in addition to that of the human resources managers, focuses on training and retention of elite for future jobs.

The last stage, in the history of human resources management, is what is now commonly referred to as “workforce analyst”; this stage is represented by the advent of information technology that involves forecasting and scenario planning for the likely need for employees with different skills in the future. Accordingly, human resources management comprises three important processes: work force demand, work force supply and taking action to reconcile these in order to ensure that supply meets demand.

These, however, are not discreet stages; rather they represent the shifts in thinking and practices of HR and the accumulative lessons from each experiment built in its development. In this sense, HR thinking and practices have passed through various turning points and enriched with different experiences gained and experiments done. Theoretical developments in this regard are also part of this cumulative experience and scholarly endeavors to make sense of them.

HR is broadly considered to be part of management, concerned with people at work and their relationship within the organization. According to Edwin “it is planning, organizing, directing, controlling of the procurement, development, compensation, maintenance and separation of human resources to the end that individual, organizational and societal objectives are accomplished”. Michael similarly considers it as a “process that utilizing labor forces such as that of the organizational objectives, objectives of all levels of HR and objectives of society that served”. These formulations of HR consider how HR, as a thinking and practice, is linked to organizational outputs and objectives.

Contrary to the above interpretation of HR, some scholars believe that HR has never been that necessary. Their assertion emanates from their

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disappointment with the bad performance of poor or untrained, less valued, below utilized and unmotivated employees, and, thus, as a solution, they urge organizations to depend more on technology. In this assertion, HR is deemed as a practice that has not been able to achieve its own objective of addressing the above organizational problems. Such claims, however, do not in any way make HR obsolete, since organizations can never complete jobs without humans; we know technologies do need humans to operate them.

The future demands organizational Excellence, and this can be achieved by focusing on learning, quality, teamwork and reengineering of the firms to cope up with current and expected future challenges; meaning that today’s organizations need employees with unique qualities such as traits, talents, skills, aptitude and competitive edge. Therefore, many organizational works actively and vigilantly to ensure the availability of capable and robust workforce both qualitatively and quantitatively. In order to achieve this, the companies need to meet the following preconditions. First, people resourcing have been done through recruiting the right employees and placing them at the right place. Second, managing individual and team performance and their contribution to the achievement of organizational goals have to be critically appraised. Third, for its employees to be productive and innovative, an organization needs to be managed on sound and rewarding system. Four, the process of work succession and prolonging the survival rate of the organization require the intervention of learning and development programs in and outside the firm.

an organization is simply a combination of humans and materials; hence to win the employees’ brain, emotion and ownership, the organization has to have a forum for exploring, and flourishing the various human needs such as their involvement in the process of decision-making, union-management relations, and handling employee’s grievance and discipline. With close reference to all that above-mentioned preconditions, the following can be deduced: It is imperative to create enabling ground to accomplish the HR functions such as management of strategic human resources (strategic partner), management of infrastructure (administrative
expert), management of employee contribution (employee champion) and management of transformation and change (change agent).

This research sought to investigate the current situation of capacity building and forecasting the future projections of HR in the given company, by locating the research questions and issues to be investigated within the above abstraction of HR, historical accounts and practical experiences of HR. HR can be an asset for the organization if and only if trained, administered, motivated and guided towards realization of the organizational objectives. However, HR could be a debt and extra burden if it lacks a sense of belonging and loyalty to the organizational vision.

In the following, the theoretical positions that inform this research are outlined.

3.2 Theoretical Framework

Today capacity-building programs are considered indispensable and central tool for success of any organization. Human capacity could not be imitated where other capacities, particularly material ones can be subject to replication. That is why businesses and organizations are focusing on enhancing the role of HR in the organization. What is presumed here is that HR practices emphasizes on the provision of training and development programs can promote dexterities and talents of workforce so as to maximize their contributions and overcome their shortcomings. Human Resources through the upgrading of their capacities can possess the quality of elasticity (it can be expanded when an organization needs to intensify its activities and shrink when necessary) that is not available in the other (material and financial) resources of an organization.

By ways of locating these considerations of capacity building in HR practices, in the following, the models adopted in this research - the Michigan Model and Harvard Model - are outlined. The reason why these are chosen is that while the one considers the hard aspect and the other appraises the soft aspect of HR practices with regard to capacity building; combined together, arguably, they would offer a much more complete picture.
3.2.1 The Michigan Model
The hard model of HRM sometime referred to as the “Michigan model”, which emphasized, “employees should be treated as a means for achieving the organizations goals”\textsuperscript{1}, and successful organizations are those that raise the capacity of their employees. Furthermore, Fombrun et al (1984)\textsuperscript{2} argues, “the external environment of increased competition and market instability will necessitate capacity building strategies which are designed to achieve the goals of the organization”. Organizations exist to accomplish a mission or achieve objectives, and a strategic management takes into account three interconnected issues of mission and strategy, organization’s structure and human resource system. This approach places less emphasis on the treatment of employees at work place and securing employee commitment, and focuses more on treating employees as another—albeit critical—strategic resource for the enterprise, on which competitive advantage could be built on. Using Porter’s characterization of the three basic business strategies of innovation, quality enhancement and cost reduction, Schuler and Jackson (1987) argue “different human resource management strategies might be lined up with different business strategies.”\textsuperscript{3} By contrast, Miles and Snow (1984) prefer a “strategy model that involves hiring in the skills that are required, with little internal promotion and limited training programs.”\textsuperscript{4}

3.2.2 The Harvard Model
Regarding the soft aspect of human resources, the researcher finds the “Harvard model” among others much more productive and dynamic. Beer et al (1984) proposed this framework as a means for “improving managers’

\textsuperscript{1}Fombrun, C J, Tichy, N M, and Devanna, M A., Strategic Human Resource Management, (, New York, NA, 1984) pp. 15-17
\textsuperscript{2}Ibid, 2008, pp. 30-32
\textsuperscript{4}Miles, RE & Snow, Designing strategic human resources systems: Organizational Dynamics, / vol.13, no.1 (1984) pp.36–52
methods of managing people.”¹ Walton argues that the beliefs and assumptions/ viewpoints “contract between the employee and the organization goes beyond agreement,”² and these are in recognition of the fact that the socialization programs of the organization moulds the attitudes and behaviors of the employees. For example, conflicts at individual, group and between management and subordinates levels kept at a very low level or de-escalated essentially not through agreement or contracts, but rather through organizational culture. The culture of tolerance, respect and collegiality are far more critical and productive in shaping behavior and attitudes than contractual agreements.

In strategic sense, employees need to think at the corporate level, and build strong bonds and relations between the organization as a production unit and the customer as a consumer to the end products/services of the organization. In such organization, jobs are done in integrated manner and this leads to immediate decision-making. This in many respects speaks to the soft dimension of the HR relations and practices within an organization.

Regarding line management, Walton (1985)³ believes that “organizations give a room in promoting and grooming transformational leaderships and prize management skills”, that strive to promote competitiveness, vibrant and competent organization capable to interact with its internal and external environments.”

The “Harvard model” which is referred to as software, emphasizes the employee capabilities as key levers for increasing innovation in the organization. The trio factors work system, human resources flow and rewards that proposed by the Harvard Model says, “Employees are involved in the design of the reward system, while managers must ensure it is consistent with the organization’s goals.” Furthermore, the working system

³Walton, R E., control to commitment in the workplace,/NA (N/A, Harvard Business Review, 1985) pp. 16-19
of organization is a key pillar through which employees are encouraging being innovative and problem solvers. The soft approach is considered as a move from control to commitment and organizational culture. Walton’s work points out that “through better human resource management practices such as careful selection and recruitment, performance management, rewards and training, enterprises could move away from an emphasis on controlling their employees to a situation in which enterprises gave employees more control and allowed them to make a greater commitment and contribution to the enterprise”.

This software approach, as a normative model, traces the same direction by setting out the concept of “better human resource management practices for better outcomes in the enterprise.” Thus, human resource management practices such as capacity building and other upgrading programs are linked to better human resource outcomes, including commitment and flexibility. Such new practices yield organizational outcomes, including better job performance, lower turnover, and higher levels of innovation.

3.3 Capacity-Building:
This research is based on two variables: “Capacity Building Concepts,” as an independent variable, which is designed to capture the human capacities (knowledge, skills, aptitude), structural capacities (governance, policies, laws, procedures, practices and regulations), and organizational capacities (leadership, strategic thinking, information systems, performance management systems, time management) and their role in bringing managerial innovation. The “managerial innovation”, considered here as dependent variable, is characterized by specific institutional practice and form, which is presumed to feature as a consequence of effects and rigor of implementation of particular modes of capacity-building. These themes are examined and analyzed in chapter three.

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1 Ibid, 1985 pp. 86
2 Guest, DE., Human resource management and industrial relations./ Journal of Management Studies, vol.24, no.5 1987, pp.19–21
Capacity Building (CB) emerged as a “lexicon of international development during the 20th century.¹ Prior to this, Technical Assistance/Cooperation (TA/C) was the dominant concept and practice throughout the world. Technical Assistance/Cooperation is essentially formulated “transfer of skills and know-how from one agency/jurisdiction to another”.² In this formulation, skills and expertise are imported to meet local demands – a practice which is often driven by project outcomes rather than sustainability.

Capacity Building (CB), by contrast, is deemed to be “more indigenous process of putting into place, at the national or regional level, sustainable competition policy frameworks and processes”³ necessary to cultivate know-how and skill responsive to the local challenges and developmental prerogatives. However, the experience of the former Technical Assistance and Cooperation (TA & C) in capacity development had not succeeded particularly in Africa. As Jaycox (1993) argues, “donors and African governments together have undermined capacity in Africa; and they are undermining it faster than they are building it”⁴. In the same year, United Nations for Development Program (UNDP) noted, “Almost everybody acknowledges the ineffectiveness of technical cooperation in achieving self-

²CAPACITY BUILDING AND TECHNICAL ASSISTANCE Building credible competition authorities in developing and transition economies INTERNATIONAL ICN 2nd Annual Conference Mérida, Mexico 23 – 25 June 2003 www.internationlcompitetionnetwork.org
³CAPACITY BUILDING AND TECHNICAL ASSISTANCE Building credible competition authorities in developing and transition economies INTERNATIONAL ICN 2nd Annual Conference Mérida, Mexico 23 – 25 June 2003 www.internationlcompitetionnetwork.org
reliance in recipient countries by building institutions and strengthening local capacities in national economic management.”¹

What makes the capacity building different from technical assistance is that it is homegrown initiative to be aligned and incorporated with the national/institutional strategies. To this end, it follows inside-out perspective; while TA&C is rather exogenous in its outlook and origin, and has a turnkey nature with outside-in approach. “Capacity building” tends to be a general term, which is not always well defined. Ann Philbin states, “Within the field of capacity building, there is a striking lack of a shared definition of capacity building”². There is a danger to these varied and fragmented visions and definitions of CB. Its definition informs the vision and associated practice. This means, if defined loosely, there is a risk that companies can waste time and money on programs and activities that end up building the wrong skills, targeting the wrong people, or being detached from the capacity development as an institutional process.

In an interview made among non-profit, leaders, funders, researchers, and consultants confirm that the term capacity building is loosely defined³. They offered a wide range of answers. In the simplest form, it is considered to be staff development, and meeting the needs of the community. At the most sophisticated level, it is considered as a practice geared to enhancing ability of the organization/institution to move towards company mission and to reach more constituents. There is also a tendency to characterize CB as anything that strengthens the organization, as opposed to those things that strengthen its programs and services. In addition to that, it develops networks, which in turn leads to social capital, and increases the community’s capacity to provide services.”⁴ Others have used capacity building to refer to activities that are designed to improve the performance

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¹ Berg E., Institutional cooperation between Sokoine and Norwegian agricultural universities (Evaluation Report), (Oslo, Royal Ministry of Foreign Affairs, 1998) pp. 8-11
of an organization by strengthening its leadership, management, or administration.¹

Even the international organizations do not agree in the definition of this concept. For example, UNDP, (1998)² offers this basic definition: “it is the ability of individuals and organizations or organizational units to perform functions effectively, efficiently and sustainably.” While, the OECD (2006)³ defines Capacity Development (which is considered to be another name for CB) as “… the process by which individuals, groups, organizations, institutions and societies increase their abilities to: (I) perform core functions, solve problems, define and achieve objectives; and (ii) understand and deal with their development needs in a broad context and in a sustainable manner.” This definition is adopted by various donors and is fully in line with the UN definition of capacity mentioned above.

UNESCO – IICBA (1999)⁴ “capacity building" can be equated to training. However, it is, well known that training may benefit individuals without strengthening the capacities of institutions and of countries to perform their responsibilities more efficaciously. Some development cooperation agencies such as UNDP, CIDA and JICA, IICBA define the term "capacity" as the organizational and technical abilities, relationships and values that enable countries, organizations, groups, at any level of society, necessary to carry out functions and achieve their development objectives over time (Morgan 1998).⁵

¹Thomas E. Backer, Strengthening Nonprofits: Foundation Initiatives for Nonprofit Organizations (Washington, DC: The Urban Institute, 2001) pp. 56-60
⁵Morgan, Peter, Capacity and Capacity Development - Some Strategies, (NA, CIDA, 10/1998) P.28
European Commission too has its own version that defines capacity building as developing and strengthening structures, institutions and procedures that help to ensure transparent and accountable governance in all public institutions; thus improving capacity to analyze, plan, formulate and implement policies\(^1\) in economic, social, environmental, and science and technology fields. Further, GTZ (Germany) defines it slightly differently, considering it as a process of strengthening the abilities of “individuals, organizations and societies to make effective use of resources, in order to achieve their own goals on a sustainable basis\(^2\).” Moreover capacity building is described as building abilities, relationships and values that will enable organizations, groups and individuals to improve their performance and achieve their development objectives (UNEP 2006).\(^3\)

A suitable definition needs to start by asking what is denoted by capacity itself. Berg (1998) \(^4\) defines capacity as “the ability of individuals, organizations and systems to perform their functions more efficiently, effectively and sustainably. Capacity development includes activities that seek to improve and strengthen such abilities at individual, organizational and systemic levels”. Almond and Kisauzi (2005)\(^5\) define capacity as “the ability of individuals, organizations, and the system not only to perform research, but also to transform research knowledge into successful

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3 UNEP, Ways to Increase the Effectiveness of Capacity Building for Sustainable Development, (Stavanger, IAIA, 2006) Pp. 13-17 
innovation”. Horton et al. (2000) have a similar view: it is the ability of individuals and organizations to perform functions effectively, efficiently, and in a sustainable manner. Groot and van der Molen (2000) adopted the following definition: “The development of knowledge, skills and attitudes in individuals and groups of people relevant in design, development, management and maintenance of institutional and operational infrastructures and processes that are locally meaningful”. However, many scholars and trainers in the area of organizational development defining the term “capacity” by suffixing/adding with different terms that change the meaning and the purposes of the term capacity accordingly.

When “capacity” is added to the term “development”, it places a “broader emphasis on the overall system, environment or context within which individuals, organizations and societies operate and interact”. Moreover, where capacity is suffixed by strengthening it “gives other dimensions to the importance of people and systems, operating within dynamic contexts, enhance their abilities to develop and implement strategies in pursuit of their objectives for increased performance in a sustainable way”. Considering the above variations in definitions, and ways of consolidating them in search for an enhanced definition of the concept, the main features of concept of capacity are extracted and outlined in terms of the following five characteristics:

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3.4 Five Central Characteristics of Concepts of Capacity

- Capacity is about empowerment and identity, properties that allow an organization or system to survive, to grow, diversify and become more complex.
- Capacity has to do with collective ability. A combination of attributes enables a system to perform, deliver value, and establish relationships and to renew itself.
- Capacity as a state or condition is inherently a system phenomenon. Capacity is an emergent property or an interaction effect. It comes out of the dynamics involving a complex combination of attitudes, resources, strategies and skills, both tangible and intangible.
- Capacity is a potential state. It is about latent/tacit (‘know-how’) as opposed to kinetic/explicit (‘know-what’, ‘know-why’) knowledge.
- Capacity is about the creation of public values, norms, standards and good governance.

3.5 Levels of Capacity Building:

Once determined what constitutes a capacity, it is now crucial which components and segments of the organization should capacity-building deal with. In Matachi’s (2006) formulation of this concept, capacity building targets the four important parts of an organization such as (1) people, (2) organization, (3) institutional and (4) environmental, each entailing and covering an aspect of the institution/organization and its context:

- **Individual:** The will, aptitude and ability to set objectives and achieve them using one's own knowledge and skills this includes the following: Knowledge, skills, value, attitude, health, awareness, etc., human resources (capacities of individuals in organizations), physical resources (facilities, equipment, materials, etc) capitals
- **Organizational:** Anything that influence an organization's performance, and includes intellectual resources (data, information, knowledge), organizational structure, and the leadership qualities of the managers

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1 Peter Morgan, Study on capacity, change and performance, (The Netherlands, ECDPM, 2006) [www.ecdpm.org](http://www.ecdpm.org) retrieved, April 2017
• **Institutional/environment:** changing, over time, the 'rules of the game' or the environment and conditions necessary for demonstrating capacity at the individual and organizational levels, and includes informal institutions, social capital, social infrastructure and capacities of individuals and organizations.

Fixsen *et al* point out that, as organizations go through the capacity building process, one of three types of outcomes can occur: - developmental, transitional and transformational:

- **Developmental** (first-order change), improvement in skills and processes,
- **Transitional** (second-order change) happens when organizations are moving from its initial state to a new desired state and
- **Transformational** (third-order change) occurs when a shift in culture and beliefs among members of the organization existed” (Fixsen *et al* 2012).¹

Similarly, Appalachian Regional Comprehensive Center (ARCC)² identifies four stages of capacity building, which speaks to the phases in the process:

- **Exploration:** In this stage, key actors identify the need for change; determine the desired capacity; and identify the knowledge, skills, structures, and processes that need to be in place to achieve the desired capacity
- **Emerging Implementation:** This stage can be summarized in three steps: (1) the target organization’s employees participate in activities; (2) the employees build new knowledge, update technological or physical infrastructure, increase resources, or learn to use available

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resources more efficiently; and (3) the employees apply their new knowledge and utilize new systems.

- **Full Implementation:** This stage involves the integration of the new information and new skills and the refining of practices based on evaluation of the changes.
- **Sustainability:** This stage involves “pervasive and consistent” use of the refined skills and practices.

These formulations combined together do allow us to rework and reconsider CB as a process with temporal, transitional and structural dimensions, and its relation to specific components and structural context of the organization/institution.

### 3.6 Capacity Building, Organizational Learning and Knowledge Management

So far, the concept of Capacity Building (CB) has been discussed by comparing and contrasting the various definitions and explication. Although capacity building embeds its spirit at various levels, such as the group, the total organization, and the society; the individual employee features as epicenter of this practice and thinking, and hence the focus of such programs and activities. Therefore, human being feature at the centre of capacity building practices and associated thinking, such as Learning Organization (LO) and knowledge management. By locating these considerations within the soft (with its focus on organization culture) and hard (with its focus on capacity and skill management) approaches, this section explores capacity building and how it is interlaced with the concepts of organizational-learning and knowledge-management. Exploration of above-mentioned close relationships furnishes further discussion on these areas of knowledge in relation to individuals/employees and the supposed role played by them in pursuing innovation and organizational objectives.

The concept of “learning organization” has a direct relation with organizational culture that inspires the employees in the given firm to give value to the spirit of the continuous learning and improvement. Such organizational culture is linked directly to the organization’s productivity, profitability and promotes learning at every level. Organizational culture can
be defined as “the sum of all attributes which distinguish a corporation from other businesses in the same industry.” In this sense, this is rather noticed by its being more embedded and less captured by any contractual and control-based managerial forms.

Organizational learning, as a feature of this dynamic process that fosters a new knowledge production and accumulation, productive aptitudes and dexterity, does facilitate improvement and innovation within the organization. Above all, organizational learning means “renewing the organization’s knowledge base; a procedure which can be developed along several guidelines: through individual learning, by learning in teams, by gathering and sharing knowledge within an organization or through institutionalizing it and applying it to specific products.”

As Amorós et al (2012) point out learning organization, a similar concept, as a new organizational concept is “based on the continual integration of the work processes with the process of learning.” In this formulation LO is a dynamic process with latent and overt element that encourages employees to learn in the process of performing a task or activity within the organizations. Learning, in this sense, is both experiential and experimental that feature as duality. Whereas, as Garvin (1993) points out, “Organizational Learning (OL) is a process aimed at acquiring (creating) new knowledge and new skills to set the course for improvement and innovation.” This implies organizations should learn to acquire new knowledge and technology that prolong their span of time in achieving their pre-determined goals.

While LO starts from the employees as epicenter in the processes of increasing production and productivity, but OL encourages organizations as a whole to pursuing cutting edge knowledge and acquiring new survival skills that enable the organizations execute their programs effectively and efficiently and outsmart their competitors. OL certainly retains the elements within LO, experimental and experiential dimensions of learning within the

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1 Antonio Amorós & Rudolf Tippelt, Managing Change and Innovation: A Challenge for Modern Organizations./NA, (Mannheim, GI, 2012) p. 16
2 Ibid, 2012 pp. 19-21

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organization. Yet it places greater emphasis on the innovative – the acquisition and production of new knowledge and technology, with evolution and revolution of the organization in mind. It too sees the necessary duality as interactive space of learning between the individual and organization. Ultimately, the “learning organization’s” objective is continually generating knowledge, gathering, communicating and transferring this knowledge via the structures of organizational learning. Organizational learning, thus, means “renewing the organization’s knowledge base, a procedure which can be developed along several different guidelines: through individual learning, by learning in teams, by gathering and sharing knowledge within an organization or through institutionalizing it and applying it to specific products”. In organizational learning, management of the firm plays crucial role. First, this is done by making themselves aware of the concepts and the applications of the organizational learning through answering such important questions and concerns like “what does organizational learning mean?”. Second, managers should know the learning subjects so as the content of the learning materials to be tailored to the organizational objectives by asking questions such as “what is being learned?” Third, careful consideration of timing and prior knowledge is central to this mode of thinking. Finally, making result based monitoring and evaluation to the efficiency and effectiveness of learning processes an integral part of this process is an imperative; in this, asking question on “how learning take place” would have a positive impact on the targeted employees. Ang (1996) points out that there are three major processes for Organizational Learning:

1. The Assumption surfacing model: which puts emphasis on observation of patterns in the real life of the company and requires employees within the company to share the ideas and use them for organizational actions.

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1Ibid, 1978pp. 31-33
2Soon Ang, Organizational Learning and Learning Organizations: Trigger Events, Processes, and Structures, (Ohio: Singapore, 1996) p. 78
2. The experiential learning model: this model focuses on the experience and history of the organization, and deduce to what is important for the future programs of the company.

3. Information processing models: this model gathering data, processing and synthesizing knowledge that facilitates the learning processes of the company through codifying, translating and communicating it throughout the organization.

For weaving the above into an organization, there are four structures for OL to consider:¹

1. Team-based organization: is totally opposed to hierarchy-based organization: characterized with self-managed, competent and analytical capacity along with problem sensing and solving employees. Employees in team-based organization have the ability of creating vision, and the quality of smooth flows of communication and sharing knowledge with the rest. Teamed based organizations describe with a flat organizational structure, which allows dialogue, and avoid rigid authority and bureaucratic barriers.

2. Leadership: the company principals act as mentors, coacher, inspirer, and teacher in transferring knowledge, experiences, and skills to their subordinates, rather than dictating, and top-downing decisions. Leaders should build vision, fostering self-confidence and inspiring employees to achieve the pre-determined goals of the company.

3. Culture: nurturing the willing of to do among the employees of the company, and companies should develop subculture (within the whole culture of the given society/ country) that accelerates the processes of production like developing ownership, fostering commitment, devotion and voicing out new ideas.

4. Learning infrastructure: companies should emphasising of importing technological tools, practice fields, and learning laboratories to promote active research, dialogue, experimentation and learning within organizations.

3.7 Linking Organisational Learning and Capacity Building: Searching for Practical Guidelines

The questions to be asked here then: how can organisational learning be linked with capacity building? What are their relationships? As discussed above, capacity-building programs are crucial in improving company performance. Today capacity–building initiatives have taken as highly critical component of any business organizations. Capacity building initiatives targeted the employees to activate their aptitudes and empower them with new skills and dexterities. While OL is for large part in-ward looking approach, capacity-building intervention transcended the internal environment of the company to reach the shareholders, stockholders and suppliers. More broadly, capacity building recognises the interrelationship among, and thus works with, the individuals, the organizations and the society.

Capacity building, as a part of change tools needs conducive environment to be effective and achieve its goals; these enabling factors could be software as policies, procedures, rules, methodologies and learning materials, or the hardware such technology, venue, teaching and learning aids, budget and qualified human resources. Capacity building intervention is supposed to be preceded by certain actions such as company restructuring to determine the vision and mission of the company and the nature of the jobs, tasks and routines that are necessary to realization of the company objectives and aspirations.

Creating policies that organize the whole processes of the capacity building interventions have paramount importance in facilitating capacity-building programs. These policies could answer the questions: capacity to do what and why, when do we need to build these capacities, and who should deliver the capacity building …etc. these policy guidelines translated into real life through human resources development via issuing rules and procedures that guarantee the process of acculturation for the employees of the company.

The practical training schedule should be based on need assessments that include all the employees regardless of their position, experience, and education and addressing their current knowledge, abilities, and skills vis-à-vis to the knowledge and aptitude that the company wants to cultivate in
their employees. Training programs organised as part of CB should have the following essences and pillars as part of its objectives; one, creating and raising the awareness of the employees; two, encouraging participation, initiatives and risks; three, cultivating skills, experiential learning, and innovation; and four, preparing employees to play the role of trainers through training of trainers.

For training to be effective and to have positive impact, must be followed by monitoring and evaluation mechanisms that confirm the conversion of the values, principles, norms and skills that are learned by the employees into the real life and practices of the company.

Today many companies failed to design mechanisms that ensure the utilization of what is learnt for the purposes of the company. That is why many companies suffer from the burden of the training expenses that does not guarantee the return from such investment. However, training by itself cannot be the panacea that cures any hiccups that an organisation faces. Unless accompanied by all round capacity building, which covers the individuals, the organization and the society, training as CB tool may not bear the desired fruit. A trained employee, unless he/she is supported and empowered by all necessary conditions, including conducive organisational culture and technology, cannot have a viable ground for innovation and development.
CHAPTER FOUR
MANAGERIAL INNOVATION

4.0 Overview

This chapter seeks to weave capacity building with managerial innovation. Moreover, it touches upon a number of definitions, models, and schools of thoughts related to managerial innovation through decoding terms and phrases that have been written in this regard.

As this chapter argues, managerial innovation offers a critical dimension to the thinking and practice of capacity building. Thus, managerial innovation remains to be central in this research project.

To this effect, this chapter critically appraises the concept “Managerial Innovation”, and the various versions of these concepts and how this research appropriated them.

4.1 Managerial Innovation

Managerial innovation, as a concept and a practice, is explored by a number of scholars, as part of the body of literature on the contemporary management. It is crucial to start by exploring the notion of innovation and what is implied by it. Over the past half-century, scholars around the world have produced a vast body of academic research and writing on innovation.

While most of these researches have focused on “various aspects of technological innovation, the trend over the last fifteen years, has been towards exploring other forms of innovation such as process innovation, service innovation, and strategic innovation” (Markides 1997).

In the maze of multiple definitions of innovation, we find different elements accentuated in each. For example, Shatayen (1998) “a process which produces new work”

“discovering of new relations” (Essawi---)

“departing the casual serialized thinking to completely different new things” (Smith...), “looking to a familiar thing through unfamiliar angle “transformed” ideas and designs (El-

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2 Ibid. 1989, 41-46

3 عبد الرحمن عصوي، سيكلوجية الإبداع، (بيروت: دار النهضة العربية) ص. 60
Swedani (1994) and “the ability to attain an unfamiliar thing” (Hamadi 1999). The new, the creative, problem solving, and the transformative are elements that feature in these various definitions. For the purpose of this study, however, Kaluzny (1982) offers a comprehensive version. For Kaluzny (1982), innovation entails “any program, product, or technique which represents a significant departure from the state of the art at the time it first appears in the organization.” A classic definition considers innovation as: (a) an introduction of a new production method, product or its quality, (b) the opening up of a new market or a new source for raw materials or semi-manufactures, or (c) the creation of a new organizational structure in industry (Schumpeter 1934). Similarly, Damanpour (1996) conceives innovation as “a means of changing an organization, either as a response to changes in the external environment or as a pre-emptive action to influence the environment. Hence, innovation is here broadly defined to encompass a range of types, including new products or services, new process technology, new organization structure or administrative systems, or new plans or programs pertaining to organization members”. Likewise, more contemporary approach presented in the Oslo Manual (2005) defines an innovation as “the implementation of a new or significantly improved product (good or service), or process, a new marketing method, or a new organizational method in business practices, workplace organization or external relations”. This definition, however usefully and wisely applied in research, is not flexible to use in social or

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1 Swedani, N. (1994). 
cultural contexts. Moreover, Cooper (1998)\(^1\) claims that innovation could be viewed based on the following dichotomous, which are product versus process, radical versus incremental, and technological versus administrative. It is noticeable that innovation and creativity complement as well as constitute each other. Zaki (1984),\(^2\) in his lexicon of management science terminology, explains innovation by injecting creativity into it: “it is a degree of creativity and differentiation by deviation from the original direction and splits from the normal serialized way of thinking to a quite different new way of thinking”. Moreover, Ebada (1992)\(^3\) defines the creative thinking by “the ability of an individual to produce a new thing that is characterized by fluency, flexibility, originality, distant consequences such as being responsive to specific problem or exciting/arousal attitude”. Many scholars identify innovation and creativity as if they were two faces of a coin. Creativity is both constituted in and a constituent of innovation. In this interpretation, the former is a necessary but not sufficient condition for the later.

Other terms that have resonance with innovation are invention, discovery and intuition. While invention is exclusively confined to the “field of technology that can be touchable, observable and audible”, innovation is far broader and inclusive in its outlook (Hamadi1999).\(^4\) Discovery entails “disclosing and uplifting a thing from what it is covered by” (El-Munged--\(^5\), )\(^5\), and it is somewhat different from invention and imagination. Characterized by its “illusiveness”, intuition denotes a sense or a feeling that something is right or things should be done in a particular way, which is fundamentally based on “guessing and estimating”\(^6\). Hamadi (1999)\(^7\) defined defined intuition as “a decision or an opinion taken/given by a person without thinking in advance”. Each of the above terms, taken individually, is

\(^1\) Cooper, J., A multidimensional approach to the adoption of innovation, (London: HBS Publishing, 1998) p. 36

\(^2\) أحمد زكي، قاموس مصطلحات العلوم الإدارية، (القاهرة: دارنشرة المصرية، 1984) ص. 45

\(^3\) أحمد عبادة، الحلول الإبداعية للمشكلات، (البحرين: دار الحكمة، 1992) ص. 34

\(^4\) علي حمادي، (1999) مرجع سابق، ص. 41

\(^5\) المنجد، للغة والإعلام، بيروت: دار المشرق، عدد 26، ص 68

\(^6\) المنجد، مرجع سابق، ص. 72

\(^7\) علي حمادي،(1999) مرجع سابق، ص. 56
different from innovation; however, they feature at a various phases of innovation, and constitute the very term we call innovation.

Sternberg (2000)\(^1\) promotes a “triarchic theory” asserting that there are three main aspects of generating innovation and innovative ideas that are-

- Synthetic (creative): the ability to generate ideas that are novel, high quality and task appropriate, according to him insightful thinking involves knowledge acquisition.
- Selective encoding: distinguishing relevant from irrelevant information.
- Selective combination: combining bits of relevant information in novel ways.
- Selective comparison: relating new information to old information in novel ways.
- Analytic: critical thinking is involved in creativity as the ability to judge the value of one’s own ideas to evaluate their strengths and weaknesses and suggest ways to improve them.
- Practical: ability to apply instinctual skills in everyday context and to sell creative ideas.

While Sternberg’s formulation of innovation useful to thinking about the actual concept of innovation and what is entailed in it, Berghah et al’s\(^2\) synthesis of innovation is outlines the stages and scopes of the innovation process; they identify six attributes of innovation process, such as:

- Stages of innovation include: creation, generation, implementation, development, adoption
- Social context includes: organizations, firms, customers, social systems, employees, developers
- Means of innovation includes: technology, ideas, inventions, creativity, market
- Nature of innovation includes: new, improve, change

\(^1\)Sternberg, Robert J., creative as a decision, (Arlington Heights:, skylight training and publishing Inc, 2000 ), pp. 27-38
- Type of innovation includes: product, service, process, and technical
- Aim of innovation includes: succeed, differentiate, and compete

Once we determine what innovation is, it is important then to ask how organizations benefit from it and the mechanism through which to benefit from such process. The contribution of innovation described in the following five competitive advantage achievements (Tidd et al 2001):¹

- A strong relationship between market performance and new products
- New products help maintain market shares and improve profitability.
- Growth also by means of non-price factors (design, quality, individualization, etc.)
- Ability to substitute out-dated products (shortening product lifecycles)
- Innovation of processes that lead to production time shortening and speed up new product development in comparison to competitors

For the purpose of this research, the following pointers are extracted from the review.

- First, innovation is a very complicated phenomenon with multifaceted dimensions rather than limited theoretical understanding.
- Second, innovation means providing new things never preceded by others.
- Third, innovation is a tendency to strive for excellence; and it can be driven by natural talent or it can be cultivated and developed via training, skills acquisition, and experience.
- Fourth, innovation means improving or inventing things/ideas.
- Fifth, innovation is a number of operational procedures and behaviors that lead to improvement of the general climate in the organization to activate the innovative performance by means of motivating the employees in solving problems and decision-making through ways and means that are more creative, inventive and imaginative.
- Sixth, innovation is also something that can reside in and operate at the individual, group or organizational level.

- Seventh, it means applying unique approach in the way of solving problems that encounter the management operations through utilizing elements of flexibility, taking risk, sensing problems, and the ability to analyse them and respond to them.

### 4.2 Innovation Theories

A number of scholars, writers and experts of management have posed theoretical proposition on innovation linked to management practices, which are later recognized by their names. These theories propose solutions for many problems regarding innovation. This section explores few of them by way of interrogating their relations to contemporary management practices and the research context. Alsarayra, & Aktem (2003)\(^1\) offer a comprehensive list of these theories, which for the large part this research depended on. The widely noted ones are those postulated by March and Simon, Hang & Aiken, Burns & Stalker, Wilson, and Harvey & Mill.

The theory of innovation proposed by March & Simon interprets innovation through what they called “problem – solving” that encounter organizations. Some organizations face a gap between what is provided and what is supposed to be provided, therefore, through a continuous process of searching, organizations can create alternatives, according to them, the process of innovation passes through various phases such as: gap in performance, failures, research and awareness, alternatives, and then innovation.

Burns & Stalker’s formulation of innovation considers the wider structural dimensions and context of the organization, hence how certain organizational practices have differential outcomes in different context and moments. They suggest that the various organizational structures are effective in different conditions; they concluded that the most suitable structures are those that contribute to implementing innovation through two dynamics: one, as a mechanical pattern that fits to the stable working

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\(^1\) The relation between organizational culture and managerial innovation in Potassium and Phosphate company, Mutta, Vol. 18 No.4
environment, and two, organic pattern, which is appropriate to the ever-changing environment.

Wilson’s theory proposes that the process of innovation goes via three phases for introducing changes in the organization such as: recognition of the change, suggestion for the change, adoption and implementation of the change (recognizing the needs or being aware of the needed change and generate suggestions and then application). The ratio of innovation in these three stages is dissimilar because of many factors; some of these are related to complexities in the tasks and diversity in the motivation system. This theory proposes that there is a direct proportional relationship between the number of tasks and the non-routine duties and this facilitate the perceptiveness of innovation in the group level without appearing differences. Moreover, this theory suggests, the different motivational systems have positive influence in generating suggestions and increasing the contribution of the majority from the members of the organization.

Harvey & Mill’s theory concentrates on understanding innovation through the notion that is known as ‘problem – solving’. They describe the types of problems that organizations encounter and the mode of solutions applied. Through recognizing the problem and the capability of the organization for being responsive to the problems or any actions taken by the organization or choosing the solution (select the best alternative) or redefining and receiving information as feedback to put an end to many organizational problems. In addition, Harvey & Mill discussed the various factors that affect the innovative and routine solutions like the size and age of the organization, its level of competitiveness, the degree of technological change, and the degree of formal communication. Whenever, these types of pressures upsurge, the company searches for methods and innovation to face these problems.

Hang& Aiken’s (1970) theory is considered by far the most comprehensive. Their theory discusses the different stages of innovation and the factors that influence the process of innovation; hence, it explains innovation as a change that takes place in the programs of the organization, like adding new services. Their theory proposes, innovations feature in stages, and are determined by the actions taken in each of these states. Here are the stages of innovation they outlined:
- Evaluation stage: to evaluate the system and the extent to achieve its objectives
- Preparation stage: to get necessary occupational skills and financial support
- Implementation stage: accomplishing the process of innovation and the probability of emerging resistance
- Routines stage: behaviours and organizational beliefs

This theory looks at innovation as a process comprised of two phases; the start phase and the application phase. They describe innovation as a result of group activity rather than individual effort. In this theory of innovation, they integrate the organizational problems and added extra variables such as personal relations, and style of dealing with conflict, which makes their theoretical formulation of innovation far more productive and appealing.

### 4.2.1 Conceptualizing Managerial innovation:

Thus far, we have explored what innovation entails, its features and characteristics. The purpose of this whole exercise has been to explicate this concept as a formative word in the concept and practice of managerial innovation. It has been argued that as organizations struggle to prosper in an intensely competitive environment, managerial innovation, with all its attributes of creativity, imagination and risk taking, is indispensible. Most often organizations survive in the emerging intangible economies – economies of information – by relying on speed, intuitiveness, flexibility, creativity and innovation. The managerial innovation underpins the competitive advantage of any organization and gives it distinctive status that differentiates it from others. To this end, innovation in management is conceptualized as the new ideas and cutting edge practice which is meant to promote the improvement of production (efficiency and quality), effective leading practices and team leaders, improvement of customers’ services and management functions such as planning, organizing, staffing, directing, and controlling.

There is a disagreement in defining the meaning of the concept of managerial innovation. As we have seen scholars in this field have not reached any consensus regarding the definition and meaning of innovation, this is due to the complicated nature of innovation itself and the diversified
aspects that the innovation is involved. This lack of consensus is directly implicated in the disagreement we notice in the definition of the concept of managerial innovation.

As a practitioner, Hamel (2006) presents a broader definition of management innovation as “a marked departure from traditional management principles, processes, and practices or a departure from customary organizational forms that significantly alters the way the work of management is performed.” Simon (1962) offers somewhat similar conception of managerial innovation, and for him, it is the “practice, process, technique or structure, which significantly alters the way the work of management is performed.” Management innovation can thus be described, as Hargrave& Van de Ven, (2006) put it, as “difference in the form, quality, or state over time of the management activities in an organization, where the change is a novel or unprecedented departure from the past.”

In these definitions, the emphasis is clearly on thinking and acting in a new way. Birkinshaw et al (2008), similarly, offer a view of managerial innovation as charting new grounds, and yet considering the various aspect of the organization. For them, management innovation is “the generation and implementation of a management practice, process, structure, or technique that is new to the state of the art and is intended to further organizational goals”(Birkinshaw et al2008). In their conceptualization of managerial innovation, Birkinshaw et al (2008) proposes a distinction to be made between radical and incremental innovations. They also stress that managerial innovations are new approaches and practices to motivate and reward organizational members, devise strategy and structure of tasks and units, and modify the organization’s management processes.

Thus for canvassed prominent conceptualization of managerial innovation offer the major features and characteristics of this notion. The researcher, however, finds the four distinct perspectives on management innovation offered by Birkinshaw et al (2008) instructive, and considers them to offer far-reaching insight. The researcher argues that these contribute to critically placing managerial innovation and its relation to capacity building within the broader inter-relational context linking individuals, organizations and society. Birkinshaw et al (2008) categorizes managerial innovation as located within, and should be considered as such from, the following perspectives: institutional, fashionable, a rational and cultural perspectives.

In their consideration of institutional perspective, the focus is on the macro environment such as the state with all its functions, ideology, and policies. The society with all its values, perceptions, actions, stakeholders and their various expectations and the global in general with its contributions have a profound input to the processes that lead to innovation. In addition, this perspective discusses the importance of micro-environmental condition of the company, which includes the material and the nonmaterial capabilities such as the philosophy, the company culture and other supportive factors that push the innovation processes inside the company to full-blown innovation works.

All these, either directly or indirectly can have a role in generating new ideas and practices. Innovations that come out as consequences of these interactions have permanent impact, when we compare it with the following fashionable perspective (which is discussed below). Institutional perspective raises the core question that says what institutional conditions give rise to the emergence and diffusion of management innovations, and consider “institutional conditions and attitudes of major groups as a key factor influencing the innovation process” (Bartlett & Nanda 1990).

What Birkinshaw et al (2008) identifies as a fashion perspective focuses on the dynamic interplay between users and providers. In other words, it is the

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interaction between managers (who use new ideas) and fashion setters who provide those ideas or practices. This perspective follows the notion of supply and demand, concepts central to economics. The fashion setters are working hard to sell their innovative ideas, products, practices or techniques to their clients using different selling mechanisms. This perspective is sometimes called “off the shelf” solution, because of its readymade and fleeting nature. It is contrary to the home grown innovation, which emerges due to predominantly internal work or by sharing, borrowing and adopting (ideas, practices, and techniques) from external sources. Fashion perspective, as conceptualized by Birkinshaw et al (2008), raises a fundamental question on how aspects of the supply of and demand for new management ideas affect their propagation. This is partly because it views, as Abrahamson (1991) writes, “suppliers of new ideas and the legitimacy of their proposals are the important tools to make managers accept the bids of fashion setters with no evidence that this innovation could lead to long-term benefits.”

The third one is a rational perspective that focuses on how management innovations - and the individuals who drive them - deliver improvements in organizational effectiveness. According to this perspective, an individual puts forward an innovative solution to address specific problems that the organization is facing and pursue them to this end. In this perspective, problem-solving is the main thrust of innovation. The rational perspective is interested in questions such as “what is the role of managers in inventing and implementing new management practices?”, and “how actions of key individuals inside or outside the organization are playing key factors in influencing the innovation process in the organization?” (Damanpour & Evan 1984).

In this perspective, the role of human agency in initiating and driving the process of innovation has paramount importance. The last perspective is the cultural perspective that focuses on how an organization reacts to the introduction of a new management practice.

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Proponents of the cultural perspective attempt to understand how management innovation shapes, and is shaped by, the culture of the organization within which it is being implemented. The cultural perspective is interested more in the core question of “how does management innovations shape, and get shaped by, cultural conditions inside an organization?” what is emphasized in this perspective is that “culture of the organization plays a key factor in influencing the innovation process in the company” (Gill & Whittle 1992).¹ The assertion here is that we should not ignore the fact that culture has an enabling and constraining element (power relations, norms and traditions), and human agency in driving the process of innovation operates within such environment.

### 4.2.2 Operationalizing Management Innovation

From the operational perspective, we must see Managerial Innovation based on the three levels of analysis: the first level describes and answers the question: “What exactly is being innovated?” The second level discusses the question of how a new innovation needs to be. The third seeks to respond to the question “what is the purpose of management innovation?” The first level of operationalizing managerial innovation should consider to what end are certain practices geared. As we have seen so far, it is related to “fairly stable bodies of knowledge about what managers ought to do, a system of assumptions, accepted principles and rules of procedure” (Kramer 1975).² Moreover, while operationalizing managerial innovation, one should consider the different facets in management of an organization: - “management practices, management processes, management techniques, and organizational structures” (Ala¨nge1998).³ These different facets of the rules and routines by which work coordinated and outputs determined and assessed inside organizations. This is the level at which observable changes take place in the way work is done and the management innovation process

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can be witnessed. This level promotes indigenous innovation and urges for inside out perspectives.

The second level focuses on, and defines, innovation as “new to the state of the art,” which essentially means that an organization might buy an “off the shelf” practice from a consultancy, university, etc. It is productive to bring what is identified as incremental and radical dimensions of an innovation noted above. For large part, the question has to be, what purpose such innovation serves within the organization. This takes us to the third level of analysis: what is the fundamental purpose of managerial innovation? In this question, we find the linkages between organizational objectives, aspirations, challenges and opportunities that feed into, and work through, managerial innovation.

As will become clearer later, however, there is an important interaction between the development of new management practices and new management ideas, so our theoretical arguments will give due consideration to these levels of analysis.

4.3 Types of Management Innovation in Organization:

We can differentiate between three types of management innovation in organizations which the researcher extracted and consolidated from two authors: Abuzeid (2010) and Saad (2004). These are:

1. **Individual innovation**: entails the innovation that is realized by individuals who possess capabilities and innovative traits (ascribed or achieved), and this is suggestive of innovative personality, the traits that differentiate the innovative personality from the others because of the capabilities, readiness and inclination that are endowed with.

2. **Group innovation**: entails the innovation that is accomplished by a group of people (department, committee…etc.) based on the property of synergism. Hence, group innovation is greater than the sum of individual member’s innovation. This is a product of the mutual interaction and cooperation between the group and the exchange of views and experiences as well as supporting to each other. Certainly, the big challenges, which are facing the contemporary organization, requires the development of innovative group work that can be
marked qualitatively and quantitatively by the following factors which Smith, (1991)\(^1\) identifies vision, safe participation and supporting innovation. Vision has a direct relation with the probability of increased innovation; this is related to a condition when the group members share values, common ideas related to the group objectives. Safe participation entails the environment and the climate that encourages individuals to express their ideas (without counter accusation), which in turn enhances the successful innovation. Supporting innovation is another vital condition through creating the space for innovative ideas and experiments to flourish, and innovation needs a kind of support at various stages of this process. This support could come either from within the group or from the organization as whole.

Other researchers have suggested that the following factors too could have an influence on the group innovation (Elrehan, Omeyma 1992).\(^2\) Gender composition of the group appears to have an influence; it is noted that participation of both sexes is more successful and brings better solutions than the homogenous group. The diversity of the group is a critical factor in enhancing group innovation, by ways of generating different views and perspectives that emerge from variations in experiences and cultural sensibilities. The connectivity of the group, as a relational factor of group/team work, has influence on innovation; the well-related group is more willing and enthusiastic than less associated/disbanded group. The other dimension of the above is that the coherence of the group, which relates to the unity and cohesion of group; a cohesive and united group is more inclined to innovation, than the group that lacks unity. The age and size of the group are also noted as likely factors. Newly formed group is more liable to innovation, than an old group; innovation is likely to increase when an increment in the number of the group takes place.

\(^1\) Smith, M., Analyzing Organizational behavior, (London: Macmillan Press, 1999)

\(^2\) الرحان، أميمة، نظريات حول منظمات الأعمال المعصرة، (عمان: الصفة للنشر والطبع، 1992) ص. ص 17-25
3. **Organizational innovation**: entails, on one hand, the sum of individual and group innovations, and, on the other, the ways in which innovation is institutionalized within the organization. It must be reiterated, once again that, innovation, in contemporary organizations, regardless of their types, is not a matter of amenity but it is far more essential and urgent need for organizational survival and growth. Therefore, organizations must institutionalize innovation and turn it into part of their daily activities. This could be attained through meeting the following basic preconditions which Assaf and Muti(1994)\(^1\) points out:

1. It must be recognized that innovation and entrepreneurship need individuals, characterized with deep thinking and good knowledge of concepts, respect the value of knowledge, real and realistic theories and they must have more eagerness and curiosity. To develop and enhance these qualities, the organization must work to upgrade the personal perception of their employees through education, training and participation in forums and conferences.

2. Learning creative problem solving, which means to promote and encourage generating ideas nurturing the habit of being flexible to get out from the limited and accustomed methods of handling problems and searching new alternative ways.

3. The necessity of developing skills and innovative capacities for sensing problems is a vital precondition. This helps nurturing innovative aptitudes that identify problems and solve them, and promotes critical thinking mind and understands problems from different dimensions and angles.

4. The necessity of developing innovative dexterities in creating problems, and developing solutions for them. An administrative problem should not only be viewed as identified, but we create it and we do solve it. The innovation at this level will lead organizations, groups, and communities to exercise experiments and empirical research that did not exist before. It is possible to

\(^{1}\) عاصف ، معطي، السلوك الإداري في المنظمات المعاصرة، (عمان مكتبة المحترفي، 1999) ص. 90
develop innovative capabilities in creating problems through creating doubts and stimulate questions related to the current and future scenarios of the organization whether regarding organizational structure, operations, work manners and means.

Crossnan and Apaydin (2010)\(^1\) presented a useful and the most complex multi-dimensional framework of innovation. Their model encompasses three determinants. The first one is the individual and group level, which focuses on leadership ability and motivation. The second one operates at the organizational level, focusing on managerial configuration, which includes organizational culture and structure. The last one speaks about process, which emphasizes business processes or the philosophy of the work and origination, including decision-making, portfolio management and commercialization. These determinants, in turn, have an impact on two dimensions of innovations. On one hand, innovation as a process, comprising the three management levels (top level, middle level, and low level management) and the resources (tangible and intangible) that drive the organization toward innovation, beside firm network system that are underpinned by a tacit or explicit nature of knowledge. On the other hand, innovation as an outcome, embraces product, service, and process and based on the nature innovation categorized in incremental built on the existing skills set and characterized by gradual and continuous endeavors. Once more, these speak about the incremental and radical dimensions of innovations noted in the previous section. The incremental innovations are represented, following Argyris (1977), as “minor changes to management practices, processes, techniques or structures that do not fundamentally alter the theories in use.”\(^2\) Whereas, radical innovation is generally marked by “a distinct and risky departure from existing practices and competences” (Amis \textit{et al}2004),\(^3\) and breaking new grounds and frontiers.

4.4 Foundation of Managerial Innovation

The field of management, in general (and managerial innovation, in particular), has been informed by an array of theories from the classical management to the scientific management to the behavioral schools, out of many theories. This researcher finds the behavioral school to be relatively more expressive and instructive to the managerial innovation compared to the other two schools of thought.

The Behavioral Theory has sufficiently explored themes on people/employees’ behavior in relation to their jobs, performance, and their interactions with their fellows and bosses, and their way of behaving when they deal with the various means of production and their interaction, communication and their influences to their external environment. The emphasis here is nodal relations among the various variables and factors shaping communication, performance and efficiency within an organization. From this standpoint, it is sound enough to choose behavioral theory as a framework to exploring and examining the managerial innovation and associated themes.

Pierce et al (2008) argue that the Behavioral Theory of the Firm (BTF) “pioneered the understanding of the internal organization of the firms and has laid the foundation for most modern theories of strategy and firm behavior.”¹ This theory, according to Cyert and March (1963),² offers a deeper “understanding of how firms make decisions in a context of bounded rationality, conflicting goals, problem driven search and imperfect environmental matching”.

Before the emergence of this theory, many internal dynamics of organizations have been incomprehensible and black boxed for many managers and subordinates. The behavioral theory of the firm provides very useful and self-explained framework that presents organizations as if operating in a house of glass. This framework looks to organization through the so-called resource based view “which emphasis on the heterogeneous

internal resources, routines and capabilities enabling firms to adapt to and exploit changes in their external environments” (Helfat et al 2007). A firm’s resource base includes “tangible, intangible, and human assets (or resources) as well as capabilities which the organization owns, controls, or has access to on a preferential basis.” It denotes the “capacity of an organization to purposefully create, extend, and modify its resource base to address rapidly changing environments” (Helfat et al 2007).

Organizational and managerial capabilities have the same meaning but differ slightly in their scope and dimension they represent; while organizational capabilities capture the whole organization, the managerial capabilities are limited to the human factors that have direct relation with production and innovation. Managerial capabilities serve to “build up, integrate, and reconfigure organizational resources and competences” (Adner and Helfat 2003), and are composed of the capacity “to sense opportunities and threats, to seize opportunities, and to reconfigure organizational assets” (Teece 2007). Whereas organizational capability is, as Winter (2003) puts it, a “high-level routine/routines that, together with its implementing input flows, confers upon an organization’s management a set of decision options for producing significant outputs of a particular type.”

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2 Ibid, 2007, pp. 23-40
3 Ibid, 2007, pp. 70-72
6 Winter, S. G., Understanding dynamic capabilities, Strategic London: Management Journal, 24(10): pp. 91-95
4.5 The Processes of Management Innovation

Birkinshaw et al (2008) regarding the process of management innovation identified four interlinked phases: motivation, invention, implementation, and theorization and labeling. These four phases of management innovation are shaped by two fundamental determinants - internal change agents and external change agents.

For Birkinshaw et al (2008), the motivation phase is characterized by a set of preconditions and facilitating factors that lead individuals or groups within an organization to be animated and motivated to experiment with new ideas and practices. What animates them might be existing or future (created) problems. It addresses the question “under what conditions, or in what circumstances, do executives deem existing management practices to be inadequate for their needs?” (Abrahamson 1996). Here the leadership in the company should encourage and inspire the employees to not only be diligent, but also creative, imaginative and inventive. Problem-solving driven experiments and research are integral factor to this practice.

In this sense, companies should depend on the internal sources in solving internal problems as well as utilizing internal opportunities. From the internal change agent point of view, companies need to undertake gap analysis to determine the current company’s situation and potential performance, and pinpoint the various shortfalls that require innovative solution. The Role of external change agents in motivating management innovation starts from identifying avoidable threats and available opportunities to seize. Many external change agents see their role in stimulating the managers of the company through the process called agenda setting, to buy or adopt the existing or fashionable practice, rather than allowing companies to create new one. Sometimes external change agent interacts either directly or indirectly with internal change agent in agenda setting.

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Invention, as Birkinshaw *et al* (2008) put it, refers to either random or planned variations in management practices. The internal change agent, in this phase, moves to explore hypothetical and a new set of practices that comes up with problem driven search, trial and error and idea linking. The hypothetical and a new sets of practices emerge, in the real life or in vivo of the company, to respond to the organizational demands, pressures, challenges and aspirations through conducting experimental efforts underway inside the organization. For a large part, these are shaped and formed through trial and error, which entails cautious as well as risky behaviors. This stage is followed by the linking ideas/experiences that are gained from the internal endeavors combined with ideas/experiences flowing from the external environment - where fashion and agenda setters feature prominently. The external change agent tried to come up with a new idea for management practice through ideas contextualization that could address the organizational problems or opportunities in the business environment. In addition to that, the external change agent provided to the company with idea refining, which means correcting and cleaning the various imaginations and make it ready for usage. Moreover, the external change agent plays the role of idea linking that brings together the external change agent’s knowledge base with the context of specific ideas of internal change agents.

Implementation phase, according to Birkinshaw *et al* (2008), is characterized by the technical side of the innovation, following the experimentations that resulted to the operationalization of the innovative ideas and techniques. This phase signposts two primary activities, that internal change agents engage in as they attempt to implement an in vivo new practice. One is trial and error, in which progressively, by ways of preliminary monitoring and evaluating, make adjustments against the original concept. The other activity is reflecting on the experimenting process, in which internal change agents evaluate progress against their broader body of experience. The role played by external change agents in the implementation phase is less clear-cut than in other phases. This is due to the fact that, as Birkinshaw *et al* (2008) argue, external change agents “lack deep contextual knowledge of the focal organization, as well as the accountability for results that most internal
change agents face, so they rarely play an active role in actually implementing new ideas in vivo.”\(^1\)

The final stage is theorization and labeling. As Birkinshaw et al (2008) highlight, this is a phase typified by retention and institutionalization of innovative practices and experiences within the organization. This phase represents a departure from the tried-and-tested offerings of the fashion-setting community. Clearly, notable here is that his phase is consisted of two interlinked elements - theorization and labeling. Theorization is increasing “the zone of acceptance by creating perceptions of similarity among adopters and by providing rationales for the practices to be adopted” (Greenwood et al 2002)\(^2\). Whereas labeling refers to the selection of a name for the management innovation in question that reflects its theorization. The primary role of internal change agents in this phase is to build legitimacy for the innovation among employees of the organization.

Here Suchman’s (1995)\(^3\) formulation of the three basic forms of legitimacy offer a productive conceptualization of it, which are categorized as pragmatic, moral and cognitive legitimacy. Pragmatic legitimacy (appealing to employees’ self-interested calculations) is pursued by showing early evidence of the innovation’s value and by allaying employees’ concerns, but such evidence is likely to be hard to come by in the early stages of implementation. Whereas moral legitimacy emerges from a normative evaluation, through positive determination of consistency with the organization’s value system. The final source of legitimacy is the cognitive one, which is materialized through the development of plausible explanations for the innovation that mesh with larger belief systems and the experienced reality of the audience’s daily life. These considerations are crucial to thinking about the role of external change agents in the theorization and labeling phase. Here, the role of external change agents is

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twofold. First, they have an important role to play in building cognitive legitimacy inside the organization. Second External change agents play a major role in building legitimacy for the innovation beyond the boundaries of the organization.
CHAPTER Five
Field Study

5.0 Overview
As noted already in the operational framework, the case explored for this research is the Greater Nile Petroleum Company (GNPC)\(^1\). This chapter broadly outlines why the case study, and why it was chosen, as well as to look at the relationship between managerial innovation and capacity building by focusing on GNPC’s HR and capacity building strategies and practices. Through process, this research sets out to examine and test two fundamental hypotheses: one, there is a statistical significance between the implementation of capacity building applications and managerial innovation in GNPC; and two, there is a statistical correlation between training and managerial innovation in GNPC. This research tests these hypotheses against the Michigan Model and Harvard Model noted in Chapter Three, to appraise both the hard and soft aspects of HR.

Section I: The Case Study
In a case study, it is customary to consider why and how the particular case/s is chosen as part of the inquiry on the problem raised and themes to be investigated. A case study, in this sense, is a research site as well as content/context that are important considerations in any research. This research began with an intention to explore a particular firm/organization for the research questions – the relationship between capacity building and managerial innovation.

\(^1\)The Nile Petroleum Company constructs all-rounded fuel and gas distribution stations throughout the country supported with many ancillaries such as car washing areas, oil and other lubricant selling shops, grocery, tyre repairing and compressor and given to individual latter on called agent who agreed with the company for selling specific number or range from the company’s products. The agents have the right to benefit from the ancillaries that exist in the premises of the station such as oil and other lubricant materials selling shops, groceries, tyre repairing and compressor and car washing area.
The researcher, among many other private or public firms, selected the Greater Nile Petroleum Company (GNPC), because it is considered to be one of the largest petroleum leading companies in East Africa. Partly, it is chosen because as a parastatal company, it has both a public and private element to it. As a parastatal company, GNPC is directed and controlled indirectly by the government’s affiliated Sudanese Petroleum Corporation. Although, it has its own autonomous, independent governance and self-budgeted systems, it certainly has significant public dimension to it. This dimension of this firm is crucial when thinking about capacity-building as a process that links individuals, society, firm and the state.

Aside from the usual fuel and cooking gas procuring, GNPC is involved in the productions of automobile battery, lubricant oil, tyres etc. GNPC has signed an agreement with many international companies and has also set a full-blown department that overviews the daily activities of this newly established program and contracts. The main purpose of the Company is marketing and distributing fossil fuel in its different types and by-products.

The company is dependent on depots and big tankers with huge capacity located in multiple sites - dispense throughout Sudan. In addition to that, the company has good distributing network channels that are crucial component of delivering its products such as lubricant oil, gas cylinders and the like to the other distribution sites and customers directly.

NPC was first established in the 1950s. When it was first established, it was registered as the Egypt-French Petroleum Company; and later on, it was renamed Greater Nile Petroleum Company for Importation. For much its existence it was operated as a subsidiary of Total International, until it fell into a control of Sudan government in 1993.1 GNPC has significantly grown over the past half a century by diversifying its products and expanding its capacity. It now owns 28 major depots. The ones in El-shejera, El-jeyli and Port Sudan are considered strategic depots. In addition, there are 240 distribution stations spread all over the country – partly due to pressure to cover demands across the geographically vast country.

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The company operates in all energy fields including but not limited to fossil fuel exploration, production, refining, manufacturing, distribution and marketing.

GNPC has constructed all-rounded fuel and gas distribution stations throughout the country supported by many ancillaries such as car washing areas, oil and other lubricants selling shops, groceries, tyre repairing and compressors. These ancillaries are given to individuals, later on called agents, who enter into an agreement with the company to sell specific numbers or ranges of the company’s products.

The agents are entitled to the right to benefit from the ancillaries that exist in the premises of the station such as oil and other lubricant materials selling shops, groceries, tyre repairing, compressor and car washing area.

In addition to this, to make its products accessible and affordable to the customer, the company uses the one-stop window/shop services.

One of the reasons why the researcher selected this company is the complexity of the context of this company – which requires diverse skill bases and operations. Considering the above context that entails complexity of tasks, diversity of the company’s products, customer base and the sheer vastness of geographical areas involved in its operations, it is certainly crucial to establish innovative, flexible, proactive and well lubricated management structure with critical set of skills in all sites.

Thus, the researcher asks the question of how does a given management process within such context appropriates capacity-building practices as part of its managerial innovation. It is also worth-relating the above question to GNCP’s acclaimed leadership in the field of marketing, distributing of fuel products and its derivatives to the direct consumers - which are embedded elements of management and marketing. In addition, the company boasts that it is equipped with exceptionally well-qualified human resources who are playing a pivotal role in achieving the company’s missions and goals.

These major jobs of the company encouraged the researcher to study it and examine his hypothesis and research questions by locating them with this company’s content and context.

Since the research focuses on the application of capacity building and its impact on managerial innovation, the company is more suitable and relevant to become the research site.
To explore the set of questions asked in this research, and to generate insight about the internal and external situations of the company that could provide the platform for further actions, conclusion and recommendations, the researcher quoted the company’s situation from an analysis made in the workshop convened in the year 2006\(^1\).

The researcher presents the company’s situation as discussed and adopted by the participant of the workshop:-

The process of the situational analysis adopted the well-known methodology, commonly identified by its acronym “SWOT” to inspect the inbound and outbound situation of the Company.

**Strengths**

The geographical coverage and its abilities to expand in the surrounding along with excellent relationships with government at the federal and local levels, and smart partnership with multi-faceted investment are major motivator for the company to achieve its predetermined goals easily. Furthermore, the internal strong points such as the availability of sound financial and total quality systems are considered another benefit, which the company builds on its competitiveness, and it is leading in the field of fuel distribution. In addition to this, in comparison to competitor companies, armed with more advanced operational equipment and complex network it has managed to give this company a comparative advantage. The unique, well-established and widely recognized trademark of the company is another powerful dimension of the company.

**Weaknesses**

The lack of integrated information and appropriate usage of human resources systems are considered an obstacle in the face of the company progress. In addition to this, the absence of healthy, safe and conducive work environment in the company leads the employees to have low morale. Moreover, the dominant culture of focusing internally and the lack of coping with the modern designs in building gas stations are affecting the company negatively. The ever-increasing expenses of the various operations

\(^1\) Situational analysis of Great Nile Petroleum Company, 2016
of the company are also noted to have prevented it from adopting low level pricing systems for its commodities.

**Opportunities**

The new policies of the government and its outlook toward liberating the fuel and natural gas prices could be a chance for Greater Nile Petroleum Company. The company is also operating in an enabling environment to diversify its services through introducing new services such as rendering lines for non-petroleum products beside augmenting its production. Furthermore, the strategic location of Sudan and its access to many land locked countries and the weakness of the competing companies operating in the same field offer this company a prospect to maintain its gains and work for more market shares inside and outside the country. Besides, the government is encouraging national and international investment especially in the agro-industry and other related industries, and many projects are being implemented to this end, which has greater prospect. The lifting of the American sanctions on Sudan encourages American and European countries to invest in Sudan. This increases the demand for the products of the company.

**Threats**

The company had major clients in Sudan, which are the thermal electricity companies, which use oil products for generating electricity. However, with currently undergoing the construction of the renaissance dam in Ethiopia, and the growing impulse for renewable energy sources, the demand for petrol products will likely decrease sharply. The introduction of the alternative energy in some sectors is likely negatively affecting the current market share of the company. In addition, the shortage in hard currency and the unstable exchange rate is a challenge facing the company. The weakness or absence in/of national planning is another obstacle that stands in front of the company activities. The tribal disputes and the wars between the government and its rivals are considered as other sources of major threats facing the company.

6.2 The Company’s Vision, Mission and Values:

**Vision**

In 2020 it’s eager to be one of the five gigantic companies that supply and marketing oil in Africa.
Greater Nile Petroleum Company is a “leading Energy Company in Sudan and one of the big five energy companies in Africa”\(^1\). It has a much “tailored company has been striving to remain number one choice for value and brand led products. For its employees, the company is committed to creating attractive platform to attract and retain national and regional talents that seek evolving career and satisfactory jobs. For its shareholders, the company holds up their objectives by ensuring high return on equity and investment. For its communities, the company takes its full social responsibility toward the community in which it is running its activities not to harm the people, assets or environment and to support local communities’ and its development programs.

**Mission**

Supplying and marketing of oil and services that have a relation to its agencies in Sudan and the region around Sudan using advanced technology and system, abiding by social responsibility.

The company “elaborated and articulated clearly its purposes through answering the 4Ws such as what, why, whom and how”\(^2\). It implements the highest standards and uses the latest technologies to provide its customers and clients with first class services and high quality products that do not just meet, but also exceed their expectations.

**Values**

- **Responsibility**: standing for customer satisfaction by sticking to working bylaws and being committed and dedicated in performing tasks and taking full social responsibility toward the community.
- **Team spirit**: we abide to team based working behaviour and knowledge sharing, experiences and communication to achieve our objectives and increase our ownership to the company.
- **Differentiation**: we abide to continuous improvement and provide quality goods and services, distinguished in all transactions and to be the one which serve the customers better.
- **Transparency**: to follow the chains of system, procedure, rules, methods that clear and known to all.
- **Trust and Justice**: we stand for trust and Justice in all our transactions.
The company is committed to implement reasonably practical standards and controls in the field of health, safety and environment to avoid accident and environmental disaster. The company encourages researches and adoption of useful renewable energy sources and extraction. It is committed to the local community developments and provides reasonable affordable aid to community development activities.

6.3 The management system and distribution channels:

Regarding the managing system, the company follows to delivering standardized services to its customers, the company applies three type of systems:

- Direct managing system to the petrol distributing stations and this type of managing system is rare in the company.
- Directing and managing the fuel distribution stations through agent which is considered the dominant system in running all fuel and cooking gas distribution stations throughout the country.
- The last management system in the company is the so called hybrid system of management, which combines the mother company and the agent.

Regarding the distribution of its products the company targets customers in the following segments:

1. The industrial sector
2. The sovereignty sector such as the military, Security, police, etc.
3. The various private fuel and gas distributing stations

Noteworthily, some fuel stations are constructed and are maintained by the company itself. However, they are operated by the beneficiers themselves like the police, the military and the security organizations because of the sensitive nature of these institutions. The abovementioned management systems and distribution channels drive the researcher to see the organizational structure of the company taken as the case study as follows:

The company adopted the functional type of organizational structure composed of general mangers with their deputies, the legal advisor and seven specialized directorate and nineteen departments as front line production units.
Diagram (5-1)
General administrative structure of the GNPC

This organizational structure is designed to realize the company vision and mission. It is the result of the job analysis that took place in the company. This functional structure is characterized by strengths as well as weaknesses.
Such type of organizational structure, most of the time, suits and is fitted to the small and medium size of companies with limited product diversification. It also encourages specializations and appropriation of other functional knowledge. Moreover, it saves the company from wasting resources due to duplication and other interceptions, since it facilitates effective coordination between the various parts of the company, and assists three directions: ‘upwards, downwards and lateral’ cross functional communication.

However, this type of organizational structure has a negative implication to the company such as unresponsiveness and inflexibility to change, and it is not customer oriented. Managers, particularly in the top level of management, instead of being promoters and leaders for change, are overloaded by routines that impedes them from looking at vision level.

Moreover, in this organizational structure the role and importance of Human Resources is not given emphasis, hence the agent that is responsible for human resources is engulfed in and sandwiched by the various activities of the so called financial and administrative directorate. The concept and importance of Human Resources Management (HRM) as a strategic and coherent approach not applied and absorbed in dealing with human capacity in the company. The instrument that is responsible for the working force in the company called “employee affairs” rather than HRM and ranked or mentioned after the departments of finance, public relations, and general services, this indicates the misunderstanding of the company leadership to the role of Human Resources (HR) as an agent for change.

HR as a thinking and practice should be linked to the organizational outputs and objectives and should remain as a culture among the company employees particularly with the top, middle and front management levels.

The location and the conception of the “employee affairs” within the Greater Nile Petroleum Company doesn’t give a room to the department to conduct activities transcend the real border of the department neither horizontally, vertically nor diagonally. The existing situation of the department cannot go beyond the traditional job of personnel such as follow-up the attendance sheet and some protective and administrative steps, even the spontaneous training that is given to the employees initiated either by the top managers or by external institutions or trainers without involving the concern department.
which expect taking needs assessment among the employees and review the
general position of the company. Therefore, as a result the training programs
given by the company are neither tailored nor focused. Moreover, it is not
linked with the objectives of the company, so that many employees are not
satisfied with.
Beside this the department position is not helpful to take any follow-up
measures and incapable to enforce any human resources policies.

6.4 Toward Globalism
The company started to operate outside the country of its origin (Sudan)
through expanding its activities to cover many countries in the region.
Ethiopia is considered the starting point for the company in this thrust to
internationalize the company and establish its branches throughout the
region.
It constructed very big depots and distribution networks and planning to
augment exportation of its fuel to the rest of the neighboring countries.
The Ethiopian experience is considered an important landmark for GNPC.
By the end of the year 2008, the company started exporting its products
from ethanol, which is considered environmentally friendly. This has
become the start of a new move for Greater Nile Petroleum Company for
East Africa, which is established to run its activities from its regional head
quarter office in Kenya, and from this location, the company would
expand its activities in other countries of the region.

6.5 Social responsibility:
The company offers an initative in collaboration with some universities to
sponsor selected well-performing and distinguished students in particular
fields. In addition to this, the Company has been funding researchers and
postgraduate students pursuing their studies in the area of energy. For
example, the company sponsored El-ziber Mohammed Salih award in the
field of scientific research. Moreover, the company gives high priority to
development of its employees by organizing training and skill-development
programms inside and outside the country, through signing contracts with
training an higher institutions.
The company developed the concept of social responsibility in a number of dimensions including: environment, health, social work, sports, education. As part of its responsibility, the company pursues the following, among others:

- Creating a conducive work environment free from hazards and accidents
- Applying rigorous safety and quality control systems, according to the international standards for safety and health
- Contributing to advancement and development of the local communities
- Increasing the value it adds to the human capital, through encouraging and urging the employees, customers, and suppliers to contribute the ideas and changes it champions.

Moreover, the company to mitigate an environmental disaster has recently initiated reforestation program in the industrial zone in Bahri/Khartoum. In the year 2015 the company attained the social responsibility award from the President of the Republic for its commitment and being pioneer in delivering social services.

Section II: Research Procedures

6.6 The Research Methodology
The researcher in his way to study the topic used the descriptive methodology to interpret and explain the internal situation of the company, meaning its culture of work, organizational structure and the company intercation with its external environment. Also, the researcher employed the analytical methodology to simplify, breakdown, and isolate every and each information to be easy for dependence on two basic data:

6.7 The Primary Data
The researcher gathered primary data through two methods by visiting the research site directly: first, conducting an interview with some managers in the company; and second, conducting a questionnaire based on mini-survey designed to collect first hand information from the managers and the employees in the company.
6.8 The secondary data
Regarding secondary data, the researcher assessed the various written materials like books, past researches, periodicles, flyers, working papers, and web materials.

6.9 Population, Sample Size and Data Analizing Techniques:
To determine this, the researcher conducted interviews with managers in the company and collected statistical data through questionnaire survey with employees of the company. In this chapter, both sets of data are analyzed and interpreted. While that data from the questionnaire survey are analyzed using Statistical Packages for Social sciences (SPSS), the data is collected from 90 sample purposely selected from the population of 120 employees of NPC. This sample is also picked from the three GNPC branches: Port Sudan, El-jeyli and El-shejera.

Out of the 90 employees that are purposefully chosen as the research sample, the determined sample included the three ranks of management, which consist of the top, middle and low management levels. From the sample selected, 71 questionnaires were completed and, thus, analyzed, and 19 questionnaires did not respond. Considering the research population (120), the study sample size is still sufficiently high (covering more than half of the study population), which certainly increases the strengths of any claims, analytical remarks and inferences made here.

6.10 Considering Reliability and Validity of the Questionnaire and Data set
As noted in the methodology section, to validate the questionnaire, the researcher approached two ways: internal validity of measurement (which seriously considers strong linkages and relations between the statements with the axes and statements with the whole topic of research) and structural validity (which is concerned with validity of the tool and its ability to achieve the overall objectives of the research).
Table (5-2)  
Illustrates Pearson Test to understand the relations between capacity building and managerial innovation

<table>
<thead>
<tr>
<th>The variable</th>
<th>Capacity building</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimension</td>
<td></td>
</tr>
<tr>
<td>Institution-</td>
<td></td>
</tr>
<tr>
<td>alization</td>
<td></td>
</tr>
<tr>
<td>Institution-</td>
<td>.702**</td>
</tr>
<tr>
<td>Autonomous</td>
<td></td>
</tr>
<tr>
<td>Training</td>
<td>.655**</td>
</tr>
<tr>
<td>Unique</td>
<td></td>
</tr>
<tr>
<td>capabilities</td>
<td></td>
</tr>
<tr>
<td>Culture &amp;</td>
<td>.598**</td>
</tr>
<tr>
<td>leadership</td>
<td></td>
</tr>
<tr>
<td>Innovation</td>
<td></td>
</tr>
<tr>
<td>Innovation</td>
<td>.640**</td>
</tr>
<tr>
<td>Results</td>
<td></td>
</tr>
<tr>
<td>Institutionaliz-</td>
<td>There is a direct</td>
</tr>
<tr>
<td>alization</td>
<td>correlation</td>
</tr>
<tr>
<td>Autonomous</td>
<td>between the two</td>
</tr>
<tr>
<td>Training</td>
<td>variables</td>
</tr>
<tr>
<td>Unique</td>
<td>There is a direct</td>
</tr>
<tr>
<td>capabilities</td>
<td>correlation</td>
</tr>
<tr>
<td>Culture &amp;</td>
<td>between the two</td>
</tr>
<tr>
<td>leadership</td>
<td>variables</td>
</tr>
<tr>
<td>innovation</td>
<td>There is a direct</td>
</tr>
<tr>
<td>Source: data</td>
<td>correlation</td>
</tr>
<tr>
<td>gathered from</td>
<td>between the two</td>
</tr>
<tr>
<td>the field study</td>
<td>variables</td>
</tr>
<tr>
<td>2018</td>
<td></td>
</tr>
</tbody>
</table>
From the above table we conclude the relationship between the six axes are strongly connected by implication, the two variables “capacity building” and the “managerial innovation” are directly correlated and we infer that this research topic scientifically and practically more applicable and credible to bring sound results and recommendation regarding the case under study.

6.11 The internal validity for the statements:

To know the internal validity of the statements with the whole axis under which the statement is categorized the researcher used the Pearson correlation coefficient between the score of each statement with the total score of the sub-scale under which the specific statement is located. The table below illustrates the result of the procedure.

Table (5-3)

Explains the correlation of each statement with the axis under which the statements are clustered of the current research community (N=40)

<table>
<thead>
<tr>
<th>Institutionalization</th>
<th>autonomous</th>
<th>training</th>
<th>unique capabilities</th>
<th>culture and leadership</th>
<th>innovation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
<td>Correlation</td>
<td>Item</td>
<td>Correlation</td>
<td>Item</td>
<td>Correlation</td>
</tr>
<tr>
<td>1</td>
<td>.569</td>
<td>1</td>
<td>.653</td>
<td>1</td>
<td>.391</td>
</tr>
<tr>
<td>2</td>
<td>.599</td>
<td>2</td>
<td>.711</td>
<td>2</td>
<td>.361</td>
</tr>
<tr>
<td>5</td>
<td>.304</td>
<td>5</td>
<td>.556</td>
<td>5</td>
<td>.693</td>
</tr>
<tr>
<td>7</td>
<td>.610</td>
<td>7</td>
<td>.657</td>
<td>7</td>
<td>.738</td>
</tr>
<tr>
<td>8</td>
<td>.492</td>
<td>8</td>
<td>.461</td>
<td>8</td>
<td>.613</td>
</tr>
<tr>
<td>10</td>
<td>.782</td>
<td>10</td>
<td>.617</td>
<td>10</td>
<td>.738</td>
</tr>
<tr>
<td>11</td>
<td>.573</td>
<td>11</td>
<td>.418</td>
<td>11</td>
<td>.784</td>
</tr>
</tbody>
</table>
From the above table we notice that the links between all the statements are statistically significant at level (0.05) and all the statements have strong internally valid.

6.6 Reliability: means the degree of reliability of the questionnaire in its outcomes if applied several times at the GNPC and other similar companies in the same year.

6.6.1 The psychometric characteristics/properties of the measurement/scale
The researcher, after adding the comments that were given to him by the arbitrators in the questionnaire, has managed to apply the edited version, which comprised 77 statements to a pilot sample sized of 40. This sample was selected randomly from the entire population under study. After editing the scores that were given by the respondents, the researcher put them into SPSS and the results were reviewed below. In the following, results related to the measures of validity and reliability is explored.

6.6.2 The reliability of the scale
To know the general degree for the measurement at its last version that consists of 77 statements from the current research community, the researcher applied an equation of Alpha Kronbach in the pilot test. The result of this procedure is noted below as illustrative data table:

<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>.749</td>
<td>12</td>
<td>.499</td>
<td>12</td>
<td>.681</td>
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<tr>
<td>15</td>
<td>.667</td>
<td>15</td>
<td>.674</td>
<td></td>
<td></td>
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<tr>
<td>16</td>
<td>.619</td>
<td>16</td>
<td>.389</td>
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<td></td>
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<tr>
<td>17</td>
<td>.716</td>
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<td></td>
<td></td>
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<td>18</td>
<td>.533</td>
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<tr>
<td>19</td>
<td>.524</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: data gathered from the field study 2018
Table (5-4)

The reliability of the scale

<table>
<thead>
<tr>
<th>sub-scale</th>
<th>the number of the statements</th>
<th>the psychometric characteristics</th>
<th>self-reliability</th>
<th>Alpha Kronbach alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutionalization</td>
<td>19</td>
<td></td>
<td>.966</td>
<td>.934</td>
</tr>
<tr>
<td>autonomous</td>
<td>12</td>
<td></td>
<td>.944</td>
<td>.892</td>
</tr>
<tr>
<td>training</td>
<td>14</td>
<td></td>
<td>.953</td>
<td>.909</td>
</tr>
<tr>
<td>unique capabilities</td>
<td>6</td>
<td></td>
<td>.905</td>
<td>.820</td>
</tr>
<tr>
<td>culture and leadership</td>
<td>16</td>
<td></td>
<td>.917</td>
<td>.842</td>
</tr>
<tr>
<td>innovation</td>
<td>10</td>
<td></td>
<td>.935</td>
<td>.876</td>
</tr>
</tbody>
</table>

Source: data gathered from the field study 2018

This tells us that the links between the axes and the statements are statistically significant at level (0.05), and all the statements are strongly reliable.

6.7 The arbitrators

To whom the questionnaire is provided so as to comment on its content, structure, and its relativeness. They are knowledgeable about the topic of the research and the field of the study in which the whole topic is categorized (Business Management) and empirical research in general.

The arbitrators had given the researcher comments regarding the content and structure of the axes and the statements and their comments are taken into consideration names of the arbitrators mentioned in appendix No1.

6.8 Statistical tools

After thorough review to many relevant researches and disciplines, the researcher noticed that the important means to garner data for the purpose of the research is developing Questionnaire. To prepare the questionnaire the
researcher reviewed a number of questionnaires previously designed to relevant researches. Accordingly the questionnaire developed in congruity with the research objectives as follows:

1. Preparing a preliminary Questionnaire for data collection
2. Giving the questionnaire to the supervisor to evaluate whether it is qualified to be a sound tool for data collection
3. Review the questionnaire according to the comments that are given by the supervisor
4. Distribute the questionnaire to a number of arbitrators for more comments, and they provided the researcher with valuable remarks that enrich the content of the questionnaire.
5. Conduct a field test study on the survey sample to examine whether there is a need for amending, adding and removing.
6. Distributing the questionnaire among the predetermined sample size to collect the necessary data for the research

This research tool consists of (77) statements distributed among (6) Axes. The Axis of institution is comprised of (19) statements. The axis of autonomy, delegation, and communication covered (12) statements. The axis of training, empowerment and teamwork encompassed (14) statements, the axis of unique capabilities embraced (6) statements. The axis of structure, culture and leadership consist of (16) statements. Finally, the axis of innovation included, (10) statements.

Table (5-5)

Likert scale which illustrates how the researcher measured the statements in the questionnaire.

<table>
<thead>
<tr>
<th>category</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Source: Tewfiq AteiaTewfiq “Managerial Innovation and its Relation with Work Performance of the Managers in the Public Sector”, 2009 Islamic University Gaza, Palestine
Section III: Display, Analysis of Personnel Characteristics

Their personal and occupational characteristics are as follows:

Table (5-6)
Distribution of sample according to Age:

<table>
<thead>
<tr>
<th>Serial</th>
<th>Age</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Less than 30 years</td>
<td>21</td>
<td>29.6</td>
</tr>
<tr>
<td>2</td>
<td>30 and less than-40 year</td>
<td>27</td>
<td>38.0</td>
</tr>
<tr>
<td>3</td>
<td>40 and less than 50</td>
<td>17</td>
<td>23.9</td>
</tr>
<tr>
<td>4</td>
<td>50 years and more</td>
<td>6</td>
<td>8.5</td>
</tr>
<tr>
<td>5</td>
<td>Total</td>
<td>71</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: data gathered from the field study 2018

From the above table it is clear that (29.6%) of the respondents are less than 30 years of age and the age of (38.0%) of the respondents lies between 30 years and 40 years. Both age ranges constitute most of the employees working in the company.

These ranges of age are characterized by many essential elements that boost innovation in the company since there are still youth who have the energy, curiosity, and ambition that never know giving up; besides their educational background. Moreover, a remarkable number of the respondents (23.9%) their ages lay between 40 years and 50 years. These ranges of age illustrate the cumulative experiences and the wisdom that play a pivotal role in bringing innovation in the company. However, the age of 8.5% of the respondents lie between 50 years and 60 years. This age range is naturally more conservative and usually refuses and resists innovative ideas. Fortunately, their numbers are so small.
Table (5-7)
Illustrates one way Anova Test to analysis the mono-variance to find the difference in the age variable

<table>
<thead>
<tr>
<th>SN</th>
<th>Variable</th>
<th>The source of difference</th>
<th>Total squares</th>
<th>Degree of freedom</th>
<th>Average squares</th>
<th>F value</th>
<th>P value</th>
<th>The Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Institutionalization</td>
<td>Between groups</td>
<td>226.399</td>
<td>3</td>
<td>75.466</td>
<td>.532</td>
<td>.662</td>
<td>There are no differences in the age variable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Within groups</td>
<td>9504.390</td>
<td>67</td>
<td>141.857</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>9730.789</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Autonomous</td>
<td>Between squares</td>
<td>187.920</td>
<td>3</td>
<td>62.640</td>
<td>1.400</td>
<td>.251</td>
<td>There are no differences in the age variable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Under squares</td>
<td>2998.024</td>
<td>67</td>
<td>44.747</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>3185.94</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Training</td>
<td>Between squares</td>
<td>129.355</td>
<td>3</td>
<td>43.118</td>
<td>.628</td>
<td>.599</td>
<td>There are no differences in the age variable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Under squares</td>
<td>4600.476</td>
<td>67</td>
<td>68.664</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>226.399</td>
<td>3</td>
<td>75.466</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Unique</td>
<td>Between</td>
<td>761.847</td>
<td>67</td>
<td>11.371</td>
<td>.407</td>
<td>.749</td>
<td>There are</td>
</tr>
<tr>
<td>capabilities</td>
<td>squares</td>
<td></td>
<td></td>
<td>no differences in the age variable</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------------</td>
<td>---------</td>
<td>------</td>
<td>------</td>
<td>-----------------------------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under squares</td>
<td>775.718</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>109.268</td>
<td>3</td>
<td>36.423</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Culture &amp; leadership</td>
<td>Between squares</td>
<td>3899.690</td>
<td>67</td>
<td>58.204</td>
<td>.626</td>
<td>.601</td>
<td>There are no differences in the age variable</td>
<td></td>
</tr>
<tr>
<td>Under squares</td>
<td>4008.958</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>94.643</td>
<td>3</td>
<td>31.548</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 innovation</td>
<td>Between squares</td>
<td>2326.315</td>
<td>67</td>
<td>34.721</td>
<td>.909</td>
<td>.442</td>
<td>There are no differences in the age variable</td>
<td></td>
</tr>
<tr>
<td>Under squares</td>
<td>2420.958</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>761.847</td>
<td>67</td>
<td>11.371</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Source: data gathered from the field study 2018**

From the above table we understand no differences in the age variable in understanding/interacting and using factors (axes) which comprise institution, autonomous, training, unique capabilities, culture & leadership and innovation, which have a positive impact on bringing managerial innovation.

Age is not considered a barrier or an obstacle in front of managerial innovation, because every age range could contribute and come up with ideas and practices that lead to managerial innovation.
Table (5-8)
Distribution of sample according to Education

<table>
<thead>
<tr>
<th>Serial</th>
<th>Level</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Secondary School Leaving Certificate</td>
<td>5</td>
<td>7.0</td>
</tr>
<tr>
<td>2</td>
<td>Diploma</td>
<td>7</td>
<td>9.9</td>
</tr>
<tr>
<td>3</td>
<td>Bachelor</td>
<td>38</td>
<td>53.5</td>
</tr>
<tr>
<td>4</td>
<td>Master</td>
<td>11</td>
<td>15.5</td>
</tr>
<tr>
<td>5</td>
<td>PhD</td>
<td>10</td>
<td>14.1</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>71</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: data gathered from the field study 2018

From the above table 7.0% and 9.9% from the population under study have completed secondary school and got pre-university diploma. The majority of the respondents (53.5%) have bachelor’s degree, (15.5%) of the sample postgraduate degree, and (14.1%) of them hold PhD degree. Since the majority of the sample under study holds first degree and above, this indicates that the processes of innovation in the company could take place easily and smoothly, because the high level of education among the employees points out their readiness and willingness to accept new novelties and participate in introducing new ideas and innovations.

Table (5-9)
Illustrates one way Anova Test to analyze the mono-variance to find the difference in the educational qualification variable

<table>
<thead>
<tr>
<th>SN</th>
<th>Variable</th>
<th>The source of difference</th>
<th>Total squares</th>
<th>Degree of freedom</th>
<th>Average squares</th>
<th>F value</th>
<th>P value</th>
<th>The Result</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Institutionalization</td>
<td>Between squares</td>
<td>1288.150</td>
<td>4</td>
<td>322.038</td>
<td>2.518</td>
<td>.050</td>
<td>There are differences in the variable of educational qualification in favor of master</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Under squares</td>
<td>8442.639</td>
<td>66</td>
<td>127.919</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>9730.789</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
From the above table we understand that there are no differences in the educational variable particularly in training, culture & leadership and innovation.

An employee regardless of his/her educational background needs training, requires cultural orientation and acquainting of know what, how, why is more important to every age.

However, there are differences in the variable of educational qualification in favor of master degree in institutionalization, postgraduate diploma in favor of autonomous and bachelor degree in favor of unique capabilities.

Institution and institutionalization requires great knowledge and skills, because of what it has of professionalize tasks like drawing strategic intent.
and drafting long standing polices such as policies, procedures, rules and methods.

On the other hand, to have the ability of self-governing/autonomous is imperative to have postgraduate diploma. Likewise, to have unique capabilities that lead to managerial innovation employees have to have a bachelor degree qualification.

Table (5-10)
Distribution of the sample of study according to Sex

<table>
<thead>
<tr>
<th>Serial</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Male</td>
<td>48</td>
</tr>
<tr>
<td>2</td>
<td>Female</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>71</td>
</tr>
</tbody>
</table>

Source: data gathered from the field study 2018

Table No (6-3) shows clearly that (67.6%) of the respondents are males, while (32.4%) of them are females.

From the above mentioned data we inferred that the number of the female employees in the company constitutes half of that the male ones. Although they are less, they could play a remarkable role in the course of attaining managerial innovation in the company. If it retains its heterogeneity in such a way, the probability of achieving managerial innovation can be greater.
Table (5-11)
Illustrates one way Anova Test to analyze the mono-variance to find the difference in the sex variable

<table>
<thead>
<tr>
<th>SN</th>
<th>Variable</th>
<th>Comparison group</th>
<th>Sample size</th>
<th>Arithmetic mean</th>
<th>Standard deviation</th>
<th>T value</th>
<th>Degree of freedom</th>
<th>P value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Institutionalization</td>
<td>Male</td>
<td>48</td>
<td>71.4583</td>
<td>12.20910</td>
<td>.776</td>
<td>69</td>
<td>.440</td>
<td>There are no differences in the variable of sex</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>23</td>
<td>69.1304</td>
<td>10.95571</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Autonomous</td>
<td>Male</td>
<td>48</td>
<td>44.1875</td>
<td>7.26301</td>
<td>.387</td>
<td>69</td>
<td>.700</td>
<td>There are no differences in the variable of sex</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>23</td>
<td>43.5217</td>
<td>5.63971</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Training</td>
<td>Male</td>
<td>48</td>
<td>52.6667</td>
<td>9.40876</td>
<td>-.180</td>
<td>69</td>
<td>.858</td>
<td>There are no differences in the variable of sex</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>23</td>
<td>53.0435</td>
<td>5.07649</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Unique capabilities</td>
<td>Male</td>
<td>48</td>
<td>23.2083</td>
<td>3.46998</td>
<td>-.989</td>
<td>69</td>
<td>.326</td>
<td>There are no differences in the variable of sex</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>23</td>
<td>24.0435</td>
<td>3.00724</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Culture &amp; leadership</td>
<td>Male</td>
<td>48</td>
<td>58.5000</td>
<td>7.69913</td>
<td>-.169</td>
<td>69</td>
<td>.867</td>
<td>There are no differences in the variable of sex</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>23</td>
<td>58.8261</td>
<td>7.45076</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>innovation</td>
<td>Male</td>
<td>48</td>
<td>35.6667</td>
<td>6.36591</td>
<td>1.520</td>
<td>69</td>
<td>.133</td>
<td>There are no differences in the variable of sex</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Female</td>
<td>23</td>
<td>37.9130</td>
<td>4.46107</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: data gathered from the field study 2018
The aforementioned data analysis illustrates that there are no differences in the variable of sex. Thereby conclude that all employees regardless their sex can contribute to the process of producing managerial innovation.
Table (5-12)

Distribution of sample according to Nationality

<table>
<thead>
<tr>
<th>Serial</th>
<th>Nationality</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sudanese</td>
<td>71</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: data gathered from the field study 2018

A look at the table No (6.4) shows that (100%) of the respondents were Sudanese. This illustrates that the company restricted recruiting to the local employees rather than to expatriates from the external labour market. However, some scholars believe that the probability of being innovative among the employees of the same nationality is so narrow. In this regard, Smith says, “well diversified group enhances innovation”.

Table (5-13)

Distribution of sample according to Occupation/position

<table>
<thead>
<tr>
<th>Serial</th>
<th>Occupation</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>worker</td>
<td>11</td>
<td>15.5</td>
</tr>
<tr>
<td>2</td>
<td>employee</td>
<td>25</td>
<td>35.2</td>
</tr>
<tr>
<td>3</td>
<td>Dep. head</td>
<td>8</td>
<td>11.3</td>
</tr>
<tr>
<td>4</td>
<td>Vice dept. Head</td>
<td>16</td>
<td>22.5</td>
</tr>
<tr>
<td>5</td>
<td>manager</td>
<td></td>
<td>8.5</td>
</tr>
<tr>
<td>6</td>
<td>G. manager</td>
<td>5</td>
<td>7.0</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>71</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: data gathered from the field study 2018

The above table shows that (15.5%) of the respondents are manual workers and (35.2%) of them were employees on whom the company depends in executing a number of duties in the various offices. (11.3%) of the respondents are heads of department and (22.5%) of them are vice department heads. (8.5%) and (7.0%) of the sample are managers and general managers respectively. From the above data we can say that, the

company is well structured and equipped with well qualified persons. This implies that the well staffed structure could be sufficient to have managerial innovation in the company.

**Table (5-14)**

**Illustrates one way Anova Test to analyze the mono-variance to find the difference in the work experience variable**

<table>
<thead>
<tr>
<th>SN</th>
<th>Variable</th>
<th>The source of difference</th>
<th>Total squares</th>
<th>Degree of freedom</th>
<th>Average squares</th>
<th>F value</th>
<th>P value</th>
<th>The Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Institution-ization</td>
<td>Between squares</td>
<td>968.178</td>
<td>5</td>
<td>193.636</td>
<td>1.436</td>
<td>.223</td>
<td>There are no differences in the work experience variable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Under squares</td>
<td>8762.611</td>
<td>65</td>
<td>134.809</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>9730.789</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Autonomous</td>
<td>Between squares</td>
<td>347.138</td>
<td>5</td>
<td>69.428</td>
<td>1.590</td>
<td>.175</td>
<td>There are no differences in the work experience variable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Under squares</td>
<td>2838.806</td>
<td>65</td>
<td>43.674</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>3185.944</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Training</td>
<td>Between squares</td>
<td>261.820</td>
<td>5</td>
<td>52.364</td>
<td>.762</td>
<td>.581</td>
<td>There are no differences in the work experience variable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Under squares</td>
<td>4468.011</td>
<td>65</td>
<td>68.739</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>4729.831</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Unique capabilities</td>
<td>Between squares</td>
<td>51.324</td>
<td>5</td>
<td>10.265</td>
<td>.921</td>
<td>.473</td>
<td>There are no differences in the work experience variable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Under squares</td>
<td>724.394</td>
<td>65</td>
<td>11.145</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>775.718</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Culture &amp; leadership</td>
<td>Between squares</td>
<td>390.430</td>
<td>5</td>
<td>78.086</td>
<td>1.403</td>
<td>.235</td>
<td>There are no differences in the work experience variable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Under squares</td>
<td>3618.528</td>
<td>65</td>
<td>55.670</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>4008.958</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>innovation</td>
<td>Between squares</td>
<td>278.697</td>
<td>5</td>
<td>55.739</td>
<td>1.691</td>
<td>.149</td>
<td>There are no differences in the work experience variable</td>
</tr>
</tbody>
</table>

98
The above results tell us that there are no differences in the work experience variable, which indicates that employees regardless their work experiences can play a positive role in bringing managerial innovation within the company.

Table (5-15)

Illustrates one way Anova Test to analysis the mono-variance to find the difference in the occupational variable

<table>
<thead>
<tr>
<th>SN</th>
<th>Variable</th>
<th>The source of difference</th>
<th>Total squares</th>
<th>df</th>
<th>Average squares</th>
<th>F value</th>
<th>P value</th>
<th>The Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Institution-alization</td>
<td>Between squares</td>
<td>786.442</td>
<td>5</td>
<td>157.288</td>
<td>1.143</td>
<td>.347</td>
<td>There are no differences in the occupational variable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Under squares</td>
<td>8944.347</td>
<td>65</td>
<td>137.605</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>9730.789</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Autonomous</td>
<td>Between squares</td>
<td>356.380</td>
<td>5</td>
<td>71.276</td>
<td>1.637</td>
<td>.163</td>
<td>There are no differences in the occupational variable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Under squares</td>
<td>2829.564</td>
<td>65</td>
<td>43.532</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>3185.944</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Training</td>
<td>Between squares</td>
<td>80.326</td>
<td>5</td>
<td>16.065</td>
<td>.225</td>
<td>.951</td>
<td>There are no</td>
</tr>
<tr>
<td></td>
<td>Under squares</td>
<td>Between squares</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>-------</td>
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<td>----------------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td>----------</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>4649.505</td>
<td>44.078</td>
<td>5.92</td>
<td>.783</td>
<td>.565</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>65</td>
<td>65</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>71.531</td>
<td>8.816</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>4729.831</td>
<td>775.718</td>
<td>65</td>
<td>11.256</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>70</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The above table tells us that there are no differences in the occupational variable, meaning that employees in spite of their occupational levels; can play an additive element in getting managerial innovation in the company.

Source: data gathered from the field study 2018
Table (5-16)
Distribution of sample according to Experience

<table>
<thead>
<tr>
<th>Serial</th>
<th>Experience</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Less than 5 years</td>
<td>18</td>
<td>25.4%</td>
</tr>
<tr>
<td>2</td>
<td>5 and less than 10 years</td>
<td>15</td>
<td>21%</td>
</tr>
<tr>
<td>3</td>
<td>10 and less than 15 years</td>
<td>18</td>
<td>25.4%</td>
</tr>
<tr>
<td>4</td>
<td>15 and less than 20 years</td>
<td>10</td>
<td>14.1%</td>
</tr>
<tr>
<td>5</td>
<td>20 and less than 25 years</td>
<td>6</td>
<td>8.5%</td>
</tr>
<tr>
<td>6</td>
<td>25 and above</td>
<td>4</td>
<td>5.6%</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>71</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

Source: data gathered from the field study 2018

The above table shows that (25.4%) of the respondents have less than five years of work experiences, and (21.1%) of the respondents have more than five and less than ten years of work experiences. Moreover, (25.4%) of the population under study their work experiences lies between 10 to 15 years. In addition, the number of respondents who are their work experience ranged between 15 to 20 years constitutes (14.1%). From the sample size we understood that (8.5%) of the population of the study their work experiences are laying between 20 to 25 years, while those who have 25 years and more of work experiences their percentage reach (5.6%).

From the above information we can deduce that the company retained a great number of employees who have been working for many years. These huge work experiences could play a supportive role in bringing managerial innovation in the company. These well experienced employees when conglomerated with the new blood that constitute 25.4% of the total employees are adding another benefit to the company machine, and these could yield managerial innovations throughout the company structure.

**Section IV: Display, Analysis of the Sample/Study Data analysis**

To analyze the statements in the designed questionnaire for collecting data the researcher used the one sample T analysis. It was very difficult to display the analysis of descriptive data through using the values of arithmetic mean.
and standard deviation unless determining absolute values to know which sample is inclining toward agree or strongly agree regarding the statements in the questionnaire.

Hence, the right way the researcher do was the following:

- First determine the range: in this case find out “the largest and lowest value” in Likert scale 5 (the largest value) - 1 (the lowest value) = 4
- Then select the length of the cell through “dividing the range on the number of Likert Scale’s cells” which is 4/5 = 0.80

After that adding the length of the cell to the value of scale which is (1) to get the upper range of the cell (strongly disagree) and so on until we get the lower and upper ranges for each cell it will be as follows

**Table (5-17)**

<table>
<thead>
<tr>
<th>SN</th>
<th>Category</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Strongly agree</td>
<td>4.20 till 5.00</td>
</tr>
<tr>
<td>2</td>
<td>Agree</td>
<td>3.4 till 4.20</td>
</tr>
<tr>
<td>3</td>
<td>Neutral</td>
<td>2.60 till 3.40</td>
</tr>
<tr>
<td>4</td>
<td>Disagree</td>
<td>1.80 till 2.60</td>
</tr>
<tr>
<td>5</td>
<td>Strongly disagree</td>
<td>1.00-1.80</td>
</tr>
</tbody>
</table>

Therefore, the statement is positive when the sample size agree on its content and the counted T value is greater than the tabular T value, which equates (1.97), or the inferential level is less than (0.05).
The statement is negative when the respondents disagree on the contents of the statement which is the counted value of T is less than the tabular value of T which is equivalent to (1.97) Al-Omer, Badran (1425)\(^1\)

### Table (5-18)

**Demonstrates T test for a single community to identify the distinctive characteristics of the first Axis institutionalization, which comprised 19 statements and is analyzed as follows:**

<table>
<thead>
<tr>
<th>SN</th>
<th>Dimension</th>
<th>Sample size</th>
<th>Theo mean</th>
<th>Arithmetic mean</th>
<th>Standar deviation</th>
<th>T value</th>
<th>Degree of freedom</th>
<th>P value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The employees are familiar with company’s vision</td>
<td>71</td>
<td>3</td>
<td>4.0563</td>
<td>.79079</td>
<td>11.256</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>2</td>
<td>The company has a clear job description</td>
<td>71</td>
<td>3</td>
<td>3.9014</td>
<td>.83075</td>
<td>9.143</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>3</td>
<td>the company has Human Resources (HR) policies</td>
<td>71</td>
<td>3</td>
<td>4.0704</td>
<td>.79864</td>
<td>11.294</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>4</td>
<td>in the company there is an active and effective research and development (R&amp;D) department</td>
<td>71</td>
<td>3</td>
<td>3.6056</td>
<td>1.0068</td>
<td>5.069</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>5</td>
<td>In the company there is a department for managing Human Resources</td>
<td>71</td>
<td>3</td>
<td>4.0845</td>
<td>.69172</td>
<td>13.211</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
</tbody>
</table>

\(^1\) Al-Omer, Badran Statistical Analysis of Data in Scientific Research Through SPSS, El- Reyad, 1425pp. 126, 127
<table>
<thead>
<tr>
<th></th>
<th>The HRM department runs its activities effectively</th>
<th>71</th>
<th>3</th>
<th>3.9014</th>
<th>1.0022</th>
<th>7.579</th>
<th>70</th>
<th>.000</th>
<th>High statistical significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>staffs are deployed in the company along the notion of “the right person at the right place”</td>
<td>71</td>
<td>3</td>
<td>3.6620</td>
<td>.95534</td>
<td>5.839</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>8</td>
<td>the policies and procedures in the company are not bottleneck for any attempt might be taken by the employees toward innovation</td>
<td>71</td>
<td>3</td>
<td>3.6479</td>
<td>.92734</td>
<td>5.887</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>9</td>
<td>the company has HR policies that motivate employees</td>
<td>71</td>
<td>3</td>
<td>3.7465</td>
<td>.96686</td>
<td>6.506</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>10</td>
<td>Regularly the company implement performance appraisals on its employees</td>
<td>71</td>
<td>3</td>
<td>3.6761</td>
<td>.98234</td>
<td>5.799</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>11</td>
<td>the company has a clear strategic plan</td>
<td>71</td>
<td>3</td>
<td>3.9577</td>
<td>.83558</td>
<td>9.658</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>12</td>
<td>There is a platform that allows employees to participate in the decision making processes of the company</td>
<td>71</td>
<td>3</td>
<td>3.6479</td>
<td>.92734</td>
<td>5.887</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>13</td>
<td>the company has fair motivational programs</td>
<td>71</td>
<td>3</td>
<td>3.3380</td>
<td>.98479</td>
<td>2.892</td>
<td>70</td>
<td>.005</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>14</td>
<td>The company has a clear plan toward empowering its employees</td>
<td>71</td>
<td>3</td>
<td>3.5493</td>
<td>.93791</td>
<td>4.935</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
</tbody>
</table>
The arithmetic means of the statement “The employees are familiar with company’s vision” reached (4.05). It is greater than (3.4) and less than (4.20) and the t value reached at (11.256). It is greater than the tabular value (1.97) and the value of the significance level (.000) which is less than (0.05).

Therefore, this statement categorizes the agree range. Hence it indicates that the employees in the company have comprehensive knowledge about the vision of the company. This could facilitate the processes toward achieving managerial innovation.

Regarding the statement that says, “The Company has a clear job description”, the sample responses are weighed as follows:

The arithmetic mean of the statement evaluated (3.90). It is greater than (3.4) and less than (4.20) and the t value reached at (9.14). That is greater than the
tabular value (1.97), and the value of the significance level (.000) which is less than (0.5).

For this reason, the statement is classified in the agree choice and this indicates that the company’s employee have a clear job description which assists them to avoid any role conflict and confusion in the workplace. In addition to that, having job descriptions shows that the company leadership has abilities and qualifications in setting objectives and guiding the company staff accordingly.

Concerning the statement, “the company has Human Resources (HR) policies” the respondents’ answers are valued as follows:
The arithmetic mean of the statement reached (4.07), it is greater than (3.4) and less than (4.20), and the t value reached (11.294). It is greater than the tabular value (1.97). The value of the significance level of the statement (0.00) is less than (0.05). Hence, the stated phrase is laid in the “agree degree”.

This implies that the company has polices that clarify the duties, responsibilities and rights of the employees. Thus, it formed a good working environment that encourages innovation in general and managerial innovation in particular.

Concerning the phrase that says, “In the company there is an active and effective research and development (R&D) department”, the interviewed population reiterated that the company runs development programs to upgrade the skills of the employees and widening their knowledge to contribute to the process of managerial innovation. Likewise, having empirical and theoretical research sharpens the capacity of the employees and encourages them to take risk in the way toward innovation.

Concerning the statement that says, “In the company there is a department for managing Human Resources” the respondents gave the below mentioned figures which illustrates that:

The mathematical mean calculated as (4.0845) is greater than (3.4) and less than (4.20). The t value reached at (13.211) is greater than the tabular value
The value of the significance level of the statement is (0.00) which is less than (0.05). Hence, the stated phrase placed in the “agree degree”. This denoted that the interviewed population determined the availability of a specialized department that follows the staff’s issues such as their administration, remuneration, hearing their grievance, appraising their performance and their development and these indicate that there is a solid ground for flourishing managerial innovation in the company.

As far as the statement, “The HRM department runs its activities effectively” is purposely designed to verify the answer of the respondents in the statement previously asked by the researcher on the accessibility of HR department. Therefore, the interviewed sample reacted as follows: the mathematical mean reckoned as (3.9014). It is greater than (3.4) and less than (4.20) and the t value attained (7.579). It is greater than the tabular value (1.97). The value of the significance level of the statement is (0.00) which is less than P (0.05).

Thus, the statement is placed within the range of “agree” this means that the department runs its activities and provided its provisions to the employees and that the employees are satisfied with it.

What substantiate the above result are the answers of the respondents to the statement “staffs are deployed in the company along the notion of ‘the right person at the right place’”

Therefore, the mathematical mean of this statement is calculated (3.6620). It is greater than (3.4) and less than (4.20). The t value reached (5.839). It is greater than the tabular value (1.97). The value of the significance level of the statement is p (0.00) which is less than (0.05).

Thus the statement, is categorized in the “agree degree”, which assured that employees through the company structure are deployed according to their qualifications and experiences. Nepotism and other occupational diseases do not exist in the company working culture.

The present policies of Human Resources and other relevant policies did not pose problems that hinder the managers from achieving managerial innovation either at individual or group level. This is testified via putting this
statement to the population under study, “The policies and procedures in the company are not bottleneck for any attempt might be taken by the employees toward innovation”. So, the result is read as follows:

The mathematical mean reckoned as (3.6479). It is greater than (3.4) and less than (4.20). The t value attained (5.887). It is greater than the tabular value (1.97). The value of the significance level of the statement is P (0.00) which is less than P (0.05).

Consequently, this statement is classified in the range of “agree” which tells us that the policies in the company have a high statistical significance in motivating innovation in the company.

In the statement delivered to the respondent to know whether the company has policies that motivate employees in managerial innovation through asking this statement “the company has HR policies that motivate”, their answers were read as follows:

The mathematical mean deemed as (3.7465). It is greater than (3.4) and less than (4.20). The t value attained (6.506). It is greater than the tabular value (1.97). The value of the significance level of the statement is (0.00) which is less than P (0.05). This output illustrates to us that the company has sound motivational policies and this could have positive effects on the employees of the company to have the enthusiasm that encourages the employees to have the spirit of innovation.

In another statement “Regularly the company implement performance appraisal among its employees”, the researcher garnered the following output:-

The mathematical mean is calculated as (3.6761). It is greater than (3.4) and less than (4.20). The t value arrived at (5.799). It is greater than the tabular value (1.97). The value of the significance level of the statement is(0.00), which is less than p (0.05). Hence, the stated phrase is placed in the “agree degree”. This denoted that the company has regular appraisal programs that help the leadership in the company to know the strong and weak aspects of their employees besides knowing their interest and inclinations that have a
crucial role in organizing the workforces effectively and efficiently. Thus, this statement has statistical significance in achieving managerial innovation.

In another expression that says, “The Company has a clear strategic plan” the respondents have reached into consensus that is gauged with “agree”, and computed as follows: -
The mathematical mean calculated as (3.9577), which is greater than (3.4) and less than (4.20). In addition, the t value arrived at (9.658). It is greater than the tabular value (1.97). The value of the significance level of the statement is (0.00), which is less than (0.05). This denoted that the company runs its activities on the base of predetermined plan, which helps it to have the ability of detecting problems early and utilizing resources such as the human capacities in an effective manner. This contributes in encouraging and nurturing the spirit of innovation.

To understand to what extent the employees take part in the processes of making decision, the researcher developed this statement “There is a platform that allows employees to participate in the decision-making processes of the company”. The result calculated as follows:
The mathematical mean reckoned as (3.6479). It is greater than (3.4) and less than (4.20). The t value attained is (5.887). It is greater than the tabular value (1.97). The value of the significance level of the statement is (0.00) which is less than p (0.05). The analyzed data verified that the employees of the company are participating in the decision-making processes in the company, which indicates that the company leaderships are more concerned about the human element and their views regarding the company’s current situation and future perspectives.

To be acquainted with the company’s motivational programs, the researcher posed to his respondents the following statement: “the company has fair motivational programs” hence, accordingly, their responses were as follows:
The mathematical mean is calculated (3.3380). It is greater than (2.6) and less than (3.4). The t assessment achieved (2.892). It is greater than the tabular value (1.97). The value of the significance level of the statement is (0.00), which is less than p (0.05). The abovementioned analysis tells us that
the majority of the responses of the respondents are situated in the “Neutral” degree, which reflects their displeasure on the motivational program of the company. This dissatisfaction could lead the employees to disobey and develop rejection or resistance behavior to any move taken by the leadership of the company toward innovation, let alone to take initiatives. Therefore, the absence of motivational program either in individual level of group could hinder managerial innovation in the company.

To investigate whether the company empowers its employees to be more fruitful or not, the researcher forwarded this statement: “The Company has a clear plan toward empowering its employees” and the result was as follows:

The theoretical mean was (3.5493). It is greater than (3.4) and less than (4.2). The t value assessed (4.935). It is greater than the tabular value, which is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). So, this statement categorizes in the agree degree.

The above displayed data indicate that there is a clear plan from the company’s leadership to promote and encourage employees to have a role in all parts of the company, either in the technical field or in managerial areas. However, in the previous statement the data indicated that the motivational program of the company is not satisfactory.

To examine whether the company leadership recognize the contribution of the employees in the company or not, the researcher forwarded this statement “the employee’s contribution is respected from the company management”. The interviewees’ responses were measured as follows:

The theoretical mean was (3.7887). It is greater than (3.4) and less than (4.2). The t value evaluated (7.312). It is greater than the tabular value, which is (1.97). The significance rate of the statement is (0.00), which is less than p(0.05). So this statement lay in the agree degree.

From this information, we can say that the company acknowledges any endeavors done by the employees. This approach could boost the individual and collective zeal of the employees toward innovation. Moreover, this way of handling employees could overhaul the relationship between the
employees and their leadership, which nurtures and acculturates the employees in the company to enhance their role in coming out with new ideas and new practices.

To understand if the company uses or applies the various safety mechanisms or not, the researcher forwarded this statement to the sample under study: “there is good application for health program in the company” the respondents’ answers are calculated as follows:

The theoretical mean was calculated as (3.8451). It is greater than (3.4) and less than (4.2). The t value evaluated at (8.485).It is greater than the tabular value which is (1.97). The significance rate of the statement is (0.00), which is less than p(0.05). So this statement is situated in the agree degree. Hence, we assume that the company abides by the rules and regulations that stipulated in the International Regulations such as the International Labor Organization (ILO) and other local regulations that urge companies to stick to it; to reduce the unwanted incidents that may be happen in absence of these indispensable measures of safety. Hence, this favorable situation in the company could provide best climate to the employees of the company to feel that they are in the safe hands, so they can take initiatives in the way to bring novelty to the company managements.

To explore whether the company motivates its employees in collective manner or not, the interviewees gave their views and are analyzed as follows:

The theoretical mean of respondents was calculated as (3.5070). That means greater than (3.4) and less than (4.2). The t value evaluated at (5.173). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00) which is less than p (0.05). So, this statement is situated too in the agree degree which implies the company extended motivational factors to augment and harvest the capabilities and potentials of its employees for the benefit of the company. The company by being providing collective motivational system could be encouraging team work, cultivates win–win mentality that yield innovative ideas and eliminates negative resentments among the employees.
For cross checking purpose, the researcher tried to put in front of his interviewees a statement contrary to what was claimed in the previous paragraph that says, “The Company motivates its employees through individual motivational system”. The interviewees provided their views and were analyzed as follows:

The theoretical mean of the respondents was calculated as (3.5634). That means greater than (3.4) and less than (4.2). The t value evaluated (4.634) it is greater than the tabular value that is (1.97), and the significance rate of the statement is (0.00) which is less than p (0.05). These indicate that the company motivates its employees at individual level, which encourage the employee to take personal initiatives toward coming with new solutions. To know how the company deploys the new staff and how the employees of the company see this process the researcher gave his informants the following statement “recruitment and selection in the company are taking place smoothly”. Hence, the respondents provided the following views:

The theoretical mean of the respondents was calculated as (3.1549). That means it is less than (3.4) and less than (4.2). The t value evaluated at (1.156). It is less than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (.252). Hence, this statement is categorized in the disagree degree.

From the above figures, the researcher understood that the recruitment and selection processes in the company are not going smoothly. This could create bad feelings among the employees such as tardiness, absenteeism, negligence and so on.

These bad feelings come out from the bad practices of the company regarding recruitment because the company’s leadership may apply nepotism, favoritism, bias, while it deals with issue of recruitment and selection. This brings despair among the employees, which could cripple their creativity.
Table (5-19)
Demonstrates T test for a single community to identify the distinctive characteristics of the second axis autonomy, delegation and communication, which comprised 12 statements and analyzed as follows:

<table>
<thead>
<tr>
<th>NS</th>
<th>Dimension</th>
<th>Sample size</th>
<th>Theatrical mean</th>
<th>Arithmetic mean</th>
<th>Standard deviation</th>
<th>T value</th>
<th>Degree of freedom</th>
<th>P value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Managers in the company are delegating some of their tasks</td>
<td>71</td>
<td>3</td>
<td>3.7887</td>
<td>.73515</td>
<td>9.040</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>2</td>
<td>Communication flows smoothly in the company</td>
<td>71</td>
<td>3</td>
<td>3.7465</td>
<td>.84038</td>
<td>7.485</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>3</td>
<td>The managers in the company are more interested in preparing future leadership for the company</td>
<td>71</td>
<td>3</td>
<td>3.6197</td>
<td>.94667</td>
<td>5.516</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>4</td>
<td>The company provides social communication for its employees</td>
<td>71</td>
<td>3</td>
<td>3.7324</td>
<td>.86119</td>
<td>7.166</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>5</td>
<td>There are regular meeting in the various management levels in the company</td>
<td>71</td>
<td>3</td>
<td>3.6620</td>
<td>.80965</td>
<td>6.889</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>6</td>
<td>The management in the company do their best in involving the employees of the company in the processes of decision making</td>
<td>71</td>
<td>3</td>
<td>3.4366</td>
<td>.93705</td>
<td>3.926</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>7</td>
<td>The bureaucratic system in the company does not pose barriers to the innovation processes</td>
<td>71</td>
<td>3</td>
<td>3.3521</td>
<td>.82978</td>
<td>3.576</td>
<td>70</td>
<td>.001</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>8</td>
<td>Decision making in the company is more centralized</td>
<td>71</td>
<td>3</td>
<td>3.7324</td>
<td>.69607</td>
<td>8.866</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>9</td>
<td>There is enough space for employees autonomy in the company</td>
<td>71</td>
<td>3</td>
<td>3.7324</td>
<td>.84444</td>
<td>7.308</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>10</td>
<td>There is harmony between the employees of the company and their managers</td>
<td>71</td>
<td>3</td>
<td>3.6197</td>
<td>.78132</td>
<td>6.683</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>11</td>
<td>Staff rooms/shared spaces are prevailing everywhere in the company</td>
<td>71</td>
<td>3</td>
<td>3.6479</td>
<td>.86352</td>
<td>6.322</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>12</td>
<td>There is a synergy among the employees &amp; the managers in the company</td>
<td>71</td>
<td>3</td>
<td>3.9014</td>
<td>.79561</td>
<td>9.547</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
</tbody>
</table>

**Source: data gathered from the field study 2018**

To explore whether the managers devolve some of their jobs to their subordinate or not the researcher forwarded to the interviewees this statement “the company is delegating some of their tasks”. Nevertheless, the result that a collected from the respondents calculated as follows:

The theoretical mean of the respondents was calculated as (3.7887). It is greater than (3.4) and less than (4.2). The t value evaluated at (9.040). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05).

This data indicated that the managers in the company accustomed in delegating/transferring part or all their jobs to their subordinates and this
clarify to us there is a room and good intention from the managers to share knowledge, experience with their employees.

This goodwill could build self-confidence, the spirit of to do, initiative, risk taking and other good qualities among the employees that lead to managerial innovation within the company.

Furthermore, the researcher tried to know the interaction among the various levels of the company hence posted this statement “communication flows smoothly in the company” to his interviewees. The answers of the respondents were computed as follows:

The theoretical mean of the respondents was calculated as (3.7465). It is greater than (3.4) and less than (4.2). The t value evaluated at (7.485). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). Hence this statement is categorized in the agree degree.

The above-mentioned data reflected that there is evenly distributed information among the different organs of the company and among the employees as well. Sharing information is very crucial in building collective understanding about the various priorities and challenges of the company, which help in determining the exact roles play by the employees in boosting managerial innovation in the company.

To understand the role played by the managers in the company in grooming future leadership, the researcher forwarded the following statement to his respondents “The managers in the company are more interesting in preparing future leadership for the company”.

The responses collected from the employees are calculated and presented as follows:

The theoretical mean of the respondents was calculated as (3.6197). It is greater than (3.4) and less than (4.2). The t value evaluated at (5.516). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). Hence this statement is categorized in the agree degree.
From this explanation, we can reach the conclusion that the company
leaderships are so keen in preparing future leadership for the company. The
leadership of the company believes that grooming leaders who carry the
mission of this company in this changing world has paramount importance.
Leaders who have the ability of appreciating the best of what is, and the
skills of exploring of what might be, and the capacity of agreeing on what
should be and the capability of innovating what can be, in a bid to take the
company competitiveness and its sustainability beyond the horizon.

To investigate whether the cohesion of the employees in the company is
strong or weak the researcher presented this statement to his respondents
“the company provides social communication for its employees” and the
result was as follows:

The theoretical mean of the respondents was calculated as (3.7324). That
means it is greater than (3.4) and less than (4.2). The t value evaluated at
(7.166) it is greater than the tabular value that is (1.97). The significance rate
of the statement is (0.00), which is less than p (0.05). Hence this statement is
categorized in the agree degree.

From the above data, we can say that the company has a fertile ground and
various sound platforms that foster informal relationships between the
employees of the company, and these have their own positive implication in
nurturing and encouraging managerial innovation in the company.

To grasp the factual situation in the company regarding the involvement of
the employees in the company real life the researcher posed this statement
“there are regular meetings in the various management levels in the
company” hence the views of the interviewees measured as follows:

The theoretical mean of the respondents is calculated as (3.6620). That
means it is greater than (3.4) and less than (4.2). The t value evaluated at
(6.889) it is greater than the tabular value that is (1.97). The significance rate
of the statement is (0.00), which is less than p (0.05). Hence this statement is
categorized in the agree degree.
From this data, we can say that the company has high interactions with its employees in all positions at departmental, divisions, units and with other ancillary staffs. This prevailed situation in the company would help in building healthy relationships among the employees and their managers and produce enabling environment for the employees to discover and maximize their potentials for the benefit of the company.

These exploratory meetings could break the barriers between the various managerial levels and bring mutual respect, build confidence, exchange or sharing and analyzing ideas. Likewise, these meetings introduce the employees with the various problems and equip them with information about capabilities owned by the company.

To evaluate whether the employees are satisfied with the leadership conduct and performance regarding the enticing/attracting the mind-set of the employees in the company;

The researcher forwarded the following statement “the management in the company do their best in involving the employees of the company in the processes of decision-making” in the other side and for cross checking purpose the researcher stimulate his respondent by saying “decision making in the company is more centralized”.

The various responses of the respondents in both statements analyzed respectively as follows:

The theoretical means of the respondents were calculated as (3.4366) and (3.7324).Both means are greater than (3.4) and less than (4.2). The t value evaluated at (3.926) and (8.866).They are greater than the tabular value that is (1.97). The significance rates of both statements are (0.00), which is less than p (0.05). For the reason that these statements categorized in the agree degree.

From this analyzed data we inferred that the company leadership spare no efforts in involving their employees in the decision processes of the company, despite of the fact that the concentration of the power in the hands
of the most powerful and influential groups such as the general manager and heads of departments and the like.

To understand whether the company’s machines hamper the move of the employees toward managerial innovation or not the researcher provided this statement “the bureaucratic system in the company does not pose barriers to the innovation processes” to his respondents, hence their answers computed as follows:

The theoretical mean of the respondents was calculated as (3.3521). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (3.576). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). For this reason, this statement categorized in the agree degree.

From this resulted we can surmise that the internal circumstances of the company either policies, procedures or laws have not negative effects on the employees in general or those regarded as entrepreneurs in the company in particular. Moreover, the company bureaucratic system is innovation friendly, motivator, promoter of news ideas and solutions. The company to unshackle/unleash the human spirit decided to follow the unbureaucratic management principles as strategy to achieve managerial innovation.

The answer to this statement also verified by the views provided by the interviewees while they were asked to give their comments on the statement that says, “There is enough space for employee’s autonomy in the company” the average of the respondents expressed their consent with the statement and so the calculated result of the interviewees is as follows:

The theoretical mean of the respondents was calculated as (3.7324). That means it is greater than (3.4) and less than (4.2). The t value is evaluated at (7.308). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). For this reason, this statement is categorized in the agree degree too.

From this outcome, we can assume that, the employees in the Nile Petroleum Company have an independency from any suppressive actions either from their bosses or from colleagues. This positive situation is an
enabling environment for motivating employees to come up with new novelties.

To investigate, whether there is synchronization between the employees of the company and their managers the researcher forwarded to their respondents these two statements respectively:

“There is a harmony between the employees of the company and their managers/ and “there is a synergy among the employees & the managers in the company”. Therefore, the result of the analysis furnished the following rates:

The theoretical mean of the respondents of the two variables of the existence of harmony& synergy between the company’s managers and subordinates were calculated as (3.6197) and (3.9014).

They are greater than (3.4) and less than (4.2). The t value of the two variables was evaluated at (6.683), (9.547). They are greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p(0.05). For this reason, the two statements are categorized in the agree degree.

From the above presented information, there is lofty harmony and energy between the leadership of the company and their subordinates. Hence we can deduce that this type of climate promote innovation in the company, because the absence of strains, conflicts and disagreements within a group of employees could lead to favorable atmosphere that contribute to managerial innovation in the company.

To corroborate the above information with the notion of having and achieving common understanding, the researcher advanced this statement to his interviewees “staff rooms/shared spaces are prevailing everywhere in the company” the respondents gave the below mentioned statistics:

The theoretical mean of the respondents was calculated as (3.6479). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (7.308). It is greater than the tabular value that is (1.97). The significance
rate of the statement is (0.00) which is less than p (0.05). For this reason, this statement is classified in the agree degree.

From the above information, we can figure out that, the company has been giving the concept of training, sharing of ideas, and proposes solutions are one of the top priorities compared with other activities carried out by the company. Therefore, having rooms/ venues for getting employees together are a healthy phenomenon encourages generating ideas, activating the various potentials that naturally implanted in human beings. Furthermore, such platform drives out fear and afraid and replace them with trust and self-confidence like asking questions and expressing ideas. Moreover, having venues like these break down barriers, abolish competition and build win-win situation of cooperation within the company.

Table (5-20)

Demonstrates T test for a single community to identify the distinctive characteristics of third Axis training and its role in boosting managerial innovation:

<table>
<thead>
<tr>
<th>SN</th>
<th>Dimension</th>
<th>Sample size</th>
<th>Theoretical mean</th>
<th>Arithmetic mean</th>
<th>Stand. Deviation</th>
<th>T value</th>
<th>Degree of freedom</th>
<th>P value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The employees in the company have the will to achieve progress</td>
<td>71</td>
<td>3</td>
<td>4.2394</td>
<td>.68587</td>
<td>15.227</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>2</td>
<td>The employee in the company have the ability to solve problems</td>
<td>71</td>
<td>3</td>
<td>3.9577</td>
<td>.70583</td>
<td>11.434</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>3</td>
<td>The leadership in the company see more interest in their jobs</td>
<td>71</td>
<td>3</td>
<td>3.7606</td>
<td>.85297</td>
<td>7.513</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td></td>
<td>The company has an interest in organizational improvement</td>
<td>71</td>
<td>3</td>
<td>3.8451</td>
<td>.72993</td>
<td>9.755</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>---</td>
<td>----------------------------------------------------------</td>
<td>----</td>
<td>---</td>
<td>--------</td>
<td>--------</td>
<td>-------</td>
<td>----</td>
<td>-----</td>
<td>--------------------------------</td>
</tr>
<tr>
<td>5</td>
<td>The company encourages its employees to pursue their formal education</td>
<td>71</td>
<td>3</td>
<td>3.7746</td>
<td>.88151</td>
<td>7.405</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>6</td>
<td>The company provides off the job training for its employees</td>
<td>71</td>
<td>3</td>
<td>3.8169</td>
<td>.86701</td>
<td>7.939</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>7</td>
<td>The company provides tailored training (at the level of interests and aspirations)</td>
<td>71</td>
<td>3</td>
<td>3.4085</td>
<td>1.00822</td>
<td>3.414</td>
<td>70</td>
<td>.001</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>8</td>
<td>The company always succeed in choosing the appropriate trainees</td>
<td>71</td>
<td>3</td>
<td>3.6761</td>
<td>.99678</td>
<td>5.715</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>9</td>
<td>The training programs of the company respond to the current needs of the company</td>
<td>71</td>
<td>3</td>
<td>3.7183</td>
<td>.97370</td>
<td>6.216</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>10</td>
<td>The training materials address the company future perspectives</td>
<td>71</td>
<td>3</td>
<td>3.7606</td>
<td>.91752</td>
<td>6.985</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>11</td>
<td>The company provides suitable</td>
<td>71</td>
<td>3</td>
<td>3.6479</td>
<td>.89600</td>
<td>6.093</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
</tbody>
</table>
Looking at the above table, it is clear to us that:

Theoretical mean of the statement No (1) is calculated as (4.2394). That means it is greater than (3.4) as well as greater than (4.2). The t value evaluated at (15.227). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). For this reason, this statement is categorized in the agree degree.

From the previously mentioned information the company leadership has the will and determination to move the company forward to modernization so as to cope with the current situation and find scientific solutions for its future programs. This keenness could furnish suitable environment for the employees to exercise their abilities and initiatives that lead them to the level of innovation.

In the statement No.(1) the researcher investigated the readiness and determination of the company’s leadership for achieving managerial innovation in the company and the responses of the interviewees were positive. However, the researcher provided to his respondents another
statement to discover whether the employees have the readiness in solving problems that appear in the company or not.

The theoretical mean of the statement No (2) is calculated as (3.9577). That means it is greater than (3.4) as well as greater than (4.2). The t value evaluated (11.434). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00) which is less than p (0.05). Therefore, this statement categorized in the agree degree.

The above information indicates that the employees in the company have the enthusiasm and the motivation to take any step toward bringing solutions to any problem that encounters or blocks the company movement to achieve its goals and realize competitiveness in the never ending changing environment that is through comprehensive innovation.

The theoretical mean of the statement No (3) is calculated as (3.7606). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (7.513). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). Hence, this statement is categorized in the agree degree.

This information shows that the leadership in the Nile Petroleum Company is led by example. By respecting and excelling their jobs, the managers of the company influence the employees of the company to be committed, dedicated and devoted to the values and principles of the company.

This leadership culture, which spillover throughout the company was a a source of good motives and high zealous for the employees in the company and it was an encouraging factor to leap toward innovation smoothly.

The theoretical mean of the statement No (4) is calculated as (3.8451). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (9.755). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). For this reason, this statement is categorized in the agree degree.

From the above information, we can infer that the leadership in the company has an interest to improve the overall performance of the employee and
develop the various mechanisms that accelerate the process of managerial innovation in the company.

The great willing of the leadership in laying a fertile ground for innovation is a clear indication for achieving Excellency in all aspects in the company.

Theoretical mean of the statement No (5) is calculated as (3.7746). It is greater than (3.4) and less than (4.2). The t value evaluated at (7.405). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). For this reason, this statement categorized in the agree degree.

According to the aforementioned statistics, the company leadership gives great importance to the value of education so that it encourages the employees to track their formal education especially at tertiary/university level. This points out that the leadership aware of the significance of education in bringing novelties in the company.

The researcher investigates that whether the company leadership (beside their interest in teaching or allowing their employees to take part in the formal education) provides off the job training or not, for this reason he forwarded an affirmative statement No (6) and the result was as follows:

The theoretical mean of the statement No (6) is calculated as (3.8169). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (7.939). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). Hence, this statement categorized in the agree degree.

From the above figures, we deduced that the company recognizes the importance of training in general and off the job training in particular; therefore, training has been scheduling in regular form for its employees either inside Sudan or outside it.

This off the job training played paramount role in upgrading the capacity of the employees and develop the spirit of to do among them. Tacitly, this indicates there are enabling grounds available inside the Nile Petroleum Company to achieve managerial innovation.
To investigate the nature of the training is given to the employees of the company the researcher puts forward this statement, which is labeled No (7). Hence, the result of the interviewees’ responses calculated as follows:

The theoretical mean of the statement is calculated as (3.4085). It is greater than (3.4) and less than (4.2). The t value evaluated at (3.414). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). For this reason, this statement is categorized in the agree degree.

From the aforementioned figures, the researcher understood that the company provided the training packages agree on after understanding the needs and aspirations of the company and the employees respectively. Therefore, it is a targeted, prioritized, focused and tailored training. This type of training is so fruitful for the company as well as the individual trainee and its outcomes easily applicable on the real ground and acceptable to both the company and the employees. Therefore, it is a sound method to have fast impact in bringing managerial innovation in the company.

Identifying ways and approaches of how training takes place by itself are not enough unless the participants are selected under predetermined selection criteria. This assorting criterion takes into consideration the education, experience, age, position…etc. of the employees whom the company want to train.

Therefore, the research forwarded to his interviewees the statement that labeled no (8) and the answers that given by the respondents were processed as follows:

The theoretical mean of the statement is calculated as (3.6761). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (5.715). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). Hence, this statement is categorized in the agree degree.

From this result, the researcher reached the understanding that the company chose the appropriate candidates who participate in any training program
based on its needs assessment that is carried before the training programs take place.

Nepotism, and other corrupted practices that spoil the training processes are intolerable in the company working culture.

The researcher to investigate and know the quality of the topics presented to the trainees he forwarded the statement tagged No. (9) Which expressed to what extent the training materials respond to the company’s current needs? The interviewees have given the following responses and computed as follows:

The theoretical mean of the statement is calculated as (3.7183). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (6.216). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). Hence, this statement categorized in the agree degree.

From the above information, it is clear that the company affirms the past of the employee’s capacity and build on the wanted abilities that react with the current situation and anticipate the future of the company. Therefore, the training materials are coping with the present position of the company by answering questions related to “what is” to unearth information and knowledge that help them in introducing “why” and its demands.

To know if the company provides training materials that give knowledge and skills for future endeavors of the company the researcher presented to his interviewees this statement “The training materials address the company future perspectives” and their responses measured as follows:

Theoretical mean of the statement is calculated as (3.7183). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (6.216). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). Hence, this statement is categorized in the agree degree.

From the aforementioned information the training materials such as handouts, presentation slides …etc. prepared in a way that equipped the
employees with specific capabilities that assist them in achieving managerial innovation.

Since these learning materials developed by the participation of in-house such as the department of Human Resources as well as out-house such as the consultants and specialized centers affiliated to Universities they are rich in terms of the information that they have and skills that they transfer to the trainees.

So far, we discussed training, trainees and training materials from the interviewee’s point of view. However, the researcher forwarded to his respondents a statement to test to what extent the trainees is applying what they received in the various workshops.

The statement, labeled No (11) says, “The Company provides suitable ground for its trainees to apply what they learned into the real life” the interviewees feedback processed as follows:

The theoretical mean of the statement is calculated as (3.6479). That means it is greater than (3.4) and less than (4.2). The t value evaluated (6.093). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). Hence, this statement is categorized in the agree degree.

Form the above information we can deduce that the company facilitates for its employees all the necessary means to convert what they have learnt during the training courses in the real life of the day-to-day activities of the company.

This situation, which has been prevailing in the company, could encourage the employees to exercise what have learnt in the base of trial and error that could yield or lead to managerial innovation.

In addition to that, the researcher is eager to know whether the company gives due attention to the trained employees or not by raising the statement, labeled No (12) to the interviewees:

Therefore, the researcher obtained the following result:
Theoretical mean of the statement is calculated as (3.7042). It is greater than (3.4) and less than (4.2). The t value evaluated at (6.475). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). Hence, this statement is categorized in the agree degree.

From these figures we can understand that the company gives the due attention to those who have received training through designing a clear policy, which urges every manager to monitor and evaluate the trainees in their workplace in regular base.

This follow-up mechanism could enable the leadership of the company to understand the impact of the training in the employees thinking and behavior as well as the contribution of the employees in advancing the company’s programs.

So far, we have seen the various trainings provided by the company to its employees from either within the company or from the outside. Nevertheless, the researcher saw the importance of investigating whether the company follows the apprenticeship system in transferring skills to the employees or not. Hence, he forwarded to his interviewees the statement tagged No (13) and the calculated result came out as follows:

The theoretical mean of the statement is calculated as (3.5352). It is greater than (3.4) and less than (4.2). The t value evaluated at (5.057). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). Hence, this statement is categorized in the agree degree.

Therefore, from these figures we infer that the company’s leadership uses apprenticeship system as a means to acculturate employees particularly those recruited from the labor market, newly graduate employees and those transferred from within the company into its various organs.

So far, we have seen the general direction of the process of learning and cultivating skillful employees in the company. However, the researcher sees the importance of testing the readiness and interest of the employees in
participating in any training program scheduled by the company, to this end
the researcher posed a statement No (14) say, “The employees of the
company have an interest in training” and the result was as follows:
Theoretical mean of the statement is calculated as (3.9437). It is greater than
(3.4) and less than (4.2). The t value evaluated at (11.123). It is greater than
the tabular value that is (1.97). The significance rate of the statement is
(0.00), which is less than p (0.05). Hence, this statement categorized in the
agree degree.
From this information, we conclude that the employees in the Nile
Petroleum Company have a high interest in training and its importance in
elevating their capabilities and thus improve their performance in the
company. Institutional interest in delivering training is not enough by itself
unless met with the same magnitude of interest from the potential trainees.
Therefore, we found that there is mutual interest between the company and
its employees and the consultants who deliver the training (in case the
training from outside).
Because the employees in the NPC have seen education and training as an
important pathway to improving wages and increase competences where the
leadership of the company viewed the training from its economic benefits
and value added to the company overall programs.

<table>
<thead>
<tr>
<th>SN</th>
<th>Dimension</th>
<th>Sample size</th>
<th>Theoretical mean</th>
<th>Arithmetic mean</th>
<th>Standard Deviation</th>
<th>T value</th>
<th>Degree of freedom</th>
<th>P value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Employees of the company are characterized by self-initiative</td>
<td>71</td>
<td>3</td>
<td>4.1268</td>
<td>.67463</td>
<td>14.073</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>2</td>
<td>the employees of the company are committed to the</td>
<td>71</td>
<td>3</td>
<td>3.9718</td>
<td>.75540</td>
<td>10.840</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>Company’s objectives</td>
<td>n</td>
<td>Mean</td>
<td>Std Dev</td>
<td>T</td>
<td>P</td>
<td>Significance</td>
<td></td>
<td></td>
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<tr>
<td>-------------------------------------------------------------------------------------</td>
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</tr>
<tr>
<td>3. Most of the employees have self-confidence</td>
<td>71</td>
<td>3</td>
<td>4.0000</td>
<td>.77460</td>
<td>10.878</td>
<td>70 .000</td>
<td>High statistical significance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. The employees of the company have the capacity of sensing problem early</td>
<td>71</td>
<td>3</td>
<td>3.8169</td>
<td>.78029</td>
<td>8.822</td>
<td>70 .000</td>
<td>High statistical significance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. The Employees of the company have the ability of analyzing</td>
<td>71</td>
<td>3</td>
<td>3.7042</td>
<td>.78184</td>
<td>7.590</td>
<td>70 .000</td>
<td>High statistical significance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. The employees of the company have the ability of generating ideas that lead to the improvement of the work</td>
<td>71</td>
<td>3</td>
<td>3.8592</td>
<td>.81584</td>
<td>8.874</td>
<td>70 .000</td>
<td>High statistical significance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: data gathered from the field study 2018

From the above-illustrated data, it is apparent for us to say that:
Theoretical mean of the statement No (1) of table (6-17) is calculated as (4.1268). That means it is greater than (3.4) as well as greater than (4.2). The t value evaluated at (14.073). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). For this reason, this statement is categorized in the agree degree.

That means, the employees in the company have the desire, determination and the willing for taking self-initiative toward realizing the pre-determined goals of the company.

The culture of having self-initiative implanted in the employees of the company due to the continuous training and socializing process carried out
by the company. These training, mentoring and apprenticeship programs provided by the company brought a change in the cognition, attitude and behavior of the employees and this ignited the engine of doing things without waiting directives from the above beside taking responsibility and being accountable to the outcome.

Furthermore, taking self-initiative is one and crucial factor/character of innovative person hence the result of the survey that comes in such a way gives a sound indicator that the company is marching in the right direction to the managerial innovation.

The researcher tried to investigate to what extent the employees are vowed to appreciate and execute the objectives of the company through providing to his respondents the statement No (2) of table (6-14) and the processed result comes out as follows:

Theoretical mean of the statement is calculated as (3.9718). It is greater than (3.4) as well as greater than (4.2). The t value evaluated at (10.840). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). For this reason, this statement is categorized in the agree degree.

From the abovementioned result, we notice that the employees have the spirit of owning and internalizing the objectives of the company and keen to convert them in the real life. This readiness is the outcome of the regular training that brings the common ground and collective consciousness among the employees of the company.

This devoutness to the values and missions of the company is a clear indication of the willingness that the employees have, and it implies that the road toward managerial innovation is clear for the employees and their leaders’ respectively.

To know more about the availability of having additional characteristics of being innovative, which (having self-confidence), the researcher presented to his interviewees the statement marked No (3) of table (6-17) and the processed result was as follows:
Theoretical mean of the statement is calculated as (4.0000). It is greater than (3.4) as well as greater than (4.2). The t value evaluated at (10.878). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00) which is less than p (0.05). For this reason, this statement is categorized in the agree degree.

From this information, we can say that the large part of the research sample agreed that the employees in the company have self-assurance and this distinctive quality could play a major factor in bringing managerial innovation in the company. Nurturing and orientating employees in such a way possibly will have an inevitable innovative role throughout the company endeavors to achieve competitiveness and growth.

In the way to investigate whether the employees are known for their sensing problems at their early stage or not, the researcher posited a statement numbered (4) of table (6-17) hence, the result calculated as follows:

Theoretical mean of the statement is calculated as (3.8169). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (8.822). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). For this reason, this statement categorized in the agree degree.

From the above-illustrated information, the researcher observed that the employees in the Nile Petroleum Company have high sensing capability, which helps them in identifying a crisis in its early stage. This early warning horn helps the management to avoid potential threats that may affect the company negatively. Furthermore, the ability of having such intelligence assists the employees of the company in finding solutions for many problems impeding the company from realizing its mission. Therefore, we can say that the ability of sensing issues is a powerful pointer to have a managerial innovation in the company.

To evaluate the availability of having the capacity of analysis among the employees, the researcher puts forward to his interviewees the statement, labeled No (5), of table (6-17) and the answer of the respondents was as follows:
The theoretical mean of the statement is calculated as (3.7042). That means it is greater than (3.4) as well as greater than (4.2). The t value evaluated at (7.590). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). For this reason, this statement is categorized in the agree degree.

From this information we can notice that the employees in the NPC have the skills and means that enable them in manipulating the internal external factors affecting the company through using the various analytical methods. This indicates that the investigative capacity of the employees and their managing capability help them in understanding the general situation of the company and come up with remedies that assist the company to survive in the global economic market.

Therefore, the employees in the company are characterized by having high analytical capacity that could assist them in bringing innovative ideas and practices in all aspects.

The researcher concluded the axis by asking his interviewees by providing them with a statement tabled No. (6) Of table (6-17) which says, “The employees of the company have the ability of generating ideas that lead to the improvement of the work” the interviewees gave their responses and processed as follows:

The theoretical mean of the statement is calculated as (3.8592). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (8.874). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). For this reason, this statement is categorized in the agree degree.

From the above figures, the researcher deduced that the employees in the company have the ability to produce myriad ideas in a specific time for specific issue. This generating idea indicates that the employees in the company have the capability to provide ideas in terms of words, pictures, in coherence, organized, and meaningful sentences.

Having such traits among the employees of the company is regarded a big advantage for bringing managerial innovation in the company.
Table No (5-22)

Demonstrates T test for a single community to identify the distinctive characteristics of the fifth axis of structure and leadership

<table>
<thead>
<tr>
<th>SN</th>
<th>Dimension</th>
<th>Sample size</th>
<th>Theoretical mean</th>
<th>Arithmetic mean</th>
<th>Standard Deviation</th>
<th>T value</th>
<th>Degree of freedom</th>
<th>P value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The company’s scale of salaries is an attractive factor</td>
<td>71</td>
<td>3</td>
<td>4.1408</td>
<td>.86678</td>
<td>11.090</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>2</td>
<td>The company leadership wants to change but they fear employees resistance</td>
<td>71</td>
<td>3</td>
<td>3.4366</td>
<td>.92168</td>
<td>3.992</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>3</td>
<td>The Managers of the company prefer to keep the status quo in the company</td>
<td>71</td>
<td>3</td>
<td>3.6479</td>
<td>.84682</td>
<td>6.447</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>4</td>
<td>The employees’ of the company are educationally well qualified</td>
<td>71</td>
<td>3</td>
<td>4.0282</td>
<td>.81015</td>
<td>10.694</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>5</td>
<td>There is no absence of accountability in the company</td>
<td>71</td>
<td>3</td>
<td>3.6338</td>
<td>.94475</td>
<td>5.653</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>6</td>
<td>There is clear mandate between the various directorates and departments</td>
<td>71</td>
<td>3</td>
<td>3.6761</td>
<td>.93770</td>
<td>6.075</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>7</td>
<td>The company</td>
<td>71</td>
<td>3</td>
<td>3.4648</td>
<td>.92321</td>
<td>4.242</td>
<td>70</td>
<td>.000</td>
<td>High</td>
</tr>
</tbody>
</table>

134
<p>| | | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>does not accommodate nepotism</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>the leadership succeeded to link between the business strategy and individual goals</td>
<td>71</td>
<td>3</td>
<td>3.6056</td>
<td>.78338</td>
<td>6.514</td>
</tr>
<tr>
<td>9</td>
<td>The leadership in the company is more responsive to the employees demands</td>
<td>71</td>
<td>3</td>
<td>3.5352</td>
<td>.92321</td>
<td>4.885</td>
</tr>
<tr>
<td>10</td>
<td>The leadership in the company leads by example</td>
<td>71</td>
<td>3</td>
<td>3.6197</td>
<td>.85132</td>
<td>6.134</td>
</tr>
<tr>
<td>11</td>
<td>absenteeism among the employees is low</td>
<td>71</td>
<td>3</td>
<td>3.8451</td>
<td>.88879</td>
<td>8.012</td>
</tr>
<tr>
<td>12</td>
<td>The turnover rate in the company is low</td>
<td>71</td>
<td>3</td>
<td>3.6056</td>
<td>.85321</td>
<td>5.981</td>
</tr>
<tr>
<td>13</td>
<td>The leadership of the company believe that innovation comes from within the company</td>
<td>71</td>
<td>3</td>
<td>3.5634</td>
<td>.89014</td>
<td>5.333</td>
</tr>
<tr>
<td>14</td>
<td>There are regular meetings between the company management and their subordinates</td>
<td>71</td>
<td>3</td>
<td>3.5915</td>
<td>.83798</td>
<td>5.948</td>
</tr>
</tbody>
</table>
15  The leadership in the company takes the initiative to enhance the employees capabilities with what is new in the world  71  3  3.3803  .78132  4.101  70  .000  High statistical significance

16  The employees of the company are sharing ideas among themselves  71  3  3.8310  .81040  8.640  70  .000  High statistical significance

Source: data gathered from the field study 2018

From the above mentioned figures and results in table (6-19) regarding the fifth axis that explain the role of structure and leadership in coming with managerial innovation in the Nile Petroleum Company. The various views of the respondents can be summed up as follows:

The first statement provided by the researcher to the informants was tagged No (1) of table (6-19) which states; ‘to what extent the compensation system of the company is persuasive, and the responses of the interviewees are measured as follows:

The theoretical mean of the statement is calculated as (4.1408). That means it is greater than (3.4) as well as greater than (4.2). The t value evaluated at (11.090). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). For this reason, this statement is categorized in the agree degree.

From this data we can infer that the salary scale of the company is regarded a motivator and acceptable factor for the employees in the company. This motivational value can push the employees for hardworking and brings more novelties in the company.

Furthermore, these figures tell us the equity that the company follows in treating the staffs regarding the work compensation. Therefore, most of the
employees perceived the salary system more equalize and fair distributed and this certainly brings job satisfaction among the employees and this will have a positive implication in accomplishing managerial innovation in the company.

If this is the situation of the employees concerning job satisfaction that is caused by the fair and equal distribution of compensation, does the leadership in its way of leading to change fear from any type of challenges or resistances emanated from the employees? For answering to this question, the researcher provided to his interviewees the statement No (2) of table No (6-19) that say, “The company leadership wants to change but they fear employees resistance” the interviewees’ respondents processed as follows:

The theoretical mean of the statement is calculated as (3.4366). It is greater than (3.4) as well as less than (4.2). The t value evaluated at (3.992). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). For this reason, this statement is categorized in the agree degree.

From the above information we understand that the good relations between the employees and their leadership and the job satisfaction that emerged form good treatment of the company to its employees paved the way to build capabilities and congruities that facilitate the process of managerial innovation without any interruption.

In spite of this the managers in the company are not enthusiastic to take steps toward leading or coming with new ideas or practices that ensure innovation in the company. Since most of the managers are aged, they hesitate from coming up with new ideas or plan for change this may make them lose their positions and other fringe benefits and expose them to conflicts with their subordinates.

Moreover, the researcher affirms that the managers are hesitating and indecisive to lead change and bring managerial innovation he solicited his interviewees to commenting on the statement No (3) of table No (6-19) that says, “The managers of the company prefer to keep the status quo in the company” and their answers were as follows:
The theoretical mean of the statement is calculated as (3.6479). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (6.447). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). For this reason, this statement is categorized in the agree degree.

Form the above result we understand that the managers in the company are not willing to take initiative to achieve managerial innovation.

This may be due to their concerns that the company may not have the basic leverage such as budget, and other inputs that carry out the new novelties. Furthermore, may think that this change can take the company to unwanted direction and expose it to crisis or this new era of managerial innovation can be in the expenses of their future career in the company.

All these apprehensions could be the main factor behind keeping the current situation of the company as it is.

To understand the type of human elements in the company in terms of their educational qualification the researcher provided to his interviewees the statement labeled No (4) of table (6-19) which says, “The employees’ of the company are educationally well qualified” the answers of the respondents are positive and measured as follows:
The theoretical mean of the statement is calculated as (4.0282). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (10.694). It is greater than the tabular value that is (1.97), and the significance rate of the statement is (0.00), which is less than p (0.05). For this reason, this statement is categorized in the agree degree.

From this figure, we can learn that the company is endowed with well-qualified employees. If this well educated people, not trained, oriented, directed and then equipped with the necessary gadgets they would not be agents of innovation.

If the other way round happened that means if not inducting, directing and not equipping with tools of change then they could be a burden to the company.
Therefore, when we compare between the answers in statement (4) and (5), we find that there are a number of educated employees deployed in the company; despite the fact that the managers are not confident enough to use these capacities and take initiative to bring change in the company.

To investigate whether managers or any person who hold a leading position are accountable before the corporate governance or not, the researcher posited the statement labeled No (5) of table (6-19) which states, “There is no absence of accountability in the company” and the answers of the respondents are processed as follows:

The theoretical mean of the statement is calculated as (3.6338). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (5.653). It is greater than the tabular value that is (1.97). The significant rate of the statement is (.000), which is less than p (0.05). For this reason, this statement is categorized in the agree degree.

From these figures, we learned that there is an accountability system in the company. According to the company structure, all subordinates are accountable to their bosses and the bosses accountable to the high corporate governance body of the company and the corporate governance abide by the law of the company. This state of legality or the culture of conformity to law is a fertile ground to flourishing managerial innovation in the company.

To investigate whether the company organs have a clear mandate or not, the researcher offered to his interviewees this type of statement that is numbered (6) in table (6-19) which says, “There is a clear mandate between the various directorates and departments” and the processed result comes as follows:

The theoretical mean of the statement is calculated as (3.6761). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (6.075). It is greater than the tabular value that is (1.97), and the significance rate of the statement is (0.00), which is less than p (0.05). For this reason, this statement categorized in the agree degree.

This result indicates to us that the company has a clear mandate between its various departments, directorates, and units. This well-ordered authorization
could produce clarity in authority, responsibility, accountability, and delegation and these give a way in doing things confidently without conflict and confusion between the members of the company.

This stable and smooth working environment is suitable for experiment and learning which is appropriate for having managerial innovation.

To learn whether the company’s managements are free of negative sentiments such as nepotism, and favoritism, the researcher forwarded the statement, which labeled No (7) in table (6-19) that say, “The Company does not accommodate nepotism” to his respondents, and received answers were calculated statistically as follows:

Theoretical mean of the statement is calculated as (3.4648). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (4.242). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). For this reason, this statement is categorized in the agree degree.

Form the statistics we can understand that the company leadership and the systems of recruitment, staffing, deploying and selection of company give no way to managers or any department to commit such illegal acts. This important culture of being free from bad governance could be a supporting factor for having managerial innovation in the company.

Therefore, we deduced that the recruitment procedures depend on merit, qualification, and refuse or decline accommodating negative habits such as nepotism and favoritism; these will have a significant role in facilitating and appreciating managerial innovation in the company.

To know how the company reconciles between the company interest and individual employee goals, the researcher forwarded to his respondents the statement that is labeled No (8) in table (6-19) which say, “The leadership succeeded to link between the business strategy and individual goals” the results read as follows:
The theoretical mean of the statement is calculated as (3.6056). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (6.514). It
is greater than the tabular value that is (1.97). The significance rate of the statement is (.000), which is less than p (0.05). For these ground, this statement is categorized in the agree degree.

From the above result, the researcher understands that the leadership has the capacity to accord between the company objectives that prioritize the company’s benefits and the employees interest that give priority to the personal objectives such as harvesting lucrative salary in addition to fringe benefits and achieving high position in the echelon of the company.

It seems that the management in the company is aware of the problems which emerge due to the divergence interests in the company; and tried to balance between people focus, and that of production centered management system.

This compatibility between both interests, without tilting into one against the other will contribute in harmonizing the various efforts that aim at managerial innovation.

To investigate to what extent the company leadership complies with the demands of the employees in the company, the researcher presented the statement that labeled No (9) in table (6-19) which says, “The leadership in the company is more responsive to the employee’s demands” and the result calculated as follows:
Theoretical mean of the statement is calculated as (3.5352). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (4.885). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). For these ground, this statement is categorized in the agree degree.

From this information, we deduced that in the company leaders are so responsive to the demands of their employees. This responsiveness could be at formal level for instance when the employees ask for materials for executing their jobs or call for a meeting or initiating proposals …etc. or the state of responsiveness may be due to informal concerns like calling for organizing a picnic/festival, hearing grievance…etc.
This readiness to hear and answer the calls and demands of the employees either formally or informally is a clear indication to the coexistence and tranquility that is available between the employees and their leaderships. This serenity could be a supportive element in bringing managerial innovation in the company.

To deepening more the organic relation between the employees and their leadership, the researcher tried to put the statement that is labeled No (10) in table (6-19) which says, “The leadership in the company lead by example” the answer to this proposition measured as follows: The theoretical mean of the statement is calculated as (3.6197). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (6.134). It is greater than the tabular value that is (1.97), and the significance rate of the statement is (0.00), which is less than p (0.05). For these ground, this statement is categorized in the agree degree.

As it is clear that the result is situated in agree degree means that the leadership of the company is part of the company’s community members. This method of leadership assured its qualification in solving problems amicably hence win the mind and heart of the employees.

This culture is contrary to that of the armchair in which the leadership controls the employees through external controlling system characterized by punishments rather than rewards.

Having this type of leadership could play a crucial role in boosting managerial innovation in the company.

Another area of interest for the researcher was investigating the readiness of the employees in doing their jobs effectively and efficiently rather than submitting themselves to any type of sentiments.

To study this, the researcher forwarded the statement that tagged No (11) in table (6-19) which says, “Absenteeism among the employees is low” and the replay was as follows: The theoretical mean of the statement is calculated as (3.8451). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (8.012). It
is greater than the tabular value that is (1.97). The significance rate of the statement is (.000), which is less than p (0.05). For these ground, this statement is categorized in the agree degree.

From the above information, we learn that there is a low rate of absenteeism in the company. This indicates that the employees in the company are so satisfied with workplace conditions therefore; we find them stick to the rules and policies of the company hence this habit is one of the pushing factors that lead to managerial innovation.

Furthermore, the researcher in his endeavors to know the stability of the employees in the company he provides a statement that examines the rate of turnover among the employees of the company through putting forward the statement that labeled No (12) in table (6-19) which says, “The turnover rate in the company is low”. However, the answers of the respondents are measured as follows:
The theoretical mean of the statement is calculated as (3.6056). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (5.981) It is greater than the tabular value that is (1.97), and the significance rate of the statement is (0.00), which is less than p (0.05). For so ground, this statement is categorized in the agree degree.

From the above information, we conclude that the turnover rate among the employees of the company is low. This point to the fact that the internal condition of the company regarding the Human Resources is stable, that why the company does not face unjustified firing, resigns based on miscalculations and misunderstanding. Furthermore, the company rule, policies, methods are made the human factor as its main concern and departure point toward any progress that leads to change.

The researcher wanted to know the leadership orientation and views concerning their belief on whether the source of innovation comes from internal resources or somewhere outside it. For this reason, the researcher provided to his respondents the statement, which labeled No (13) that say, “The leadership of the company believes that innovation comes from within the company” in table (6-19) hence, the result was processed as follows:
The theoretical mean of the statement is calculated as (3.5634). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (5.333) it is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). For so ground, this statement is categorized in the agree degree.

Form the above analysis we deduced that the company’s leadership believes that innovation in general and managerial innovation in particular should come from within the company that is why the company exerts huge endeavor to make the company the center from which managerial innovation could be sparking.

This does not mean the company’s leadership has a negative attitude toward the externally flourished innovation. They strongly believe that through the processes of diffusing, sharing and lending can make managerial innovation tangible fact but not at the expenses of the internal initiatives that are led by pioneers form the company itself.

To assess whether the leadership motivate their employees through learning their views and concerns or not, therefore, the researcher solicited his interviewees by providing the statements labeled No (14) and No (16) in table (6-19), which says, “There are regular meetings between the company management and their subordinates and share ideas from each other”. Their answers in both statements are processed as follows:

The theoretical mean of the statements is calculated as (3.5915) and (3.8310). That means they are greater than (3.4) and less than (4.2). The t values of both statements evaluated at (5.948) and (8.640). They are greater than the tabular value that is (1.97). The significance rates of both statements are (.000) which are less than p (0.05). For this ground, these statements are categorized in the agree degree.

From the above illustrative figures, we reach into the reality that there is a scheduled meeting between the employees of the company and their leaders. This implies that the employees in the company regarded as an asset for the company in solving its problems and embolden its success. Thereby, they
have rooms to utilize their potentials through the process of thesis and antithesis and come with managerial innovation (synthesis).

Furthermore, the researcher wants to know whether the company has an intention to equip its employees with the update information and technology or not. To understand that the researcher provided to his informants the statement, which is tagged No (15) in table (6-19) that say, “The leadership in the company take the initiative; to enhance the capabilities of its employees with what is new in the world?” hence, the answers of the interviewees calculated as follows:
The theoretical mean of the statement is calculated as (3.3803). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (4.101). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00) which is less than p (0.05). For so ground, this statement categorizes in the agree degree.

From these figures, we can deduce that the leadership of the company has the determination and willingness to catch on their employees with all globally invented ideas and technology so as to be pioneers in everything rather than followers.

These help them to take initiative and thereby innovative in all aspects of the company.

**Table No (5-23)**

**Demonstrates T test for a single community to identify the distinctive characteristics of the six-axis of innovation**

<table>
<thead>
<tr>
<th>SN</th>
<th>Dimension</th>
<th>Sample size</th>
<th>Theoretical mean</th>
<th>Arithmetic mean</th>
<th>Standard Deviation</th>
<th>T value</th>
<th>Degree of freedom</th>
<th>P value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The managers of the company are understanding the importance of innovation</td>
<td>71</td>
<td>3</td>
<td>3.7042</td>
<td>.93189</td>
<td>6.368</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>2</td>
<td>The managers usually come with</td>
<td>71</td>
<td>3</td>
<td>3.6901</td>
<td>.78543</td>
<td>7.404</td>
<td>70</td>
<td>.000</td>
<td>High statistical</td>
</tr>
<tr>
<td></td>
<td>new ideas</td>
<td></td>
<td></td>
<td></td>
<td>significance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>--------------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---------------</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>The managers of the company do not stick to the rules</td>
<td></td>
<td>3</td>
<td>3.4507</td>
<td>.75193</td>
<td>5.051</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>4</td>
<td>The managers of the company are adopting participative method of working</td>
<td></td>
<td>3</td>
<td>3.5775</td>
<td>.78671</td>
<td>6.185</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>5</td>
<td>The managers of the company are innovative</td>
<td></td>
<td>3</td>
<td>3.5211</td>
<td>.96893</td>
<td>4.532</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>6</td>
<td>Promoting technological advancement in the company has a positive impact in the company’s activities</td>
<td></td>
<td>3</td>
<td>3.7465</td>
<td>.84038</td>
<td>7.485</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>7</td>
<td>The company has policies that encourage innovation</td>
<td></td>
<td>3</td>
<td>3.6056</td>
<td>.86979</td>
<td>5.867</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>8</td>
<td>The employees feel that they are involved to take initiative in making innovation</td>
<td></td>
<td>3</td>
<td>3.7606</td>
<td>.78312</td>
<td>8.183</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>9</td>
<td>There is group innovation in the company</td>
<td></td>
<td>3</td>
<td>3.6761</td>
<td>.92234</td>
<td>6.176</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
<tr>
<td>10</td>
<td>The leadership of the company encourage innovation</td>
<td></td>
<td>3</td>
<td>3.6620</td>
<td>.87739</td>
<td>6.357</td>
<td>70</td>
<td>.000</td>
<td>High statistical significance</td>
</tr>
</tbody>
</table>

Source: data gathered from the field study 2018
Looking at the above table, it is clear to us that:

The theoretical mean of the statement No (1) in table (6-18) that say, “The managers of the company understand the importance of innovation” calculated as (3.7042). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (6.368). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). For these ground, this statement is categorized in the agree degree.

From these figures, we can understand that the individuals who are leading the company daily businesses comprehend the importance of innovation in the life of the company. Starting from this fact, the managers are so vigilant to use any opportunity that could affect the company managerial innovation schemes positively. This state of mind regards motivator factor in the world of innovation. Therefore, the Nile Petroleum Company is promised with new novelties that could strengthen its competitiveness locally as well as globally.

Moreover, the researcher to know whether the managers go beyond recognizing the importance of managerial innovation toward applications by forwarding the statement No (2) and (5) in table (6-21), which says, “The managers usually come with new ideas and they are innovative” thus, the result of the answers of the interviewees are processed and presented as follows:

The theoretical mean of the statement No (2) and (5) in table (6-21) is calculated as (3.6901) and (3.5211). That means they are greater than (3.4) and less than (4.2). The t value of both statements evaluated at (7.404) and (4.532). They are greater than the tabular value that is (1.97). The significance rates of the both statements are (0.00), which is less than p (0.05). Therefore, both statements are categorized in the agree degree.

Form the above information the researcher recognized that the managers in the company do not only understand the importance of managerial innovation but they also share knowledge with and transfer to their employees to explode the potentials of the employees for the benefit of the company.
The above data tells us that the leadership of the company is characterized with capabilities of initiating ideas, encourage employees to exercise their reserved capacities and take risks. Furthermore, the managers in the company distinct with coaching and mentoring employees in their way to realize innovation, all these techniques contribute to the result of having managerial innovation in the company.

To investigate whether the managers are flexible or not, the researcher posited to his interviewees the statement that labeled No (3) in the table (6-21) that say, “The managers of the company do not stick to the rules” and the responses of the respondents processed as follows:

The theoretical mean of the statement calculated as (3.4507). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (5.051). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). Therefore, this statement categorized in the agree degree.

From the above results we reach the conclusion that the managers in the company are not hostage to the rigidity of the rules and regulations and this habit has play an important role in fostering managerial innovation in the company. In addition to that, the researcher noticed that evaluating and considering the given situation at the workplace and accommodating the employee’s views are the main characteristics of the mangers in the company.

The researcher to learn whether the managers allow their subordinates to participate in the daily life of the company or not, and the employees’ views regarding this engagement concerns, forwarded the statements that labeled No (4) and No (8) in table (6-21), which say, “The mangers of the company are adopting participative method of working” and “The employees feel that they are involved to take initiative in making innovation” the responses of the interviewees calculated as follows:

The theoretical mean of both statements calculated as (3.5775) and (3.7606). That means they are greater than (3.4) and less than (4.2). The t value of the both statements evaluated at (6.185) and (8.183). They are greater than the
The above figures illustrate to us that the managers let their employees to participate and take initiatives in/regarding the different activities of the company. The managers in the company do not work in an isolated working environment; that confined to them. They believe in teamwork, sharing experiences, and overall involvement of the employees in all aspects of the company programs.

The involvement of employees in such a way leads to empowering and equipping them with the necessary skills to build self-confidence and help them to partake in managerial innovation.

As we mentioned before, innovation does not come only from the internal environment of the company, but the external setting too has a role in diffusing innovation in terms of ideas, processes, production and technology. To know whether the company is adopting new technology from the outside and exploit it effectively or not, the researcher puts forward to his interviewees the statement that tagged No (6) in table (6-21), which says, “Promoting technological advancement in the company has a positive impact in the company’s activities”. The answers of the respondents are measured as follows:

The theoretical mean of the statement calculated as (3.7465). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (7.485). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). Therefore, this statement is categorized in the agree degree.

The above information tells us that adopting and using the externally invented technology is more important and it regards as a catalyst for achieving managerial innovation in the company. According their views utilizing externally produced technologies could be the springboard that allows managers and their staff leaping strongly toward managerial innovation. Furthermore, denying or having phobia from any externally
produced technology could lag the company behind thereby stop existing and disappear forever.

To understand the company level of having policies that support managerial innovation endeavors in the company, the researcher puts the statement that labeled No (7) in table (6-21), which says, “The Company has policies that encourage innovation” and the views of the repliers were calculated as follows:

The theoretical mean of the statement calculated as (3.6056). That means it is greater than (3.4) and less than (4.2). The t value evaluated at (5.867). It is greater than the tabular value that is (1.97). The significance rate of the statement is (0.00), which is less than p (0.05). Therefore, this statement is categorized in the agree degree.

Section V: Hypothesis Testing

The first and main hypothesis

- “Capacity-building applications are implemented to enhance managerial innovation in the Greater Nile Petroleum Company”

The first sub-hypothesis

- “There is a statistical significance between the implementation of capacity building applications and managerial innovation in the Greater Nile Petroleum Company”

The second sub-hypothesis

- “There is a statistical correlation between training and managerial innovation in the Greater Nile Petroleum Company”

The researcher used T test to examine the suitability of the hypotheses in connection with procedures that lead to the findings. Henceforth, the researcher would display each tested hypothesis in association with the six axes/variables in the following consecutive tables:
Table (5-24)
Demonstrates T test for a single community to identify the distinctive characteristics of an institution

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sample size</th>
<th>Theoretical mean</th>
<th>Arithmetic mean</th>
<th>Standard deviation</th>
<th>T value</th>
<th>Degree of freedom</th>
<th>P value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Institutionalization</td>
<td>71</td>
<td>57</td>
<td>70.7042</td>
<td>11.79030</td>
<td>9.794</td>
<td>70</td>
<td>0.00</td>
<td>Institutionalism characterized with positive</td>
</tr>
</tbody>
</table>

Source: data gathered from the field study 2018

According to the above result, the first sub- Hypothesis (There is a statistical significance between the implementation of capacity building applications and managerial innovation in the Greater Nile Petroleum Company) characterized with positive that means the significance level of P weighed up to (0.00), which is less than the tabular value of P (0.05). Moreover, the value of T is evaluated at (9.794). It is greater than the tabular value of t, which is (1.96).

Therefore, from the above data we conform that the acceptance of the first and main hypothesis (There is a statistical significance between the implementation of capacity building applications and managerial innovation in the Greater Nile Petroleum Company).

Table (5-25)
Demonstrates T test for a single community to identify the distinctive characteristics of the second axis of autonomy, empowerment and communication

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sample size</th>
<th>Theoretical mean</th>
<th>Arithmetic mean</th>
<th>Standard deviation</th>
<th>T value</th>
<th>Degree of freedom</th>
<th>P value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autonomy, empowerment</td>
<td>71</td>
<td>36</td>
<td>43.9718</td>
<td>6.74637</td>
<td>9.957</td>
<td>70</td>
<td>0.00</td>
<td>Autonomous, empowerment</td>
</tr>
</tbody>
</table>
The significance level of P regarding the first sub-hypothesis “there is a Statistical significance between the implementation of capacity building applications and managerial innovation in the Greater Nile Petroleum Company” weighed up (0.00), which is less than the tabular value of P (0.05). The value of T respecting the same hypothesis evaluated at (9.957). It is greater than the value of the tabular value of T, which is (1.96).

Therefore, from the above table we assure the acceptance of the first sub-hypothesis (There is a statistical significance between the implementation of capacity building applications and managerial innovation in the Greater Nile Petroleum Company).

Thereby, the autonomy, empowerment and communication capabilities representing capacity building are characterized with positive, which is deemed to be supportive in bringing managerial innovation in the company.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sample size</th>
<th>Theoretical mean</th>
<th>Arithmetic mean</th>
<th>Standard deviation</th>
<th>T value</th>
<th>Degree of freedom</th>
<th>P value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training</td>
<td>71</td>
<td>42</td>
<td>52.7887</td>
<td>8.22004</td>
<td>11.059</td>
<td>70</td>
<td>0.00</td>
<td>Training characterized with positive</td>
</tr>
</tbody>
</table>

Source: data gathered from the field study 2018

From the above-mentioned figures, we infer that the significance level of the p value is calculated as (0.00), which is less than the rate of the tabular value of P (0.05). The value of T evaluated at (9.794) that is greater than the significance of the tabular value of T, which estimated by (1.96).
Hence, we conclude that the second sub-hypothesis (*there is statistical correlation between training and managerial innovation in the Greater Nile Petroleum Company*) is accepted as applicable hypothesis.

Thus, the training programs that represent the “capacity building” characterized with positive. It is believed to be the catalyst stimuli in facilitating managerial innovation in the company.

**Table (5-27)**

*Demonstrates T test for a single community to identify the distinctive characteristics of the Fourth Axis of Unique Capabilities*

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sample size</th>
<th>Theoretical mean</th>
<th>Arithmetic mean</th>
<th>Standard deviation</th>
<th>T value</th>
<th>Degree of freedom</th>
<th>P value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unique capabilities</td>
<td>71</td>
<td>18</td>
<td>23.4789</td>
<td>3.32892</td>
<td>13.868</td>
<td>70</td>
<td>0.00</td>
<td>Unique capabilities characterized with positive</td>
</tr>
</tbody>
</table>

*Source: data gathered from the field study 2018*

Based on the above statistics in table (6-18) the significance level of the p value is reached (0.00). It is less than the rate of the tabular value of P (0.05). The value of T arrived at (9.794). It is greater than the significance of the tabular value of T (1.96).

Hence, we can deduced that the first sub-hypothesis (*there is statistical significance between the implementation of capacity building applications and managerial innovation in the Greater Nile Petroleum Company*) indicates to us that the “capacity building applications” and “managerial innovation” are statistically significant correlation between them.
However, the unique capabilities axis is characterized with positive, it is confident enough and a clear signal that the application of capacity building packages could fetch managerial innovation in the company.

Table No. (5-28)

Demonstrates T test for a single community to identify the distinctive characteristics of structure and leadership

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sample size</th>
<th>Theoretical mean</th>
<th>Arithmetic mean</th>
<th>Standard deviation</th>
<th>T value</th>
<th>Degree of freedom</th>
<th>P value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Structure and leadership</td>
<td>71</td>
<td>48</td>
<td>58.6056</td>
<td>7.56775</td>
<td>11.809</td>
<td>70</td>
<td>0.00</td>
<td>Structure and leadership characterized with positive</td>
</tr>
</tbody>
</table>

Source: data gathered from the field study 2018

Based on the above statistics in table (6-20) the significance level of the p value computed (0.00). It is less than the rate of the tabular value of P (0.05). The value of T evaluated at (11.809). It is greater than the tabular value of T (1.96). Hence, we can determine the acceptance of the first sub-hypothesis (there is a statistical significance between the implementation and of capacity building applications and managerial innovation in Greater Nile Petroleum Company).

The structure and leadership, which represent the capacity building, is characterized with positive, which implies that they are sufficient to bring managerial innovation in the company.
Table No. (5-29)
Demonstrates T test for a single community to identify the distinctive characteristics of innovation

<table>
<thead>
<tr>
<th>Variables</th>
<th>Sample size</th>
<th>Theoretical mean</th>
<th>Arithmetic mean</th>
<th>Standard deviation</th>
<th>T value</th>
<th>Degree of freedom</th>
<th>P value</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Innovation</td>
<td>71</td>
<td>30</td>
<td>36.3944</td>
<td>5.88091</td>
<td>9.162</td>
<td>70</td>
<td>0.00</td>
<td>Innovation characterized with positive</td>
</tr>
</tbody>
</table>

Source: data gathered from the field study 2018

From the above statistics in table (6-22), the significance level of the p value computed (0.00). It is less than the rate of the tabular value of P (0.05). The value of T is evaluated at (9.162). It is greater than the tabular value of T (1.96).

This reflected to us that the first sub-hypothesis (there is a statistical significance between implementation of capacity building applications and managerial innovation in the Greater Nile Petroleum Company) is empirically accepted.

So, parallel we can say that innovation, which represents capacity building is characterized with positive, thereby it is adequate in bringing managerial innovation in the company.

In nutshell, from the tables 6-11, 6-12 since we have accepted the sub-hypotheses 1 and 2, this implies the acceptance of the main hypothesis “Capacity-building applications are implemented to enhance managerial innovation in the Greater Nile Petroleum Company”, which includes the two accepted hypotheses.
Conclusion: Results and Recommendations

After thorough discussion and analysis of the secondary and primary data, and personal observation, the researcher arrived at the following Results and Recommendations.

First: The Results:-

The research ends with a number of results. These are as follows:

The Specific Results:

1. There are no satisfactory motivational incentives in the company.
2. The level of awareness among the employees regarding the internal environment of the company is high.
3. The level of participation of the employees in the company’s activities is satisfactory.
4. There is a high degree of loyalty to the company programs
5. The work environment of the company is attractive to and conducive for the employees to achieve managerial innovation
6. The informal relationships between the employees themselves on one side and with their leadership on the other are marked as positive.

The General Results:

1. Institutionalization is helpful to the process of innovation that takes place in an organization.
2. The autonomy, empowerment and communication are supportive elements to the progression of managerial innovation in an organization.
3. Training programs have positive impact; hence, they serve as a source for managerial innovation in an organization.
4. Obtaining unique capabilities is crucial in having managerial innovation in an organization.

5. Organizational structure and leadership have a fundamental function in generating managerial innovation in an organization.

Second: The recommendations

1. There must be a policy, which clearly addresses the issue of innovation; to keep the momentum of the innovative acts in the company, through introducing provisions that urge the leadership to fulfill the main necessities and obliges the employees to contribute their best to achieving innovation.

2. There must be a committee or a council that consists of knowledgeable and well experienced employees to supervise, encourage and evaluate the performance of the innovative employees and thereby identify and recommend those who have done well by giving recognition to their innovation.

3. Arrange an event (be it festival or exhibition) for the innovative people to display their findings/innovation. This helps them to get more feedback on how they can upgrade/excel what they have invented. Moreover, such events help the innovative people to get market and commercialize their products or services.

4. Establishing fund and soliciting budget is another preconditions for having effective capacity building programs and create enabling environment to achieve innovation in a company.

5. There must be well-tailored curriculum for training that takes into consideration the internal challenges of the company and the possibility of benefiting from the various opportunities in the external environment.

6. Regular performance appraisals are very crucial to monitor the employees and their jobs simultaneously. Either these regular inspections could enable the leadership to identify the problems
caused by the employees themselves or that take place at the work environment. In both cases, the appraisal report could inspire the leadership to take instant solutions or correction is accordingly.

7. Organize training courses particularly off-the-job training either in collaboration with national institutions like universities and other well-established and specialized training centers or by working together with institutions outside the country to benefit from what is produced globally.

8. Regular but continuous meetings of the company’s communities at their work place are so important in generating ideas (through thesis, synthesis and anti-thesis processes), diagnosing problems (through sharing ideas, evaluating situations) and, these could consider an incubators or information bank particularly, if documented well and adopted sound information management systems. Therefore, the company should promote these activities until they become a culture and a way of life that return to the company with achievement especially in the area of managerial innovation.

9. Since the company is operating in exacerbated and ever changing environment, it needs to undertake organizational reengineering to cope with the changes that could take place due to the economic liberalization, which are adopted by the country recently. In addition to that, the market shares of oil products are about to shrink because of expanding in electricity particularly after the construction of the renaissance/millennium dam of Ethiopia and the flourishing of solar energy in the country.

10. Establishing grievance committees for curbing, preventing or solving any real or potential conflicts that could emerge because of misunderstanding, confusion, overlapping of duties or other resources based conflicts.

11. Instituting provident fund and other fringe benefit schemes for the employees, on the way to have job satisfaction and milking their
efforts in adding values that guarantee the survival and the competitiveness of the company, also, such provident fund could minimize the occurrence of employees’ turnover and further resources attrition in the company.

12. Establishing a full blown Directorate for Human Resources Management to do its due activities and augment the research capacity of the firm to address the current situation of the firm and forecast the future path towards organizational Excellency.

Suggestions for Future Studies

After all these works of reviewing previous studies, searching books, visiting various cyber sites and field studies on finding facts and truth about the topic “the impact of capacity building on managerial innovation” the researcher urges other scholars and researchers to do further research in the following areas and dimensions to bridge the gaps that were not covered in the area of this research such as:

1. The various motivational factors that enhance managerial innovation
2. The role of organizational policies in achieving managerial innovation
3. The various barriers (such as the lack of budget) that hinder managerial innovation
4. Does managerial innovation need incubators like what is used in pure and applied science?
5. Innovative personality and the role of the organization in boosting such characteristics
6. The national curriculum and its impact in nurturing innovative culture
7. The role of leadership in fostering the engagement of indigenous and exogenous efforts that lead to managerial innovation
8. How actions of key individuals inside or outside the organization are playing key factors in influencing the innovation process in the organization?
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## Appendix No (1)

### ARBITRATORS

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<th>Name</th>
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<tr>
<td>1</td>
<td>Abdulhadi Abdulsamad</td>
<td>Professor</td>
<td>Business Administration</td>
<td>International University of Africa</td>
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<tr>
<td>2</td>
<td>AbdulMuhsun Mohammed Ahmed</td>
<td>Associate professor</td>
<td>Economic and political Sciences</td>
<td>International University of Africa</td>
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<tr>
<td>3</td>
<td>Faisal Mohammed Ali</td>
<td>Associate professor</td>
<td>Business Administration</td>
<td>International University of Africa</td>
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<tr>
<td>4</td>
<td>Ibrahim Aloshary</td>
<td>Associate professor</td>
<td>Qualitative methods</td>
<td>International University of Africa</td>
</tr>
</tbody>
</table>

Source: data gathered from the field study 2018
Dear Sir/Madam

Salute

This questionnaire has been developed for the purpose of collecting information that help the researcher to fulfill the requirement of his PhD thesis titled “the Impact of Capacity-building on Managerial Innovation” the case study Nile Petroleum Company from the period 2005-2015.

The researcher applauds your commitment and chopping part of your precious time to answer this questionnaire, and he iterates to you that this data and information will keep secret and use it only for the research purpose.

Thank you for your cooperation

Mohammedadem Mohammed

Note

- Put the sign (√) under the information that suitable to you
- Put the sign (√) in front of the statement and under the degree that match with your opinion
**Personal Information:**

- **Age**

<table>
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<th>SN</th>
<th>Less than 30</th>
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<th>50 and less than 60</th>
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- **Educational Qualification**

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<td></td>
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- **Gender**

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- **Nationality**

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- **Position**

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<th>Dep. head</th>
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<th>G. manager</th>
<th>advisor</th>
<th>Others</th>
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- **Work Experience**

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<th>Less than 5 years</th>
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<th>11-15 year</th>
<th>16-20 year</th>
<th>21-25 year</th>
<th>More than 25</th>
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</table>
### 1. The Axis of Institution

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<th>Neutral</th>
<th>Disagree</th>
<th>Strongly disagree</th>
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<tbody>
<tr>
<td>1</td>
<td>The employees are familiar with company’s vision</td>
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<tr>
<td>2</td>
<td>The company has a clear job description</td>
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<td>3</td>
<td>The company has Human Resources (HR) policies</td>
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<td>4</td>
<td>In the company there is an active and effective research and development (R&amp;D) department</td>
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<td>5</td>
<td>In the company there is a department for managing Human Resources</td>
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<td>6</td>
<td>The HRM department runs its activities effectively</td>
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<td>7</td>
<td>Staffs are deploying in the company along the notion of “the right person at the right place”</td>
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<td>8</td>
<td>The policies and procedures in the company are not bottleneck for any attempt might be taken by the employees toward innovation</td>
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<td>9</td>
<td>The company has HR policies that motivate employees</td>
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<td>10</td>
<td>Regularly the company implement performance appraisal among its employees</td>
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<tr>
<td>11</td>
<td>The company has a clear</td>
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</tbody>
</table>
There is a platform that allows employees to participate in the decision making processes of the company.

The company has fair motivational programs.

The company has a clear plan toward empowering its employees.

The employee’s contribution is respected from the company management.

There is good application for health program in the company.

<table>
<thead>
<tr>
<th>SN</th>
<th>Statement</th>
<th>Strongly agree</th>
<th>Agree</th>
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<tbody>
<tr>
<td>17</td>
<td>The company motivates its employees through collective motivational system</td>
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<tr>
<td>18</td>
<td>The company motivates its employees through individual motivational system</td>
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<td>19</td>
<td>Selection and recruitment in the company are taking place smoothly</td>
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2. The axis of autonomy, delegation and communication

<table>
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<th>Disagree</th>
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<td>Managers in the company are delegating some of their tasks</td>
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<td>2</td>
<td>Communication flows smoothly in the</td>
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<td>1</td>
<td>Managers in the company are delegating some of their tasks</td>
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<td>2</td>
<td>Communication flows smoothly in the</td>
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172
The managers in the company are more interesting in preparing future leadership for the company

The company provides social communication for its employees

There are regular meeting in the various management levels in the company

The management in the company do their best in involving the employees of the company in the processes of decision making

The bureaucratic system in the company does not pose barriers to the innovation processes

Decision making in the company is more centralized

There is enough space for employees autonomy in the company

There is harmony between the employees of the company and their managers

Staff rooms/shared spaces are prevailing everywhere in the company

There is a synergy among the employees & the managers in the company

3. The axis of training, empowerment and teamwork

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<th>Statement</th>
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<th>Neutral</th>
<th>Disagree</th>
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<tr>
<td>1</td>
<td>The employees in the company have the willing to achieve progress</td>
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<td>2</td>
<td>The employee in the company have the ability to solve problems</td>
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<td>3</td>
<td>The leadership in the company see more interest to their jobs</td>
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<td>4</td>
<td>The company has an interest in organizational improvement</td>
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<td>5</td>
<td>The company encourages its employees to</td>
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pursue their formal education

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<tbody>
<tr>
<td>6</td>
<td>The company provides off the job training for its employees</td>
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<td>7</td>
<td>The company provides tailored training (at the level of interests and aspirations)</td>
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<td>8</td>
<td>The company always succeed in choosing the appropriate trainees</td>
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<tr>
<td>9</td>
<td>The training programs of the company respond to the current needs of the company</td>
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<tr>
<td>10</td>
<td>The training materials address the company future perspectives</td>
<td></td>
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<td>11</td>
<td>The company provides suitable ground for its trainees to apply what they learned into the real life</td>
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<tr>
<td>12</td>
<td>The company has a plan that enable it to follow the trained employees in their workplace</td>
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<tr>
<td>13</td>
<td>The management of the company use the apprenticeship in transferring skills</td>
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<tr>
<td>14</td>
<td>The employees of the company have an interest in training</td>
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4. The axis of unique capabilities

<table>
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<tr>
<th>SN</th>
<th>Statement</th>
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<tbody>
<tr>
<td>1</td>
<td>Employees of the company are characterized with self-initiative</td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>the employees of the company are committed to the company’s objectives</td>
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<tr>
<td>3</td>
<td>most of the employees have self-confidence</td>
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</table>
4. The employees of the company have the capacity of sensing problem early

5. The employees of the company have the ability of analyzing

6. The employees of the company have the ability of generating ideas that lead to the improvement of the work

5. The axis of structure, culture and leadership

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<td>The company’s scale of salaries is an attractive factor</td>
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<tr>
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<td>The company leadership wants to change but they fear employees resistance</td>
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<tr>
<td>3</td>
<td>The Managers of the company prefer to keep the status quo in the company</td>
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<td>4</td>
<td>The employees’ of the company are educationally well qualified</td>
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<tr>
<td>5</td>
<td>There is no absence of accountability in the company</td>
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<tr>
<td>6</td>
<td>There is clear mandate between the various directorates and departments</td>
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<tr>
<td>7</td>
<td>The company does not accommodate nepotism</td>
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<tr>
<td>8</td>
<td>The leadership succeeded to link between the business strategy and individual goals</td>
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<tr>
<td>9</td>
<td>The leadership in the company is more responsive to the employees demands</td>
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<tr>
<td>10</td>
<td>The leadership in the company leads by example</td>
<td></td>
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<tr>
<td>11</td>
<td>Absenteeism among the employees is low</td>
<td></td>
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<tr>
<td>12</td>
<td>The turnover rate in the company is low</td>
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<td>The leadership of the company believe that innovation comes from within the company</td>
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<td>There are a regular meetings between the company management and their subordinates</td>
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<td>The employees of the company are sharing ideas among themselves</td>
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6. The axis of innovation

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Appendix No (3)
جامعة إفريقيا العالمية
كلية الدراسات العليا
إستبانة

السيد/............................................................. حفظه الله

السلام عليكم ورحمة الله تعالى وبركاته،،، وبعد

تم إعداد هذه الاستبانة بغرض الحصول على معلومات تساعد الباحث في إكمال متطلبات رسالة
الدكتوراة، بعنوان: أثر بناء القدرات على الإبداع الإداري: دراسة حالة شركة النيل
للبترول من الفترة 2005 إلى 2015.

ويثمن الباحث اقتطاع جزء من وقتكم الغالي للإجابة على فقرات هذه الاستبانة، كما يؤكد على
سرية البيانات والمعلومات واستخدامها فقط ل أغراض البحث العلمية.

شكرًا حسن تعاونكم

محمد أمحمد محمد

ملحوظة
- ضع علامة (✓) في البيانات التي تنسابك
- ضع علامة (✗) أمام العبارة وتحت الدرجة حسب ما يناسب رأيك

....وواصل
## المعلومات الشخصية

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</table>
| 12    | يواصل.....
لا أوافق بشده
لا أوافق
محايد
وافق بشدة
وافق

الشركة ليا خطة واضحة نحو تمكين موظفيها

الشركة تشجع موظفيها من خلال نظام التحفيز الجماعي

الشركة تشجع موظفيها من خلال نظام التحفيز الفردي

الاختيار والتعيين في الشركة يتم بصورة مرنة وسهولة

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لا أوافق
محايد
وافق بشدة
وافق

الشركة تدقيقاً، الاتصال، التواصل
لا أوافق بشده
لا أوافق
محايد
وافق بشدة
وافق

المديرون في الشركة يفوضون بعض مهامهم

التواصل الإداري ينساب بصورة سلسة في الشركة

المدراء في الشركة لهم الرغبة في إعداد قيادات مستقبلية للشركة

توفر الشركة التواصل الاجتماعي لمنسوبيها

هناك إجتماعات منتظمة في المستويات الإدارية المختلفة للشركة

الإدارة تعمل ما في وسعها على إشراك موظفي الشركة في عمليات إتخاذ القرار

الشركة برامج تحفيزية عادلة

مساهمة الموظفين تجد التقدير والإحترام من قبل إدارة الشركة

يوجد تطبيق جيد لبرنامج الصحة بالشركة

الإدارة تعمل ما في وسعها على إشراك موظفي الشركة في عمليات إتخاذ القرار

المديرون في الشركة يفوضون بعض مهامهم

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النظام البرويقراطي في الشركة لا يشكل عائق أمام عمليات الإبداع  
1

يتتم إتخاذ القرارات في الشركة بصورة أكثر مركزية  
8

هناك مساحة كافية للإستقلالية للعاملين في الشركة  
9

هناك توافق بين الموظفين والمديرين بالشركة  
10

غرف الاجتماعات (المساحات المشتركة) متوفرة في كل مكان في الشركة  
11

الموظفون لديهم علاقة طيبة مع مدراءهم  
12

## ثالثًا: محور التدريب، التمكين وفرق عمل

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محايد
وافق
وافق بشدة

السيرة

تتيح الشركة للمتدربين الفرصة لتطبيق ما تدرّبوا عليه

الشركة لديها خطة لمتابعة المتدربين في مواقع عملهم

إدارة الشركة تستخدم نظام التلمذة في نقل الخبرات

موظفو الشركة لهم الرغبة في التدريب

رابعاً: محور المقدرات الخاصة

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محايد
وافق
وافق بشدة

السيرة

موظفو الشركة يمتازون بالمبادرات الذاتية

موظفو الشركة ملتزمون بأهداف الشركة

معظم الموظفين لهم ثقة بالنفس

موظفو الشركة لهم القدرة الإشراكية (لاكتشاف المبكر للمشاكل)

موظفو الشركة لهم القدرة التحليلية

موظفو الشركة لهم القدرة على توليد أفكار جديدة قادرة على تحسين العمل

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بواصلة...
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**خامساً:** محور الهيكل، الثقافة والقيادة
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<td>مديرية الشركة لا يتمسكون بنص وروح القوانين</td>
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<td>مديرية الشركة يتبون العمل بالمشاركة</td>
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<td>مدراء الشركة ابداعيون ومدعون في عملهم</td>
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<td>الرقم</td>
<td>الفقرة</td>
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<tr>
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<td>6</td>
<td>الاهتمام بالهندسة في الشركة</td>
</tr>
<tr>
<td>7</td>
<td>الشركات لها سياسات تشجع الإبداع</td>
</tr>
<tr>
<td>8</td>
<td>هناك إبداع جماعي في الشركة</td>
</tr>
<tr>
<td>9</td>
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