DOKUZ EYLÜL UNIVERSITY
GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES

A REVIEW STUDY ON QUALITY ASSURANCE AUDITORS

by
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İZMİR

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M.Sc EXAMINATION RESULT FORM

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A REVIEW STUDY ON QUALITY ASSURANCE AUDITORS

ABSTRACT

Today, companies require a global means to accurately capture and analyze product quality audit information real-time so that problems are quickly identified and acted upon to save time and money.

However, gaining a competitive edge by improving a product or service quality often involves, rebuilding a system.

Quality audit is the process of systematic examination of a quality system carried out by an internal or external quality auditor or an audit team. It is an important part of organization's quality management system and is a key element in the ISO quality system standard.

This can help determine if the organization complies with the defined quality system processes and can involve procedural or results-based assessment criteria.

The purpose of this thesis is to provide ideas into what the concept of audit quality means. The objective is to provide information regarding quality audit and its importance in continuous improvement of any quality system.

Keywords: Total quality management, quality assurance, audit quality, auditors, and role of audit.

KALİTE GÜVENCE DENETÇİLERİ ÜZERİNE BİR ÇALIŞMA

ÖZ

Günümüzde, şirketlerin doğruyu yakalaması ve gerçek zamanlı ürün kalitesi analizi için küresel bir araç gerekmektedir, böylece problemler hızlıca tespit edilebilmekte ve zaman ve paradan tasarrufa göre hareket edilebilmektedir.

Ancak, bir ürün ya da hizmet kalitesini geliştirerek bir rekabet avantajı kazanma sıklıkla bir sistemin yeniden inşa edilmesini içermektedir.

Kaliteli denetim bir iç ya da dış denetçi veya denetim grubu tarafından yürütülen bir kalite sisteminin sistematik olarak inceleme sürecidir. Bu bir kuruluşun kalite yönetim sisteminin önemli bir parçasıdır ve ISO kalite sistemi standartlarının bir unsurudur.

Bu organizasyonun tanımlı kalite sistemi sürecine uygun olup olmadığını belirlememize yardımcı olur ve sonuç tabanlı değerlendirme kriterlerini içerebilir.

Bu tezin amacı kalite kavrami hakkinda fikir saglamak ve ne anlama geldigini algilamaktir. Burada kalite denetimi ile ilgili bilgi vermek ve kalite sisteminde sürekli iyileştirmenin önemini anlatmaktır.

Anahtar kelimler: Toplam kalite yönetimi, kalite güvencesi, denetim kalitesi, denetçiler ve denetim rolü.

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CHAPTER ONE

INTRODUCTION

A quality assurance auditor is a person who is trained to monitor and control record usage in an agency. Education, engineering, health care, manufacturing, or other businesses that are required to keep detailed processes and procedures in order to comply with governmental standards are all areas that typically hire quality assurance auditors. They can be hired internally by the agency itself, or hired by an external agency in order to ensure that the bodies it governs are complying with governmental standards.

A quality assurance auditor typically will provide several general items during an audit, items that are specific to the business being audited.

Quality audit is a positive and constructive process used to assess, verify and validate the quality of activities.

A common element in modern definitions of quality is that an actual performance of a product is compared to a certain standard; the smaller the gap between the actual 'performance' and the 'standard', the higher the level of quality achieved.

In manufacturing, this current concept of quality is quite simple: a product has to meet a pre-establish requirements, with a given tolerance. If the actual output meets these requirements, then the required level of quality has been achieved; if not, the output is substandard and the quality level is not acceptable.

For services, however, this quality concept is not easily applicable. Services cannot be technically measured or counted. And, interestingly, the production and consumption of a service are linked. This has specific implications for the definition of service quality. First, what is the 'standard' to which the actual performance is compared? Over the last decade, extensive research has been done in this area. Through focus group interviews and surveys, Parasuraman et al. (1985) found that, in assessing quality, consumers compare their perceptions of the actual performance

with their expectations about what performance should be. The gap between perceived performance and these expectations determines the level of quality achieved by that service.

From the viewpoint of business administration, service quality is an achievement in customer service. It reflects at each service encounter. Customers form service expectations from past experiences, word of mouth and advertisements. In general, customers compare perceived service with expected service in which if the former falls short of the latter the customers are disappointed.

It has now become important for organizations to develop a quality strategy by adopting the principles of total quality management (TQM) and quality assurance (QA). Implementation of TQM further ensures that organisations change how they perform activities so as to eliminate inefficiency, improve customer satisfaction and achieve the best practice (Porter, 1996). Quality assurance (QA) is a set of procedures intended to ensure that product/service under development meets specified requirements.

This thesis consists of seven chapters. In chapter one, whole study is summarised shortly. In chapter two, general information on total quality management is given. In chapter three, quality assurance is examined. In chapter four, quality audits are discussed, in chapter five, application of internal auditors is given to find out the opinion of employees concerning internal auditor; In chapter six, discussion of the findings and in chapter seven, conclusions are presented.

CHAPTER TWO
TOTAL QUALITY MANAGEMENT (TQM)

2.1 Historical Evolution of TQM

In the early 1900's, Frederick Taylor, founder of the "Scientific Management" movement, promoted his "one best way" method as a set of scientific principles to measure the efficiency and productivity of any given task (1911, 1947). His approach had a strong impact on managerial practices in America during that time.

Taylor's basic principles require four tasks that can be described as follows:

- The development of standards
- The fitting of a worker to a specific task
- The provision of means to encourage each worker for the best utilization of his ability
- The organization controls the various phases of a project (Kanigel, 2005).

In the late 1980's, the quality improvement movement and its potential impact on organizational theory and practice, appear to have several parallels with Taylor's principles (Kronenberg & Loeffler, 1991). In this context, TQM is more than just a slogan or a program; indeed, its movement professes a fundamental change in values, theory, and practice of modern organizations. Dr. W. Edwards Deming, "the man who discovered quality" (Gabor, 1992) and his principles provided a focus on the customer and a potential impact on organizational theory and practice.

Total Quality Management has taken place in four stages. They can be categorized as follows:

1- Quality inspection

2- Quality control

3- Quality assurance

4- Total Quality Management

Quality has been evident in human activities for as long as we can remember. However the first stage on this development can be seen in the 1910's when the Ford Motor Company's 'T' model car rolled off the production line. The company started to employ teams of inspectors to compare or test the product with the project standards. With further industrial advancement came the second stage of TQM development and quality was controlled through supervised skills, written specifications, measurement and standardization.

The third stage of this development, i.e. quality assurance contains all the previous stages in order to provide sufficient confidence that a product or service will satisfy customers' needs. The fourth level, i.e. Total Quality Management involves the understanding and implementation of quality management principles and concepts in every aspect of business activities. Total Quality Management demands that the principles of quality management must be applied at every level, every stage and in every department of the organization.

2.2 Basic Definitions of TQM

Total quality management (TQM) means different things to different people. It describes ways to manage people and business processes to ensure complete customer satisfaction at every stage. We will attempt to define total quality management in terms of reported practice by numerous firms.

Total quality management started out as an approach to improve quality of products and services. It is the coordination of efforts directed at improving customer satisfaction, increasing employee participation, strengthening supplier partnerships, and facilitating an organizational atmosphere of continuous quality improvement.

Analysing the three words, we have:
Total: Made up of the whole,
Quality: Degree of excellence of a product or a service provides,
Management: Act, art, or manner of handling, controlling, directing, etc.

Therefore, TQM can be defined in a variety of ways. The shortest definition is probably meeting and striving to exceed the requirements of the customers.

Total quality management, on the other hand, is oriented around the process of achieving the outcomes. Because the process must be managed, one could argue that TQM is essentially the effective management of a process that produces high quality products or services according to exact customers specifications and expectations at the right time and at the right place.

We could call the process a quality process that is intended to produce a qualified product or service. The next questions then are, what is quality? What is qualified product or service? What is quality process? What is quality philosophy?

2.2.1 Definition of Quality

In order to understand total quality, we must first understand quality. Nowadays, the customers are who define what quality is for them based on their needs and preferences. So quality is the perception that the customer has of the product or service based upon that person's evaluation of his/her entire experience. That perception will influence on the customer willingness to pay and use the same product or service one more time and tell everybody about it.

Quality is define in many ways. Most people have a conceptual understanding of quality as relating to one or more desirable characteristics that a product or a service should possess.

2.2.2 Qualified Product or Service

A brief definition of a qualified product or service is a product or a service that has features, characteristics, and attributes that ensure that the product or service has the ability to satisfy a given need. A more extensive definition of a quality product or service is a product or a service that satisfies the above definition but also has such

other features or dimensions as performance, durability, reliability, maintenability, aesthetics, and perceptions of high quality (reputation).

2.2.3 Qualified Process

To produce a qualified product or service requires a quality process. A quality process can be defined as product manufactering or service delivery operations that utilize such accepted TQM processes as employee empowerment, employee education and training, solicitation of employee suggestions for improvement, utilization of team for problem solving and for getting work done, utilization of the latest information and communication technology, utilization of concurrent engineering where appropriate, development of focused units, focus on cycle-time, minimization, constant search for productivity improvements, and other aspects of TQM. However, it is important to keep in mind that TQM is more than concentrated focus on quality process and quality product or service (Pegels, 1995).

2.2.4 Quality Philosophy

Many people have contributed to the statistical methodology of quality improvement. However, in terms of implementation and management philosophy, three individuals emerge as the leaders: W.E. Deming, J.M. Juran and A.V. Feigenbaum.

The philosophy of Dr. Deming is an important framework for implementing quality and productivity improvement. This philosophy is summarized in his 14 points for management. A brief statement and discussion of Dr. Deming's 14 points are:

1) Create and publish to all employees a statement of the aims and purposes of the company or other organization. The management must demonstrate constantly their, commitment to this statement.
2) Learn the new philosophy
3) Understand the purpose of inspection for improvement of processs and reduction of cost
4) End the practice of awarding business on the basis of price tag alone

5) Improve constantly and forever the system to production and service
6) Institute training
7) Teach and institute leadership
8) Drive out fear, create trust, create a climate for innovation
9) Optimize toward the aims and purposes of the company the efforts of teams, groups, staff areas
10) Eliminate exhortations for the work force
11) (a) Eliminate numerical quotas for production, instead, learn and institute methods for improvement

(b) Eliminate management based organization, instead, learn the capabilities of processes, and how to improve them
12) Remove banners that rob people of pride of workmanship
13) Encourage education and self-improvement for everyone
14) Take action to accomplish the transformation (Montgomery, 2009).

As we read Dr. Deming's 14 points we notice two things: First, there is a strong emphasis on change. Second, the role of management in guiding this change process is of dominating importance.

2.3 Total Quality Management

Total quality management can be viewed as an outgrowth of the origins of TQM. But how is it more? One can argue that TQM is more because its main driver is concern with the customer. What are the customer's needs? What are his or her expextations? What can we do to meet or exceed these expectations?

Another way to look at total quality management is to analyze the three words, especially the last two. The frst word, 'total', means that everyone in the organization must play a role in order for TQM to be successful. But the words 'quality management', are loaded with potential meaning. Should the stress be on quality or on management? Does quality management mean good management or does it mean the management of quality?

In practice, TQM is what you make it do for you. It has generated a strong focus on customer satisfaction close customer contact and coordination. But because many managers believe that the key word in TQM is ‘quality’, the utilizers of TQM have a tendency to be heavy quality oriented. Quality is certainly a prerequisite of good management, but by no means is it the only measure.

2.4 Total Quality Management Principles and Practices

This part introduces the eight quality management principles on which the quality management system standards of the ISO 9000 series are based. These principles can be used by senior management as a framework to guide their organizations towards improved performance. The principles are derived from the collective experience and knowledge of the international experts who participate in ISO Technical Committee ISO/TC 176, Quality management and quality assurance which is responsible for developing and maintaining the ISO 9000 standards.

a. Customer Focus

Organizations depend on their customers and therefore should understand current and future customer needs, should meet customer requirements and strive to exceed customer expectations. Understanding the customer’s needs and expectations is essential to winning new business and keeping existing business.

Key Benefits:

- Increased revenue and market share obtained through flexible and fast responses to market opportunities
- Increased effectiveness in the use of the organization’s resources to enhance customer satisfaction
- Improved customer loyalty leading to repeat business.

b. Leadership

Leaders establish unity of purpose and direction of the organization. They should create and maintain the internal environment in which people can become fully involved in achieving the organization’s objectives.

Key benefits:

- People will understand and be motivated towards the organization's goals and objectives
- Activities are evaluated, aligned and implemented in a unified way
- Miscommunication between levels of an organization will be minimized.

c. Involvement of People

People at all levels are the essence of an organization and their full involvement enables their abilities to be used for the organization's benefit.

Key Benefits:

- Motivated, committed and involved people within the organization
- Innovation and creativity in furthering the organization's objectives
- People being accountable for their own performance
- People eager to participate in and contribute to continual improvement.

d. Process Approach

A desired result is achieved more efficiently when activities and related resources are managed as a process.

Key Benefits:

- Lower costs and shorter cycle times through effective use of resources
- Improved, consistent and predictable results
- Focused and prioritized improvement opportunities.

e. System Approach to Management

Identifying, understanding and managing interrelated processes as a system contribute to the organization's effectiveness and efficiency in achieving its objectives.

Key Benefits:

- Integration and alignment of the processes that will best achieve the desired results
- Ability to focus effort on the key processes
- Providing confidence to interested parties as to the consistency, effectiveness and efficiency of the organization.

f. Continual Improvement

Continual improvement of the organization's overall performance should be a permanent objective of the organization.

Key Benefits:

- Performance advantage through improved organizational capabilities
- Alignment of improvement activities at all levels to an organization's strategic intent
- Flexibility to react quickly to opportunities.

g. Factual Approach to Decision Making

Effective decisions are based on the analysis of data and information.

Key Benefits:

- Informed decisions
- An increased ability to demonstrate the effectiveness of past decisions through reference to factual records
- Increased ability to review, challenge and change opinions and decisions.

h. Mutually Beneficial Supplier Relationships

An organization and its suppliers are interdependent and a mutually beneficial relationship enhances the ability of both to create value.

Key Benefits:

- Increased ability to create value for both parties
- Flexibility and speed of joint responses to changing market or customer needs and expectations
- Optimization of costs and resources (Quality Management Principles ISO, 2012).

2.5 Improvement Strategies Employeed by Organizations

2.5.1 Primary ımprovement Strategies

Strategies are long-term approaches that the firm plans to follow in order to achieve its long-term objectives.

A primary strategy is usually viewed as a strategy that can be employed with minimal preparation and that can also be summarily suspended. The primary strategies that firms have employed include the following:

- Solicit ideas for improvement from employees.
- Encourage and develop teams to identify and solve problems.
- Encourage team development for performing operations and service activities resulting in participative leadership.
- Benchmark every major activity in the organization to ensure that it is done in the most efficient and effective way.
- Utilize process management techniques to improve customer service and reduce cycle time.
- Develop and train customer staff to be entrepreneurial and innovative in order to find ways to improve customer service.
- Implement improvements so that the organization can qualify as an ISO 9000 supplier.

2.5.2 *Secondary* I*mprovement Strategies*

A variety of secondary strategies are employed by compagnies to improve their operations and profitability, especially over the long term. The secondary strategies that firms have employed include the following:

- Maintain contunous contact with customers; understand and anticipate their needs.
- Develop loyal customers by not only pleasing them but by exceeding their expectations.
- Work closely with suppliers to improve their product/ service quality productivity.
- Utilize information and communication technology to improve customers service.
- Develop the organization into manageable and focusedunits in order to improve performance.
- Utilize concurrent or simultaneous engineering.
- Encourage, support, and develop employee training and education programs.
- Improve timeliness of all operation cycles (minimize all cycle times).
- Focus on quality, productivity, and profitability.
- Focus on quality, timeliness, and flexibility.

2.6 Benefits of TQM Implementation

The effective implementation of TQM will increase customer satisfaction with the service offerings (Omachonu and Ross, 1994). Quality enhances customer loyalty through satisfaction; this in turn can generate repeat business and lead to the attraction of new customers.

Total quality management ensures the participation of everyone in the decision making process through activities such as quality cycles and team work. The question is, does this devolution of authority leads to employees' satisfaction or not?

Motivation theories indicate that two major forms of motivation exist; the intrinsic and the extrinsic motivation. While some will argue that the best form of motivation is monetary incentive, others argue for self fulfilment and recognition.
The motive behind the intrinsic reward is to provide the employee with some autonomy which empowers him to take decisions that affects his job, thus making him responsible and accountable.
This is said to increase the employee's level of job satisfaction (Dimitrades, 2000).

The implementation of TQM ensures that every worker in the organisation does his work with quality the first time, thus improving the efficiency of operation and avoiding some cost associated with waste.

Implementation of TQM further ensures that organisations change how they perform activities so as to eliminate inefficiency, improve customer satisfaction and achieve the best practice (Porter, 1996). Porter noted that constant improvement in the effectiveness of operation is essential but not a sufficient factor for organisation to be profitable. According to Sila (2007), TQM helps in improving the quality of products and also reduces the scrap, rework and the need for buffer stock by establishing a stable production process. He argued that TQM will reduce the cost of production and time of production. Continuous improvement which is a feature of TQM is said to reduce the product cycle time thus improving productivity (Huang and Lin, 2002). Many other TQM practices such as training, information system management, relationship with suppliers etc have a positive impact on operational performance.

2.7 Limitations to the Implementation of TQM

Oakland (1995) identified factors that hinder the implementation of TQM. These include the thought that its implementation can be time consuming, bureaucratic, formalistic, rigid and impersonal. Ugboro and Obeng (2000) found out in their research that the half hearted implementation of TQM is a major reason for its failure in most organisations. According to them, organisations are only willing to

implement just those aspects of TQM which is supported by existing organisational culture. Their findings revealed that employees did not feel as part of the decision making process and their ability to make contributions to quality improvement were restricted due to the limited authority granted them to carry out their activities.

Wilkinson et al. (1998) noted that the failure of TQM can be attributed to the inappropriate implementation method adopted by the firms employed and not because of the principles of TQM itself. They believed TQM could be successful if it is adequately planned for and implemented according to plan.

Another reason for the failure of TQM is the emphasis given to individual rewards for TQM effort. This negates the recommendation made by Deming (1986), who argued that rewards needs to be tied to team work or department rather than individual. The failure of organisations to implement the rewards to group might lead to internal competition amongst employee and this will have a negative impact on team performance which TQM promotes. High cost of providing quality service is a major hindrance to the implementation of TQM, in organisations.

CHAPTER THREE
QUALITY ASSURANCE

3.1 Definition

Quality assurance (QA) is a process-centred approach to ensuring that a company or organization is providing the best possible products or services. It is related to quality control, which focuses on the end result, such as testing a sample of items from a batch after production. Although these terms are sometimes used interchangeably, quality assurance focuses on enhancing and improving the process that is used to create the end result, rather than focusing on the result itself. Among the parts of the process that are considered in QA are planning, design, development, production and service.

According to Dale et al. (1994) quality assurance is a prevention based system, which improves product and service quality with increased productivity by placing the emphasis on product, service and process design. Quality assurance emphasis on defect prevention, unlike quality control that focuses on defect detection once the item is produced.

Quality assurance is focused on the prevention of the production of non conforming product and much emphasis is placed on the activities involved in the process of production. Thus, it is a management design aimed at controlling quality at all stages of production to prevent quality problems from emerging.

The quality assurance philosophy opined that quality is created in the design stage and not the control stage and that problems associated with quality are caused by poor process design. According to Lockwood et al. (1996), ‘to be effective, quality assurance must involve the development of a new operating philosophy and approach that looks to be proactive rather than reactive, that includes motivating and involving people in the process across normal departmental barriers'.

Oakland (1995) defined quality assurance as broadly prevention of quality problems through planned and systematic activities, which include documentation.

3.2 Quality Assurance Framework

A quality assurance framework assures delivery so that it is evident that the right things are being done for the right reasons in the right way from the start. It also ensures that appropriate programme delivery disciplines and governance are implemented effectively.

First and foremost a quality assurance framework helps to make sure the expected programme benefits are realised.

Quality assurance frameworks include:

1) Determination of adequate technical requirement of inputs and outputs,
2) Certification and rating of suppliers,
3) Testing of procured material for its conformance to established quality, performance, safety, and reliability standards,
4) Proper receipt, storage, and issue of material,
5) Audit of the process quality,
6) Evaluation of the process to establish required corrective response,
7) Audit of the final output for conformance to
    - Technical
    - Reliability,
    - Maintainability, and
    - Performance requirements.

3.3 The Shewhart Cycle

There are many QA tools that organizations can use and that will help guide them through the steps that are needed to ensure that their processes are as efficient and

productive as possible. One of the most popular tools is called the Shewhart cycle, which was developed by Dr. W. Edwards Deming, a 20th-century American management consultant who named the tool after his associate, Walter A. Shewhart.

This cycle for quality assurance consists of four steps: Plan, Do, Check and Act (PDCA). At the end of Shewhart cycle, which also is called the Deming cycle or PDCA cycle, the steps are repeated to ensure that the process is being evaluated and improved on a constant basis.

The PDSA Cycle is a systematic series of steps for gaining valuable learning and knowledge for the continual improvement of a product or process. Also known as the Deming Wheel, or Deming Cycle, the concept and application was first introduced to Dr. Deming by his mentor, Walter Shewhart of the famous Bell Laboratories in New York.

The cycle begins with the Plan step. This involves identifying a goal or purpose, formulating a theory, defining success metrics and putting a plan into action. These activities are followed by the Do step, in which the components of the plan are implemented, such as making a product. Next comes the Study step, where outcomes are monitored to test the validity of the plan for signs of progress and success, or problems and areas for improvement. The Act step closes the cycle, integrating the learning generated by the entire process, which can be used to adjust the goal, change methods or even reformulate a theory altogether. These four steps are repeated over and over as part of a never-ending cycle of continual improvement.

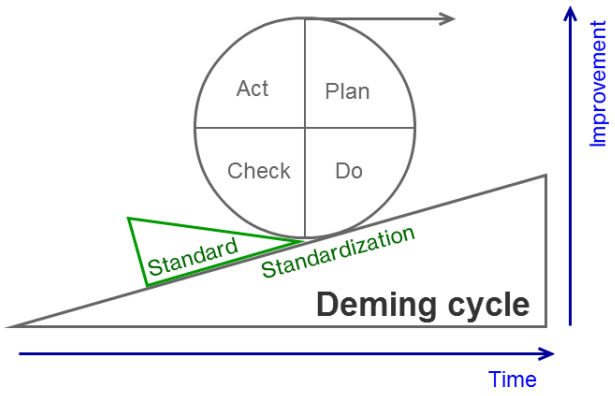

Figure 2.1 The deming cycle

3.4 Difference Between Quality Assurance and Quality Control

It is important for an organisation to agree on what the meanings of Quality Assurance (QA) and Quality Control (QC). Both form an integral part of the organisation's quality management plan, and the effectiveness of delivery teams relies on the differences being well understood by all stakeholders, including management.

Quality assurance and Quality control are closely related concepts, and are both aspects of quality management; they are fundamentally different in their focus:

- Quality assurance is the process of managing for quality;
- Quality control is used to verify the quality of the output.

Achieving success in a project requires both QA and QC. If we only apply quality assurance, then we have a set of processes that can be applied to ensure great quality in our delivered solution, but the delivered solution itself is never actually quality-checked.

Likewise, if we only focus on quality control then we are simply conducting tests without any clear vision for making our tests repeatable, for understanding and eliminating problems in testing, and for generally driving improvement into the means we use to deliver our solutions.

So, what exactly is the difference between quality assurance and quality control?

A good point of reference for understanding the difference is the ISO 9000 family of standards. These standards relate to quality management systems and are designed to help organisations meet the needs of customers and other stakeholders. In terms of this standard, a quality management system is comprised of quality planning and quality improvement activities, the establishment of a set of quality policies and objectives that will act as guidelines within an organisation and QA and QC.

In the ISO 9000 standard, clause 3.2.10 defines Quality Control as: “A part of quality management focused on fulfilling quality requirements” Clause 3.2.11 defines Quality Assurance as: “A part of quality management focused on providing confidence that quality requirements will be fulfilled”. Simply put, Quality Assurance focuses on the process of quality, while Quality Control focuses on the quality of output.

CHAPTER FOUR
QUALITY AUDITS

4.1 Introduction

The term ‘audit’ was defined in the 16th Century as “the official examination of the accounts with verification by reference to witness and vouchers”. Gradually, it came to be associated with ‘any systematic investigation or appraisal or procedures or operation for the purpose of determining conformity with prescribed procedures’.

Today audit can be defined as “Checking – Inspection – Examination - Reporting”. According to ISO 8402: “An audit is a systematic and independent examination to determine whether quality activities and related results comply with planned arrangements and whether these arrangements are implemented effectively and suitable to achieve objectives” (ISO – 8402).

4.2 Definitions

DeAngelo (1981) defines audit quality as the market-assessed joint probability that a given auditor will both detect material misstatements in the client’s financial statements and report the material misstatements. Therefore, according to DeAngelo’s (1981) definition, audit quality is a function of the auditor’s ability to detect material misstatements (technical capabilities) and reporting the errors (auditor independence).

Palmrose (1988) defines audit quality in terms of level of assurance. Since the purpose of an audit is to provide assurance on financial statements, audit quality is the probability that financial statements contain no material misstatements. In fact, this definition uses the results of the audit, that is, reliability of audited financial statements to reflect audit quality.

A quality audit entails a systematic evaluation of a representative sample of the activities and drawing inference on the quality system as a whole.

Quality audit is always performed against a documented system. The process of the quality system determines whether:

- The documentation meets the defined quality objective of the organization.
- The activities performed are in conformity with the documented system.
- The quality system is effective with respect to documentation and its implementation, in meeting the defined quality objectives, and
- Statutory and safety requirements are being fulfilled.

Now the question comes; what is quality auditing?

Quality auditing is the process of examining the effectiveness of management control programs, the purposes of which is to prevent problems. Quality audit, which forms an important part of a quality management system, is an independent review conducted to compare the given aspects of quality performance with a standard for that performance. It is one of the key management tools for achieving the objectives set out by the organization. It is an activity of gathering information for the improvement or corrective actions for standard.

4.3 The Reason for Auditing

Quality systems control the mechanisms that develop and deliver products and services to customers. If we rely on customers to tell us of the effectiveness of the controls, it may be too late and we will not retain their custom. An effective quality system will contain constant checks, tests and systems for corrective action (because things 'will go wrong'). However, all of these need the support of independent checks of the organization from within the organization. These independent checks are Internal Quality Audits.

Audits are a routine activity to avoid nasty surprises at critical times. Audits make sure that we don't overload the tray. Audits are needed to find not only the disasters (often all too obvious) but also the frequency of near disasters (which are usually

covered up). We need audits to remind us of the correct way of doing things and to make sure that problems are avoided (Internal Quality Audits, 1996).

4.4 The Principal Types of Audits

There are three types of quality audits, namely, first party (internal audit), the second party (external audit) and third party (extrinsic audit).

4.4.1 Internal Audit

First party quality audit (Internal audit): when an organization conducts an audit on its own quality system using its own staff / external consultants, the audit is known as first part quality audit or internal quality audit. Important points are: auditing staff must be trained for conducting this exercise and should not bias against the functional department being audited.

Internal audits ensure that an organization is meeting its own quality standards or contractually required standards. Internal audits may be done by auditors who work for the company being reviewed. They may also be hired by the company to audit its own functions. However, auditors must be independent of the function they are auditing.

The purpose of internal audit is:

- To identify possible product/process improvements.
- To identify deficiencies in products or in the plant/quality management.

4.4.2 External Audit

The second party quality audit is performed by the purchasing organization upon the supplier organization. The idea here is to have an assessment of the supplier's processes in order to have confidence that the supplier would be able to supply goods or services of an agreed quality level on a sustained basis. Important point is these

audits can be performed by the trained personnel of the purchasing organization or an outside agency hired by them.

External auditors are separate from the company they are auditing because they are independent. They may be hired by a supplier or customer to ensure that the audited company meets their quality standards. External audits can be done by quality consultants specializing in the quality standards for those organizations.

4.4.3 Extrinsic Audit

Third party quality audit (extrinsic audit): this audit is performed by the certification bodies (ISO registered bodies) on the applicant organization seeking such certification. If these, auditors, after conducting the quality audit on the organization with respect to a standard, find the organization to be worthy enough, the certification is granted to the organization. Third party audits normally results in the disruption of day-to-day activities of the organization being audited during the duration of the audit.

Apart from the registered certification bodies, the third part audit may also be conducted by some government departments dealing with environment and pollution, health and safety, atomic energy etc.

4.5 Other Types of Quality Audits

- **A Product Quality Audit**

A product quality audit is a depth examination of a particular product or service to evaluate whether it conforms to product specifications, performance standards and customer requirements (Westcott, 2006).

A product audit is performed for the purpose of verifying that the product meets the required specifications.

- **A Process Quality Audit**

A process quality audit examines a single process or activity to verify that the inputs, actions and outputs are in accordance with requirements established by procedures, work instructions, or process specifications (Westcott, 2006).

A process audit is performed for the purpose of verifying that the process enables a product (that meets specified requirements) to be produced consistently. In other word, the auditor will be looking to confirm that the process is stable. Process audits are typically utilized to assure confidence, not to investigate problems.

- **A Quality System Audit**

A quality system audit is 'a documented activity performed to verify, by examination and evaluations of objective evidence, that applicable elements of the quality system are appropriate and have been developed, documented, and effectively implemented in accordance and in conjunction with specified requirements'.

A quality system audit is an evaluation of the whole quality system, and will include all processes that affect quality.

- **Problem or Spot Audits**

Problem or Spot audits is performed for the purpose of verifying continued stability in an area where a problem has been identified. These audits are usually focused, of short duration, and assess whether procedures/work instructions are being followed.

- **Self Audit**

Self audit is performed when a manager audits his/her own area, or when an employee audits his/her own work processes. The particular type of audit lacks independence (is considered biased), but is considered useful in the identification of

not only the problems that may be found in documented processes, but also areas that could be improved.

4.6 The Basic Approaches to Auditing

Within these three types of audits, there are two approaches that auditors can take:

- Vertical auditing
- Horizontal auditing

Vertical audits look, in depth, at a particular function or department. This type of audit would monitor the use of all relevant procedures as they are used to support the function or activity. Internal audits are usually vertical audits.

Horizontal audits follow a process from start to end. This type of audit would look at procedures as they support the process itself and is likely to span many different functions or departments. Audits or assessment leading to certification are likely to be horizontal (Internal quality audits, 1996).

4.7 Quality Audit Benefits

Audit is a cycle of activity involving systematic review of practice, identification of problems, development of possible solutions, implementation of change, and then review again.

Therefore, quality audit benefits are:

- It drives continuous improvement
- Lets management know problems or potential problems
- Provides input into management decisions
- Accesses training and effectiveness
- Shows management support of the quality program
- Verifies compliance

Quality audit is an important tool for continuous improvement and the auditee and auditing organization must follow the above stages. During auditing the auditor must follow some important guidelines to fulfil the objectives:

- Do not be biased
- Keep an open mind
- Do not be argumentative
- Be patient
- Remind the participant that the audit is for continuous improvement
- Always state the facts
- Do not correct the person on the spot
- Report accurately and clearly
- Be familiar with the procedure.

Finally an ISO 9001:2000 certificate proves that the Quality Management System has been certified against a best practice standard and found compliant. Issued by a third party certification body/registrar after auditing, the certificate lets customers know they can trust that the company have implemented the necessary internal processes to meet obligations.

4.8 About ISO

ISO (International Organization for Standardization) is the world's largest developer of voluntary International Standards. International Standards give state of the art specifications for products, services and good practice, helping to make industry more efficient and effective.

Short for **I***nternational* **O***rganization for* **S***tandardization*, ISO is not just an acronym; instead, the name derives from the Greek word *iso*, which means equal. ISO is a network of national standards bodies. These national standards bodies make up the ISO membership and they represent ISO in their country.

There are three member categories. Each enjoys a different level of access and influence over the ISO system. This helps us to be inclusive while also recognizing the different needs and capacity of each national standards body.

- Full members (or member bodies) **influence** ISO standards development and strategy by participating and voting in ISO technical and policy meetings. Full members sell and adopt ISO International Standards nationally.
- Correspondent members **observe** the development of ISO standards and strategy by attending ISO technical and policy meetings as observers. Correspondent members can sell and adopt ISO International Standards nationally.
- Subscriber members **keep up to date** on ISO's work but cannot participate in it. They do not sell or adopt ISO International Standards nationally.

Today ISO have members from 163 countries and 3368 technical bodies to take care of standard development. More than 150 people work full time for ISO's Central Secretariat in Geneva, Switzerland.

4.8.1 The Benefits of ISO International Standards

ISO International Standards ensure that products and services are safe, reliable and of good quality. For business, they are strategic tools that reduce costs by minimizing waste and errors and increasing productivity. They help companies to access new markets, level the playing field for developing countries and facilitate free and fair global trade.

The ISO standards provide a host of benefits to the economy, technology and society as a whole.

1. ISO enables businesses to complete on markets around the world, due to the widespread adoption of the standards, products and services are developed according to the specifications meaning they will have international acceptance.

2. For innovators of new technologies, ISO standards help to speed up the distribution of innovations and their development into products. Customers can

enjoy a broad choice of offers as well as benefiting from the effects of competition among suppliers.

3. Conformity of products and services to ISO standards provides assurance about their quality, safety and reliability for consumers.

4. ISO provides the technological and scientific bases underpinning health, safety and environmental legislation to aid governments.

5. ISO creates "a level playing field" for all competitors, helping trade officials and the existence of divergent national or regional standards can create technical barriers to trade. ISO are the technical means by which political trade agreements can be put into practice.

6. By defining the characteristics that products and services will be expected to meet on export markets, ISO gives developing countries a basis for making the right decisions when investing their scarce resources.

7. On an environmental level, ISO standards can help to preserve the air, water, soil quality, gas emissions, radiation and environmental aspects of products.

8. ISO contributes to the quality of life in general by ensuring that the transport, machinery and tools we use are safe.

9. The ISO facilitation process is essentially conformity assessment – checking that the products, materials, services, systems, processes or people measure up to the specifications of a relevant standard.

10. ISO guides and standards for conformity assessment represent an international consensus on best practice.

4.8.2 Types of ISO

Currently, the ISO 9000 series is comprised of the following international standards:

ISO 8402 - Quality management and quality assurance vocabulary

ISO 9000 - Guidelines for selection and use
ISO 9001 - Model for quality assurance: design, development, production, installation and servicing
ISO 9002 - Model for quality assurance: production, installation and servicing
ISO 9003 - Model for quality assurance: final inspection and test
ISO 9004 - Quality management and quality system elements
ISO 10011 - Guidelines for auditing quality systems
ISO 10012 - Requirements for measuring equipment
ISO 10013 - Guidelines for quality manuals.

Fundamentally these standards can be grouped into two categories:

Requirements - These mandatory standards dictate what a company *shall* do. Companies become registered to or compliant with one of the requirements standards. There are four requirements standards:
ISO 9001, ISO 9002, ISO 9003, ISO 10012.

Guidelines - These assist a company to interpret the requirements standards, suggesting what a company *should* do. There are also four guidelines:
ISO 8402, ISO 9000, ISO 9004, ISO 10011, ISO 10013.

4.8.3 ISO 9001:2000

ISO 9001:2000 specifies requirements for a quality management system where an organization

1. Needs to demonstrate its ability to consistently provide product that meets customer and applicable regulatory requirements, and
2. Aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable regulatory requirements.

All requirements of this International Standard are generic and are intended to be applicable to all organizations, regardless of type, size and product provided.

Where any requirement(s) of this International Standard cannot be applied due to the nature of an organization and its product, this can be considered for exclusion.

Where exclusions are made, claims of conformity to this International Standard are not acceptable unless these exclusions are limited to requirements within clause 7, and such exclusions do not affect the organization's ability, or responsibility, to provide product that meets customer and applicable regulatory requirements.

4.8.4 ISO 9001-2000: 8 Management Principles

1. **Client Approach**
   Organizations depend on their customers and must understand their present and future needs, should know meet their expectations and aspire to exceed their needs.
2. **Leadership**
   The leaders give a sense of direction and unity to the organization. Managers must create an environment that encourages empowering people so that they are fully engaged in the pursuit of quality objectives of the organization.
3. **Involvement (engagement) people**
   The essence of an organization is its people and only their full participation enables their abilities to serve the benefit of the organization.
4. **Processes approach**
   A desired result is accomplished so most effective when activities and resources are managed as a process.
5. **Systematic approach (scientific) management**
   Identifying, understanding and managing interrelated processes as a system contributes to the effectiveness and efficiency of an organization achieving its objectives.

6. **Continuous improvement**

   The continuous improvement of the overall performance an organization should be a goal standing of each organization.

7. **Using made in decision**

   Effective decisions are made after analyzing data / facts and real information.

8. **A mutually beneficial relationship with suppliers**

   An organization and its suppliers are interdependent and a healthy relationship beneficial for all, increasing the possibilities to quality.

4.8.5 ISO 9001 Certification Process

The ISO 9001 certificate is issued by an independent registrar after successful verification that your company has implemented an ISO 9001 quality management system and follows all its requirements in daily operations. Once the company has completed all ISO 9001 documentation (including the all-important quality manual and quality procedures), the company may apply for ISO 9001 certification. The certification is issued by an independent and accredited ISO 9001 registrar. There are many such ISO 9001 registrars, so you can choose the one that fits your company's circumstances the best. We recommend that you choose your ISO 9001 registrar early during the ISO 9001 implementation process as some registrars offer free support materials that help you implement ISO 9001.

In order to achieve ISO 9001 certification, your company needs to have the entire ISO 9001 quality management system implemented; this includes having written the entire ISO 9001 documentation and following all the requirements stipulated in your documentation. Before the certification audit can be performed and the ISO 9001 certification is issued, your company needs to meet two conditions:

a) Perform one complete internal ISO 9001 audit. Such an internal audit is performed internally by one or more company employees who verify that their company in fact follows the requirements described in the ISO 9001 documentation.

b) Secondly, your company needs to have a track record of operating according to

ISO 9001 requirements; most registrars require about 2 months of track record.

The time to implement ISO 9001 and reach certification depends very much on you and your company. The fastest is 2-3 months because most ISO 9001 registrars require at least 2 months ISO 9001 track record before the certification audit.

A more realistic estimate may be this - but there are many "ifs":

- if you have a relatively small company (say, less than 20 employees),
- if your employees are motivated and if they don't oppose change (employee buy-in is crucial, and employees must be involved from the beginning; consider an ISO 9001 introduction video presentation),
- if you have the backing of all senior executives (which you will likely only get if they understand ISO 9001 and its benefits to the company; consider a training course),
- if you and other managers are ready to put significant time and efforts into the ISO 9001 implementation endeavour, and
- if you use a really good pre-written template for your ISO 9001 quality manual and quality procedures, as well as good pre-written forms and checklists, then you may be able to get your organization certified in as short as 3-4 months. (ISO 9001 implementation, 9001 Council, 2003)

4.9 Auditors

4.9.1 Background to Auditing and Role of an Auditor

DeAngelo (1981) describes audit quality in terms of the joint probability that an assigned auditor will both find out a breach in the client's accounting system and would then report that breach.

As auditors earn client-specific rents therefore auditors who have got a strong client-base would be much prone to damages in case of an audit failure. Due to these facts related to the strong reputation of audit firms and the auditor independence,

which is related to the likeliness of reporting a breach in clients' reporting, the audit firms have got more incentives to provide higher audit quality. Large audit firms that has got small chunk of percentage as part of the revenue generated from any particular audit engagement are more in position to resist the pressures from the client related to the reporting of accounting breaches.

Auditors, in order to keep the audit quality high, need to take the internal communication into consideration as well and in order to keep the internal communication better a regular dialogue should be assured between the firm's audit committee, statutory auditor and the internal auditors. Internal control ensures that the loopholes are eliminated in the total coverage of compliance, risk monitoring, and the substantive verification of assets, liabilities, revenues and expenses.

Auditors to a great extent focus on the audits of historical financial information. But a look into the future information is vital as well as far as the role of auditors in concerned and the auditors should provide an outlook of economic and financial information of the company based on the privileged access to the key information. The Directive on Statutory Audit requires that statutory auditors be subject to principles of professional ethics and lays down a number of principles for independence, ranging from behavioural aspects to considerations around ownership, fees, rotation or companies' governance and audit committees.

4.10 Auditing Principles

1) Have integrity and be professional.

• Comply with all applicable legal requirements.

• Withstand the pressures that may be exerted and the influences that may affect your professional judgment.

2) Present fair and truthful results.

• Make sure that audit results are fairly presented.

• Make sure that important concerns are reported.

3) Exercise due professional care.

• Perform auditing tasks with due care and diligence.
• Make reasoned judgments in all audit situations.

4) Care about confidentiality.

• Care about confidentiality and information security.
• Handle information with due care and discretion.
• Protect information that is sensitive or confidential.

5) Be independent and impartial.

• Be independent of the activities being audited.
• Be impartial and always be free of bias.

6) Use an evidence-based approach.

• Use an evidence-based approach to reach reliable and reproducible audit conclusions (ISO 19011, 2011).

4.11 Reasons for an Auditing Failure and its Consequences

According to Anders Mårdell, one of the foremost but uncommon reasons for audit failure would be an attempt of sophisticated fraud from the client's side, which is that a client purposefully wants to hide certain material misstatements so that the auditor could not detect it. The most common reason for the audit failure would be that an audit itself was not effective and efficient, or that the audit was not planned in a proper way.

Due to the lack of proper planning, it is difficult for an auditor to assess the main and significant risks are present in the client firm, so in this way the auditor focuses on wrong aspects rather than the ones which need to be scrutinized. Weak knowledge of the auditor regarding the client firm is another factor, which could lead to an audit failure.

According to Anders, an audit failure is not due to the process of audit involved in the audit engagement rather it is due to the unavailability of information. The consequences of an audit failure could be that an auditor is being sued due to the issuance of wrong audit opinion concerning the financial reports, or maybe you do not get paid for the audit services (with a smile). But the authorities do look into the

case and decide that who was guilty party in the audit failure and based on that the guilty party is subject to the charges in the law.

One of the reasons for audit failure is the time allocated for the audit engagement. For instance sometimes there are only 10-hours allocated out of which you have to both detect the problem and keep communication and coordination with colleagues. Due to budgetary concerns the time limit could not be extended and therefore it turns out to be difficult to discover problems and detect material errors within such short period of time. Other than this an audit failure could be due to improper audit planning, and due to mistakes in the planning process you can miss important factors in the audit of the client firm. And sometimes a risk is detected in the audit but then it is difficult to eliminate the risk because the time allocated to you do not allow you to do so. The consequences for the audit firm are that it would need to use the insurance in order to cover its mistakes within the audit. Other than this there is a governmental organization, which investigates the audit engagements of auditors and in reference to illegal or bad audit the license of the auditor could be cancelled as well (Farooq, 2011).

4.12 Internal Audit Procedure

An internal audit must define:

a) Criteria
b) Scope
c) Program frequency
d) Method
e) Report result
f) Keep records

a) Criteria

Q: What do we audit against?

A: Your procedures, ISO 9001:2008. Plus any industry specific regulations or contractual requirements.

b) Scope

Q: How far do we go?

A: Far enough to ensure the sequence and interaction of processes.

c) Program frequency

Q: How often?

A: Internal audit program frequency is not specified in ISO 9001:2008. Normal practice is to audit the whole QMS (but in bite-sized pieces) at least once per year or more often if considered appropriate.

d) Method

Q: How do we audit?

A: Interviewing staff, observing activities and viewing relevant records.

e) Report results

To report the audit results to management, you need to include in your procedure how any problems and improvements are followed up.

Q: What should be included in my report?

A: Your report should be objective and provide a balanced view. Report good things (conformance), bad things (non-conformance) and observations on possible improvements.

Q: What is a non-conformance?

A: ISO 9000 defines non-conformity as the failure to fulfil a requirement. So, if you can demonstrate that a requirement of ISO 9001, your procedures or other relevant document has not been met then you have a non-conformance.

The term "observation" is your opinion - so make sure you report it as such.

f) Keep records

Auditor training records are also required.

Job Description:

1. confirm compliance with ISO 9001, any other regulations, company procedures, etc.

2. seek improvements (or simplifications) in processes.
Tip: Don't forget to audit "top management".

There is considerable emphasis on top management being seen to be on-board and playing the game. Top management is defined as the person(s) who direct an organisation at the highest level.

The principal message that management must get across is that the objective of this business is to keep the customer happy.

Notice that few of these clauses specify a procedure or a record – top management are simply required to do it. As a result, the Certification Body will want to question the Directors and the staff. This something that your own auditors must also do.

CHAPTER FIVE
APPLICATION

5.1 Purposes

The purpose of this chapter is to reveal the opinions of the employees regarding internal auditor. Questionnaires were distributed in ten different companies amongst customer service agents who deal directly with customers on daily basis. ECOBANK (Bank of Niger) had 10 respondents drawn from 10 questionnaires distributed, represent 11,2% of total population. SEEN (water traitement company) had 7 respondents drawn from 10 questionnaires distributed, represent 7,9% of total population. NIT (Logistics company) had 7 respondents drawn from 10 questionnaires distributed, represent 7,9% of total. SPEN (water traitement company) had 10 respondents drawn from 10 questionnaires distributed, represent 11,2% of total population. ORANGE (Telecom company) had 10 respondents drawn from 10 questionnaires distributed, represent 11,2% of total population. SAHELCOM (Telecom company) had 7 respondents drawn from 10 questionnaires distributed, represent 7,9% of total population. ORIBA (Food transformer company) had 10 respondents drawn from 10 questionnaires distributed, represent 11,2% of total population. LNTP (Laboratory) had 10 respondents drawn from 10 questionnaires distributed, represent 11,2% of total population. BOA (Bank of Africa) had 8 respondents drawn from 10 questionnaires distributed, represent 9% of total population. SAU (Steel transformer company) had 10 respondents drawn from 10 questionnaires distributed, represent 11,2% of total population. This is represented in Table 5.1 below.

Table 5.1 Distribution of companies

Valid	Frequency	Percent	Cumulative Percent
ECOBANK	10	11.2	11.2
SEEN	7	7.9	19.1
NIT	7	7.9	27
SPEN	10	11.2	38.2
ORANGE	10	11.2	49.4
SAHEL COM	7	7.9	57.3
ORIBA	10	11.2	68.5
LNTP	10	11.2	79.8
BOA	8	9	88.8
SAU	10	11.2	100
Total	89	100	

5.2 Population and Sample

Sekaran (2003) describes sampling as the process of selecting a sufficient number and the right type of elements for study from a certain population. As population is defined, the entire group of elements that the researcher is interested to investigate. An element on the other hand, is a single member of the population (Jankowicz, 1991).

Sample is defined as a portion or subset of the population, the size of which is determined by the type and objective of the study, as well as time and financial constraints (Fink, 1995).

Sampling therefore is the method of drawing the sample and it is a vital part of a research as it allows to the researcher to generalize findings, as it is impossible to examine the whole population.

Samples were drawn from the entire population of study in this research due to time, financial and human resource constraints, thus it is believed that the sample will provide the researchers with more reliable results (Sekaran, 2003; Blumberg et al., 2005).

5.3 Sample Design

Sampling is divided into two main categories: probability and non-probability. In probability sampling, the elements of the population have a definite chance, but not necessarily equal, of being included to the sample. On the contrary, in non-probability sampling, the odds that a particular element will be included in the sample are unknown.

The probability sampling technique was adopted using Systematic random. However, with the systematic random sample, there is an equal chance (probability) of selecting each unit from within the population when creating the sample.

To create a systemic random sample, there are seven steps**:**

- **Define the population**

In our research, the population is the 50 ISO certified companies in Niamey, Capital City of Niger. The population is expressed as N. Since we are interested in all of them, we can say that our sampling frame is all 50 companies.

- **Choose your sample size**

We chose the sample size of 10 companies. The sample is expressed as n. This number was chosen because it reflects the limit of the time we have to distribute the questionnaires to employees.

- **List the population**

To select a sample of 10 companies, we need to identify all 50 companies.

- **Assign numbers to cases**

We now need to assign a consecutive number from 1 to ***N***, next to each of the companies. In our case, this would mean assigning a consecutive number from 1 to 50.

- **Calculate the sampling fraction**

In this case: $Sampling\ \ fraction = \frac{\mathrm{n}}{\mathrm{N}} = \frac{10}{50} = \frac{1}{5}$

The sampling fraction tells us that we need to select 1 company in every 5 companies from the population of 50 companies.

- **Select the first unit**

Since we need to select 1 company in every 5 companies, first we use a random number table to select the first company.

- **Select your sample**

Now that we know the first unit, namely the 3rd company on the list, we can select the other 9 companies to make up our sample of 10 companies.

Since we need to select company in every 5 companies from the list, we use the 3rd company as the starting point and then select every 5th company from this point.

Table 5.2 ISO certified companies list

No	Companies	Sectors	No	Companies	Sectors
1	BCN	Bank	26	BUL-INFO	Communication
2	GESCOM	Logistics	27	SONITEL	Telecom
3	ECOBANK	Bank	28	SAHEL-COM	Telecom
4	BADC	Bank	29	AFRIPA	Telecom
5	BRS	Bank	30	ZTE	Communication
6	BIA NIGER	Bank	31	AFREETEL	Telecom
7	COMMUN	Communication	32	D& M	Logistics
8	SEEN – SA	Water traitement	33	ORIBA	Food Transformer
9	CSCA	Logistics	34	BETP	Laboratory
10	COMANI	Logistics	35	ETPG	Laboratory
11	WAM	Communication	36	ARC LABO	Laboratory
12	MAERSK	Logistics	37	BA	Bank
13	NIT	Logistics	38	LNTP/B	Laboratory
14	SONIPHAR	Laboratory	39	THG	Communication
15	EBAI-GROUP	Laboratory	40	SAHEL LAB SA	Laboratory
16	BINCI	Bank	41	NIGELEC	Electricity
17	SONIBANK	Bank	42	SNE	Water traitement
18	SPEN	Water traitement	43	BOA	Bank
19	AHS NIGER	Telecom	44	A.T	Telecom
20	DOULLA	Communication	45	ZAIN	Telecom
21	KAM-PROCESS	Logistics	46	KM AGENCE	Communication
22	BETP	Logistics	47	KAM-SARLU	Logistics
23	ORANGE NIGER	Telecom	48	SAU	Steel Transformer
24	MEDIATEL	Telecom	49	IXCOM NIGER	Communication
25	SITA	Telecom	50	SONIP	Food Transformer

Table 5.3 Selected companies list

1	ECOBANK-NIGER
2	SEEN – SA
3	NIT
4	SPEN
5	ORANGE NIGER
6	SAHEL-COM
7	ORIBA
8	LNTP/B
9	BOA
10	SAU

5.4 Population and Sample Size

The population of study was drawn out of various local companies in Niamey, capital city of Niger. The survey started on the 3rd of September, with the questionnaire distributed among employees that have everyday contact with the customers. The interview questions were given to the interviewees in advance so that they could prepare the interview. It was an effective and efficient way of obtaining sufficient information within a short time period.

It took two weeks in the distribution and collection of the questionnaires. 100 questionnaires were distributed among 10 companies, of this 89 were completed but 11 of them were rejected as a result of so many omissions in filling.

5.5 Reliability and Validity

The two most important and fundamental characteristics of any measurement procedure are reliability and validity. These two principles will be discussed in turn.

5.5.1 Reliability

Reliability is defined as the extent to which a questionnaire, test, observation or any measurement procedure produces the same results on repeated trials. In short, it is the stability or consistency of scores.

This has to do with the ability of a research finding to replicate itself if a parallel study is conducted. Thus in order to ensure the finding of this research the Cronbach Alpha was used to test the reliability of questions asked for this research. The result from the validity test shows Cronbach Alpha to be 0.826 on the average of all the variables considered which is above the required 0,7 mark. This is an acceptable level according to Sekeran (2003).

Table 5.4 Scale statistics

Mean	Variance	Std. Deviation	N of Items
42.01	87.398	9.349	26

The table of scale statistics gives the descriptive statistics for the scale as a whole. The output provides a summary of the data. We can see that our data contains 26 cases and the analysis is considering 100 percent of the data.

Table 5.5 ANOVA with Friedman's Test and Tukey's Test for Nonadditivity

	Sum of Squares	df	Mean Square	Friedman's Chi-Square	Sig
	295.807	88	3.361		
	113.843	25	4.554	7.779	.000
	12.940	1	12.940	22.319	.000
Between items	1274.871	2199	.580		
	1287.811	2200	.585		
	1401.654	2225	.630		
Total	1697.461	2313	.734		

Table 5.6 Cronbach's Alpha

Cronbach's Alpha	N of Items
.826	26

Cronbach's alpha provides an overall reliability coefficient for a set of variables. We can see that Cronbach's alpha is 0.826, which indicates a high level of internal consistency for our scale.

The Item-Total Statistics table presents the "Cronbach's Alpha if Item Deleted" in the final column, as shown below:

Table 5.7 Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Var1	40.70	83.964	.237	.438	.824
Var2	40.33	80.881	.366	.456	.820
Var3	40.44	82.363	.291	.541	.823
Var4	40.29	82.255	.298	.417	.822
Var5	40.30	80.827	.372	.363	.819
Var6	40.76	84.228	.251	.448	.824
Var7	40.62	83.102	.274	.396	.823
Var8	40.73	83.517	.278	.505	.823
Var9	40.42	81.427	.323	.307	.822
Var10	40.06	79.622	.411	.366	.818
Var11	40.44	80.385	.412	.387	.818
Var12	40.34	80.749	.374	.463	.819
Var13	40.21	79.306	.428	.378	.817
Var14	40.15	81.535	.308	.420	.822
Var15	40.62	83.080	.269	.276	.823
Var16	40.62	82.511	.310	.381	.822
Var17	40.40	81.698	.301	.445	.823
Var18	40.35	80.002	.455	.497	.816
Var19	40.13	80.823	.368	.350	.820
Var20	40.53	79.570	.526	.619	.814
Var21	40.02	80.931	.332	.402	.821
Var22	40.30	78.168	.552	.592	.812
Var23	40.47	82.047	.312	.396	.822
Var24	40.08	77.914	.511	.451	.813
Var25	40.18	80.672	.375	.480	.819
Var26	40.80	83.959	.273	.450	.823

This table shows the value that Cronbach's alpha would be if that particular item was deleted from the scale. We can see that removal of any variable, would result in a lower Cronbach's alpha. Therefore, we would not want to remove these variables.

5.5.2 Validity

Validity is defined as the extent to which any instrument measures what it is intended to measure. The validity of a questionnaire relies first and foremost on reliability. If the questionnaire cannot be shown to be reliable, there is no discussion of validity.

The reality is that reliability and validity are two different aspects of an acceptable research questionnaire. It is important for a researcher to understand the differences between these two aspects.

In its simple explanation, reliability of a questionnaire seems to emerge from the quality of the questionnaire. On the other hand validity seems to emerge from the internal and external consistency and relevance of the questionnaire. In other words reliability of a questionnaire refers to the quality of tool while validity refers to the process used to employ the tool in use, i.e. the process used to conduct the questionnaire.

5.6 Questionnaires

A questionnaire is a research instrument consisting of series of questions and other prompts for the purpose of gathering information from respondents. Most often it is designed for statistical analysis of the responses.

According to Sekeran (2003), ‘A questionnaire is a pre-formulated written set of questions to which respondents’ records their answers, usually within rather closely defined alternatives’.

A questionnaire was structured for this research (See Appendices) and was administered to the front line staffs of the study (MP Wadhawan & CO., 2012).

5.7 Pilot Study

The pilot test is a useful tool for researchers, as it helps them to check the Data collection methods and uncover any mistakes or miscomprehension of the questionnaire. The sample examined in the pilot study must be a part of the sample used for the conduction of the research; thus, the researcher may reveal unexpected findings, based on which any necessary adjustment is made (Gerson and Horowitz, 2002).

A pilot study was conducted before the administration of the questionnaire in order to detect potential problems that may arise as a result of difficulty in the interpretation of questions by respondents.

According to Blumberg et al. (2005) respondents in a pilot study could range between five and hundred, thus ten questionnaires were distributed among employees in a telephonic company.

The feedback given from the respondents was considered in remodelling the questions to suite the research objectives.

CHAPTER SIX
DATA ANALYSIS

6.1 Introduction

Data extracted from the questionnaires were statistically analysed with the SPSS software. Detailed analysis of the results derived from this analysis is presented in this chapter. The major findings of this research, recommendation and limitation of the research will be discussed.

6.2 System Approvals

The ISO standard has always considered the obligation of implementing quality management system (QMS) internal audits, which are one of the main elements in the quality management model embodied in such regulations, oriented to self-evaluate the system efficiency, objectively and on a regular basis.

The graph below show that ISO standard 9001 is the most used for the companies.

ISO 9001 is the most popular Standard Model for quality assurance: design, development, production, installation and servicing.

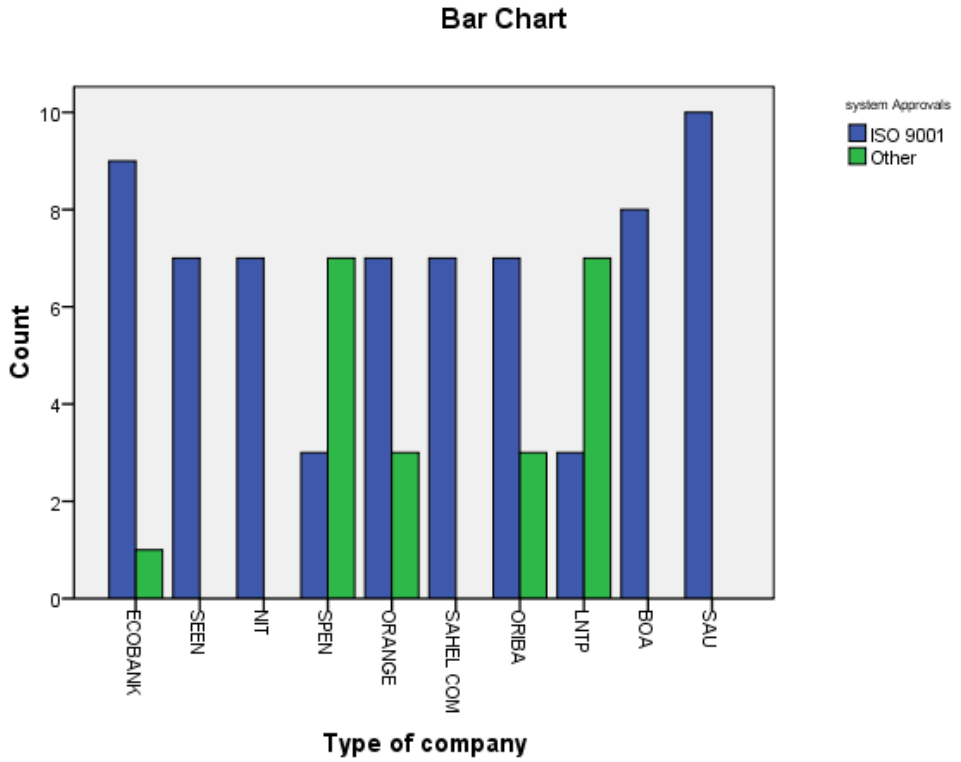

Figure 6.1 System Approvals

6.3 Corporate Philosophy

The following tables show the findings of the research. It results that 80.9% of companies have a willingness to share information with the employees; 58.4% have a documented reporting system to track metrics. 64% of employees said there were formalized programs for maintenance of equipments. A little more than half companies issue internal non conformance reports.

Table 6.1 Crossing between variables 'type of company and willingness to share information'

Type of company	Is there a willingness to share information?			Total
	Yes	No	Not Sure	
	72	6	11	89
	80.9%	6.7%	12.4%	100%

Table 6.2 Crossing between variables 'type of company and documented reporting system'

Type of company	Is there a documented reporting system to track metrics?			Total
	Yes	No	Not Sure	
	52	13	24	89
	58.4%	14.6%	27%	100%

Table 6.3 Crossing between variables 'type of company and formalized program for equipment maintenance'

Type of company	Is there a formalized program for maintenance of equipment?			Total
	Yes	No	Not Sure	
	57	13	19	89
	64%	14.6%	21.4%	100%

Table 6.4 Crossing between variables 'type of company and issue for internal non-conformance reports'

Type of company	Does the company issue internal non-conformance reports?			Total
	Yes	No	Not Sure	
	46	22	21	89
	51.7%	24.7%	23.6%	100%

6.4 Utility

The interviewees were asked to evaluate the usefulness of the internal audits practiced in their companies. In view of the results from the empirical study, we can conclude that organizations make the best for themselves in conducting Quality Management System internal audits, although it is promising to observe that the majority of the organizations lay a good deal of importance on such a practice, and that the management is involved to improve policies, and identify wastage, leakages & areas of improvement in a high percentage of them. One of the weaknesses noted is only 46.1% said that the internal audit activities give reasonable comfort to employees.

Table 6.5 Crossing between variables 'type of company and formalized corrective action internally'

Type of company	Does the company conduct a formalized corrective action internally?			Total
	Yes	No	Not Sure	
	50	15	24	89
	56.1%	16.9%	27%	100%

Table 6.6 Crossing between variables 'type of company and assurance in audit activity

Type of company	Does the internal audit activity provides assurance on internal controls?			Total
	Yes	No	Not Sure	
	75	6	8	89
	84.3%	6.7%	9%	100%

Table 6.7 Crossing between variables 'type of company and wastages identification in audit activity'

Type of company	Does the internal audit activity identifies wastage, leakages & areas of improvement?			Total
	Yes	No	Not Sure	
	68	7	14	89
	76.4%	7.9%	15.7%	100%

Table 6.8 Crossing between variables 'type of company and internal audit processes & systems'

Type of company	Does the internal audit activity improves policies, procedures, processes & systems?			Total
	Yes	No	Not Sure	
	75	3	11	89
	84.2%	3.4%	12.4%	100%

Table 6.9 Crossing between variables 'type of company and internal audit in implementing recommendations'

Type of company	Does the internal audit activity able to convince the OM to implement their recommendations?			
	Yes	No	Not Sure	Total
	60	5	24	89
	67.4%	5.6%	27%	100%

Table 6.10 Crossing between variables 'type of company and internal audit activity in reasonable comfort'

Type of company	Is the internal audit activity give reasonable comfort?			
	Yes	No	Not Sure	Total
	41	11	37	89
	46%	12.4%	41.6%	100%

6.5 Good Practices

Internal audit evidence is information obtained by an internal auditor which enables conclusions to be formed on which recommendations can be based.

The following tables show that, only 43.8% of employees think that the companies have a common location, which is a repository of the audit plan, audit reports, management replies. 56.1% of employees affirm that the Internal Auditor report directly to the Audit committee. The importance of internal audit activity growing in a company in the coming years was approved by 88.8% of employees.

Table 6.11 Crossing between variables 'type of company and common location in audit activity'

Type of company	Is there a common location, which is a repository of the audit plan?			
	Yes	No	Not Sure	Total
	39	12	38	89
	43.8%	13.5%	42.7%	100%

Table 6.12 Crossing between variables 'type of company and internal auditor reporting'

Type of company	Does the chief of internal auditor reports directly to the audit committee?			Total
	Yes	No	Not Sure	
	50	15	24	89
	56.1%	16.9%	27%	100%

Table 6.13 Crossing between variables 'type of company and periodic quality control review in audit activity'

Type of company	Is there a periodic quality control review carried out over the internal audit?			Total
	Yes	No	Not Sure	
	43	18	28	89
	48.3%	20.2%	31.5%	100%

Table 6.14 Crossing between variables 'type of company and importance of internal audit activity in the company'

Type of company	Does the internal audit activity growing in the company in the coming year?			Total
	Yes	No	Not Sure	
	79	1	9	89
	88.8%	1.1%	10.1%	100%

CHAPTER SEVEN
CONCLUSIONS

This thesis extends previous studies on audit quality by broadening the theoretical and empirical approaches to understanding the meaning of audit quality. Rather than looking at indirect signals of the level of quality achieved, the research has focused on the meaning contained in how audit partners, and quality inspectors talk about the concept of audit quality, that is, how these people internalise and make sense of the term ‘audit quality‘.

This thesis has sought to understand what factors influence the practical construction of the term audit quality.

A review of the literature argued that most of the earlier research on this subject has employed a functionalist approach in investigating the topic of audit quality and how organisational and social factors that exist in the auditing environment.

As illustrated in this study, the concept of audit quality develops dynamically and is influenced by many factors which are prevalent in the auditing setting.

It is hoped the audit quality model developed provides a framework to assist practitioners and academics in understanding what the dimensions of audit quality are, how discrepancies can arise and how these might be managed.

It is management's responsibility to maintain the internal control system and to ensure that resources are properly applied in the manner and to the activities intended. This includes responsibility for the prevention and detection of fraud and other illegal acts.

In order to place reliance on evidence, the Internal Audit department should be satisfied with its nature, extent, adequacy, consistency and relevance to the internal audit assignment and with the methods governing it's collection.

The Head of Internal Audit should meet with management to discuss the audit findings during, and at the completion of fieldwork for each internal audit assignment and the formal written report should be presented to management as soon as possible thereafter.

It is management's responsibility to ensure that proper consideration is given to internal audit reports. Internal Audit should ensure that appropriate arrangements are made to determine whether action has been taken on internal audit recommendations or that management has understood and assumed the risk of not taking such action.

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APPENDICES

Definition of Internal Audit

Internal auditing is an independent, objective assurance and consulting activity designed to add value and improve an organization's operations.

It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes.

Type of Company:_____

System Approvals:_____

1) Is there a willingness to share information? *Yes /No /Not Sure*
2) Is there a documented reporting system to track metrics? *Yes /No /Not Sure*
3) Is there a formalized program for maintenance of equipment? *Yes /No /Not Sure*
4) Do you issue internal non-conformance reports? *Yes /No /Not Sure*
5) Do you conduct formalized corrective action internally? *Yes /No /Not Sure*
6) Does the internal audit activity to the executive provide assurance on internal controls? *Yes /No /Not Sure*
7) Does the internal audit activity to the Executive identify wastage, leakages & areas of improvement? *Yes /No /Not Sure*
8) Does the internal audit activity to the Executive improve policies, procedures, processes & systems? *Yes /No /Not Sure*
9) Does the internal audit activity to the Executive able to convince the operational management to implement their recommendations? *Yes /No /Not Sure*

10) Does the internal audit activity to the Executive Above all, give you reasonable comfort that there will be NO SURPRISES? i.e. you are quite convinced that on major issues their coverage is adequate. *Yes /No /Not Sure*
11) Do you feel comfortable that Internal Audit has competent & proficient staff? *Yes /No /Not Sure*
12) Do you feel comfortable that they follow a suitable methodology/best practices? For e.g. do they follow the "Standards on Internal Audit (SIA) issued by ICAI or any other standards from a Professional body? *Yes /No /Not Sure*
13) If required, is the Head of Internal Audit capable to take on an operational role? For e.g. would you recommend him to be the CFO or the Financial Controller? *Yes /No /Not Sure*
14) In your view is a Risk based internal audit approach being used? *Yes./No./Not. Sure*
15) Has internal audit been useful helping the Board of Directors/Audit Committee fix the Risk Appetite? *Yes./No./Not. Sure*
16) Has internal audit been useful reviewing the design of controls in the ERP system under implementation? *Yes./No./Not. Sure*
17) Has internal audit been useful rating employees on the basis of their compliance of the processes? *Yes./No./Not. Sure*
18) Are risk management being audited *Yes./No./Not. Sur*
19) Are risk management bein audited *Yes./No./Not. Sur*
20) Are fraud risk management being audited *Yes./No./Not. Sure*
21) Is there a common location (e.g. on a hard disk/server/internal audit portal on the intranet), which is a repository of the audit plan, audit reports, management replies, etc. *Yes./No./Not. Sure*
22) Does the Chief Internal Auditor report directly to the Audit committee? *Yes./No./Not. Sure*
23) Do you think the Audit committee needs to be more proactive to make Internal audit as an important tool for itself? *Yes./No./Not. Sure*

24) Is the performance of the internal audit activity measured and reported on an annual basis? *Yes./No./Not. Sure*

25) Is there a periodic quality control review carried out over the internal audit activity? E.g. an External review of the internal audit activity once in three years *Yes./No./Not. Sure*

26) Do you see the importance of internal audit activity growing in your company in the coming years*? Yes./No./Not. Sure*