

**MODALITIES OF IMPLEMENTATION OF FOOD SAFETY
SYSTEM CERTIFICATION-22000:2010 STANDARD: THE CASE
OF NESTLE KENYA LIMITED**

BY

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DECLARATION

BY CANDIDATE

This research project is my original work and to the best of my knowledge has not been submitted for examination or a degree award in any other university.

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This project has been submitted for examination with my approval as the university supervisor.

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DEDICATION

My special dedication goes to my family,

Wife

Veronica Bochaberi

Son

Nelson Omae.

As I went through this noble course, you were the force behind. I found purpose in
life to give you the best.

I give special thanks to my parents, Mr. & Mrs Morimbocho for instilling in me the
discipline to work hard early in life.

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I cannot forget all my (MBA) class mates for the great times and challenges we shared and learnt together. Memories we shared are still very fresh on my mind. May the good Lord reward you all.

ABSTRACT

Implementation of FSSC 22000:2010 for any food manufacturing organization increases its competitiveness and this serves as a big gain in the marketplace. Consumers of the firm's products have confidence in what they purchase because of the proven enactment and on-going maintenance of the system. Successful implementation of the standard has a huge positive implication on the quality of commodities produced by the firm. This study sought to determine the modalities of implementing FSSC 22000:2010 practices at Nestle Kenya limited, the benefits that the firm has reaped due to the implementation and finally to determine the effect of the standard practices to the firm's competitiveness. The research methodology adopted was a case study using Nestle Kenya Limited as the unit of study. The research findings revealed that Nestle Kenya Limited have systems and structures of FSSC 22000:2010 well in place. The organization had to contend with a number of issues when they started to implement the standard. These were: employees not receptive to the idea at first, no clear understanding of the standard for many, low level of empowerment, lack of motivation, unclear objectives, internal inefficiencies, manual process and misalignment across departments. The benefits that the firm has seen from the standard include; notable reduction in consumer complaints, reduced quality near misses, zero product withdrawals from the market, reduced production costs, improved traceability across their value chain, proactive and preventive employee culture, legal compliance, better risk management, proven industry credentials and better stakeholder relationships. It is also important that the barriers cited by the informants as hampering effective implementation of the standard be addressed by the leadership of Nestlé Kenya in order to reap the full benefits of FSSC 22000:2010 and significantly improve the quality performance of the company.

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ABBREVIATIONS AND ACRONYMS

ASQ - American Society for Quality

BBC – British Broadcasting Corporation

BRC - British Retail Consortium

BSI - British Standards Institution

FAO – Food and Agriculture Organization

FSSC – Food Safety System Certification

FSMS - Food Safety Management Systems

GFSI - Global Food Safety Initiative

IFS - International Featured Standards

ISO – International Organization for Standardization

KAM – Kenya Association of Manufacturers

KNBS - Kenya National Bureau of Statistics

KPC – Kenya Pipeline Company

NQA – National Quality Assurance

PRPs – Pre-requisite Programmes

SME – Small and Medium Size Enterprises

SQF - Safe Quality Foods

WHO - World Health Organization

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Surak (2007) points out that over 2,680 Food Safety System Certification (FSSC) 22000 certificates have been awarded globally, with 40% being conferred to sites in Europe, 30% percent to sites in the United States and 20% percent to sites in Asia. FSSC 22000 is a Global Food Safety Initiative (GFSI)-recognized food safety management audit scheme. The scheme uses ISO 22000 and appropriate ISO 22002 standards to outline the requirements for a food safety management system.

A firm implementing FSSC 22000 gains in the marketplace. Consumers have confidence in its products because of the proven enactment and on-going maintenance of the system. Successful implementation of the standard has a huge implication on the quality of commodities produced by a firm (FSSC 22000, 2014).

In various industries a quality standard is put in place by independent institutions such as the British Standards Institution (BSI). Firms gain by regulating the way they work to meet these standards. Businesses do this in the hope that the cost of improving quality will be more than covered by extra sales (BBC, 2014).

The American Society for Quality (2014) states that quality is a subjective term for which each individual or sector has its own definition. In technical terms, quality can have two implications: the characteristics of a commodity or service that bear on its capacity to meet defined or implied requirements, and, a commodity or service without deficiencies. International Organization for Standardization (ISO) defines quality as the degree to which a set of inherent characteristics fulfils requirements

(ISO, 2005). Quality is a perceptual, provisional, and to some degree a subjective feature and may be understood differently by different people. Consumers may pay attention to the specification quality of a product/service, or how it compares to competitors in the marketplace. Producers may measure the conformance quality, or degree to which the product or service was produced appropriately (ASQ, 2014). Support staff may relate quality to the extent that a commodity is reliable, sustainable or can be maintained.

Since FSSC 22000 is a non-prescriptive standard, it provides both opportunities and challenges to organizations that desire to implement the requirements. The challenges are just the opposite of the opportunities. Organizations that want to implement ISO 22000 must have access to professionals who understand food safety systems so that the food safety management system can be properly designed and implemented (Surak and Lorca, 2007).

Challenges to FSSC 22000 implementation highlighted by Newslow (2013) include shifting the status quo, organizing and prioritizing the execution and sustaining focus on commitment. Processes and procedures that have probably been in operation for many years have to be validated. Understanding the accreditation process is at most times confusing. Newslow (2013) notes that the process of an initial paperwork only audit followed by corrective actions, and then another paperwork assessment and the facility implementation leads to confusion.

1.1.1 Quality and Competitiveness

Quality is about meeting the minimum standard required to satisfy customer needs (BBC, 2014). High quality products meet the standards set by customers. ISO (2005) defines quality as the totality of characteristics of products that bear on their capability to meet all legitimate, customer and consumer requirements. When looking at foodstuff, it is important to note that food safety is not the same as food quality, even though there might be an overlap (Will and Guenther, 2007). Quality comprises all product characteristics that impact its value to consumers, whereas safety comprises all measures intended to safeguard human health. The Nestle Quality Policy (2014) states the ambition of Quality Compliance as to be right first time and right every time. Quality Compliance for any food manufacturing organization specifically acts in taking the necessary steps to ensure that all Food Products, Systems and Services are compliant with all up-to-date external and internal requirements. Within an expanding number of external regulatory requirements in food manufacturing, some organizations have also come up with a number of internal requirements. These are directly self-imposed by the organization's continuous attention towards its customers and consumers.

Production of faulty goods incurs repair costs and damages the reputation of the firm. There are two main approaches to achieving quality; Quality control where finished products are checked by inspectors to see if they meet the set standard, and, Quality assurance where quality is built into the production process. For instance, all personnel check all items at all stages of the production process for faults. In this way everyone takes responsibility for delivering quality. Successful quality assurance results in zero defect production. Introducing quality assurance requires Total Quality

Management (TQM), in which managers try to bring about a change in business culture, convincing employees to care about how products are being made and to do their part to ensure standards are met (BBC, 2014).

Organizations need to foster a quality culture with the objective of developing, manufacturing and providing products and services with zero defects that are trusted and preferred by their consumers. There is a need for the firms to continuously challenge themselves to improve the quality management system to guarantee safety, prevent quality incidents and eliminate defects through the review of quality objectives and results. Important as well is encouraging participation and promotion of quality responsibilities amongst all employees and third parties through standards, education, training and coaching, supervision and effective communication (Nestle Quality Policy, 2014).

The National Quality Assurance (2014) notes that the ways to stay competitive in the globalized market is to guarantee customer satisfaction, cut on operating costs, and enhance operating efficiencies, better-quality stakeholder relationships, legal compliance, better risk management, proven industry credentials and capacity to win more business. Attaining and upholding FSSC 22000:2010 requirements brings about competitiveness through these ways. Firms that can meet or exceed customers' expectations have a greater chance of survival in the highly competitive market. Aly and Mullen (2010) emphasized that businesses have to find a strategy that will help them survive, as the past strategies seem not to be working in the present day.

1.1.2 Food industry in Kenya

The Kenya Association of Manufacturers (2014) notes that Kenyan food-processing sector which comprises food, beverages and tobacco, is the leading section of the manufacturing industry. Looking at the structure, financial contribution and performance in the manufacturing segment, the sector remains the most significant and largest. It includes over 1,200 businesses, covering all from small family firms to large international corporations.

The Kenya National Bureau of Statistics (KNBS) 2014 Statistical Abstract points out that the sector grew by 4.8% in 2013 compared to a revised growth of 3.2% in 2012. In 2011 the growth was 3.4%. Among the leading causes of slower growth in 2012 were high costs of production and stiff competition from imported goods. As highlighted in section 1.1.1 of this study, these two causes touch on competitiveness and FSSC 22000:2010 standards go a long way in addressing them.

The two major social-economic challenges facing the country are poverty and unemployment. The food sector can provide both jobs and wealth by leveraging the country's success in the agriculture sector (Munguti, 2013). Food processing covers foods, beverages and tobacco. It includes dairy, vegetable oil, grain milling, baking, confectionery, fruits, vegetables, beverages, meat, fish, honey, nuts, and mushrooms, among others. The food processing sector can therefore be a key driver of the country's economic growth.

Kenya's national food quality and safety system is managed by a number of statutory government agencies under different ministries. Their goal is to uphold public health

by protecting the consumers against health hazards and enhancing economic development. Even though the country does not have a defined and published policy on food safety as part of a wider National Food and Nutrition Policy, there exists food laws designed to protect the consumers. Food safety regulatory agencies work under the Ministries of Trade, Industrialization, Public Health and Sanitation, Livestock, Fisheries Development, and Agriculture. The agencies include Kenya Bureau of Standards (KEBS), Kenya Agricultural Research Institute (KARI), Kenya Plant Health Inspectorate Services (KEPHIS), Department of Public Health (DPH), Weights and Measures Department (WMD), Government Chemist's Department, Department of Veterinary Services (DVS), Kenya Dairy Board (KDB), and Horticultural Crops Development Authority (HCDA), among others. The tasks of these agencies comprise sensitization and implementation of codes of hygiene and agricultural practices by stakeholders throughout the food chain. Despite these, Kenya experiences major problems of non-compliance with basic food safety and agricultural health practices in local markets. The level of awareness of the said practices among small producers is small.

The full extent of the burden and cost of unsafe food is currently unknown in both the developed and developing countries (World Health Organization, 2008). Food-borne diseases remain a problem in Kenya. Approximately 70% of all episodes of diarrhea are attributable to ingestion of contaminated food and water. Processed foods constitute 75% and 25% of the diets in the urban and the rural areas of Kenya, respectively (FAO/WHO, 2005). The informal sector in the food industry comprises small and medium size enterprises (SME) and food vendors, which supply at least 80% of the food products to domestic markets, including meat and milk, under

rudimentary hygiene controls. Aflatoxin poisoning during January – June 2004 in Eastern Kenya resulted in a total of 317 reported cases with 125 deaths. Maize sampled from the affected area had aflatoxin B1 concentrations of 4400ppb which is 220 times greater than the 20ppb allowed by food safety standards. Fatalities linked to the consumption of meat from Rift Valley Fever infected animals have caused public health concerns in the recent past indicating the weaknesses of food safety control agencies in Kenya.

Will and Guenther (2007) point out that food standards practiced in Kenya can be categorized as either mandatory or voluntary. Mandatory standards are set by Governments in the form of regulations, which include technical requirements such as testing, certification and, labeling. They are enforced by liability rules of non-compliance. Voluntary standards are set through formal coordinated approaches of key stakeholders in the supply chain (business associations, NGO initiatives or are developed and monitored by individual companies). These include some of the standards observed by associations. They are required when producers want to compete in international markets. Observance of voluntary standards such as BRC Global and Tesco Nature's Choice (TNC) becomes a precondition for establishing long-term supplier-customer relationships.

1.1.3 Food Safety

Food refers to any substance consumed to provide nutritional support for the body. It is usually of plant or animal origin and contains vital nutrients such as carbohydrates, fats, proteins, vitamins or minerals. Food is ingested by an organism and assimilated by the organism's cells to produce energy, maintain life, or stimulate growth (The

Business Dictionary, 2014). Food safety is a universal requirement. It is not just a requirement for the safety of consumer health, but as well the constant influence food safety bears on global trade (Satin, 2008). Adequate food safety management systems have to lead to safe and sound food. FSSC 22000:2010 is a Global Standard established for use in certification of Food Safety Management Systems for food manufacturers. It encompasses the requirements of ISO 22000:2005 (Food Safety Management Systems requirements) and PASS220:2008 (prerequisite programmes on food safety for food manufacturing). The Global Food Safety Initiative (GFSI) recognizes the FSSC 22000:2010 system. GFSI is the organization that coordinates global food safety requirements. GFSI also works with other food safety management systems like the British Retail Consortium (BRC), International Featured Standards (IFS) and Safe Quality Foods (SQF). FSSC 22000:2010 has a strong component of ISO 22000:2005 which enables it to be in line with other broad management schemes as the ISO 9001 and ISO 14001. This ensures great system integration (Food Safety System Certification 22000, 2014).

Food safety and quality has come to be a topic of high priority in Kenya and universally due to globalization of the food market and access to safe and sound food being considered as a human right in the Bill of Rights of many governments' constitution. Food Safety is essential to public health, poverty decline and viable growth of most governments (Food Safety and Quality, 2014).

Developing nations are faced with great challenges in guaranteeing sufficient supply of safe and sound foods for their local and global markets. Little or no consideration was being paid to avoidance of foodborne hazards and infections along the food value

chains. In the light of this, the World Health Organization (WHO) urged member States to incorporate food safety in their public health and nutrition functions and to offer sufficient resources to start and build up food safety programmes. The main interventions included creation and putting into practice of food safety guidelines, procedures and capability building.

Surak (2005) states that the people working in food manufacturing firms know that the damaging publicity of product recalls, or worse, lawsuit, brand damage and the bearing on consumers' health suffered as a result of a foodborne disorder outbreak associated with a product, can have a considerably adverse effect on the business. With a supply chain that is now vastly international, the consequences of food safety problems are more extensive than ever before. Consequently, food manufacturing firms all along the supply chain range have known the necessity to make more efficient food safety activities by employing food safety management systems (FSMSs) to ensure effective food safety practices, conform to the compulsory governing requirements, meet the stipulations of food chain customers downstream, and provide consumers with a high level of confidence in the products they purchase.

1.1.4 Food Safety System Certification 22000 as a Quality Management System

FSSC 22000 (2014) asserts that the FSSC 22000 standard comprises a comprehensive accreditation standard for Food Safety Systems founded on present requirements for accreditation (ISO 22000, ISO 22003 and technical stipulations for sector Pre-requisite Programmes (PRPs). The endorsement is usually done under the standard ISO guide 17021. Organizations that have already attained ISO 22000 Certification

only require an extra appraisal based on technical requirements for sector PRPs to attain this accreditation scheme.

The FSSC 22000 scheme was established for the accreditation of food safety schemes of firms in the food industry. These include food manufacturers that process or manufacture: perishable animal products, apart from slaughtering and pre-slaughtering, perishable vegetal products, products with extended shelf life at ambient temperature and biological products for food manufacturing (NQA, 2014). Conveyance and storage in the facility and as part of the process are incorporated in the requirements. The scheme is relevant to all food manufacturing firms in the above classes, irrespective of capacity and complexity, whether commercial or non-commercial and whether public or private.

1.1.5 Nestlé Kenya Limited

Nestlé Kenya Limited is a wholly owned subsidiary of Nestlé S.A. in Vevey, Switzerland. Nestlé is a Swiss multinational food and beverage company. It is the largest food company in the world measured by revenues. The firm has been in existence for more than 140 years and currently boasts of more than 2,000 brands. It operates in more than 86 countries and attained CHF 92 billion sales in 2013 (Nestle Annual Report, 2013). The Kenyan plant started in 1974 and has since been manufacturing Infant cereals (Cerelac), Breakfast cereals (Cerevita), Beverages (Milo, Nestle Drinking Chocolate) and Culinary Seasonings (Maggi). The firm also repacks Soluble Coffee (Nescafe) and Dairy products (Nido) from sister plants.

One of the organization's goals is to have no major quality incident and attain absolute quality compliance. A major quality incident involves withdrawal of product from the market. In February 2013, Nestle Kenya had a major learning from its sister plant in Italy which had to withdraw finished product from the market in Italy and Spain after tests revealed traces of foreign material. There is no room for error since there is infant food in the firm's product portfolio.

The firm had a total of 24 consumer complaints and 64 quality near misses in 2013. The aim for 2014 is to reduce these numbers by 50%. Other plans in place are to align testing methods with Control bodies, design and Implement process for prevention and detection of economically motivated adulteration and for the mitigation of the risks. For capability building among its staff, the firm continually strives to strengthen competence management and succession planning in Quality Management. For these reasons, the firm decided to go for FSSC 22000 Certification as the standard goes a long way in addressing the issues.

The organization is guided by a vision; "To positively enhance the quality of life of the people of Equatorial Africa by all that we do through our people, our products and our CSV activities." Success in FSSC 22000 implementation is very vital for the realization of this vision for Nestlé Kenya Limited as it will go a long way in ensuring quality through its brands.

1.2 Research Problem

FSSC 22000 encompasses a comprehensive food quality accreditation scheme for Food Safety Systems based on ISO 22000, ISO 22003 and technical specifications for

sector Pre-requisite Programmes. At the end of the day, the glut of these various national and industry standards pose serious challenges to firms across the supply chain (FSSC 22000, 2014). Challenges consist of misunderstanding about real requirements that must be met to attain even levels of food quality and safety and the higher cost and operational difficulties faced by producers, processors and other suppliers that find themselves required to adhere to several programs.

Matano, (2010) conducted a study on the influence of ISO certification on customer satisfaction using Kenya Pipeline Company Limited as his unit of study, with Nakuru as the region of focus. From the research a number of recommendations were made for the KPC management; to assess at appropriate intervals the quality system adopted to satisfy the ISO Standards, to ensure its continuity, suitability and effectiveness, and to include the customers' satisfaction check in their reviews. The researcher recommended further studies in the area of adaptation of a process approach when developing, Implementing and improving the effectiveness of a quality management system.

Guchu and Mwanaongoro, (2012) conducted a research on ISO Quality Management System Implementation for Small to Medium Manufacturing Firms in Kenya. The focus of their research was on the approach to obtain ISO certification for small to medium sheet metal manufacturing firms in Kenya.

Anyango and Wanjau, (2011) conducted an assessment of the Relationship between ISO 9001 Certification and Performance of Manufacturing Firms in Nairobi. Their consideration was that ISO 9001 accreditation is essential in the current dynamic

manufacturing environment with firms ever more seeking ISO 9001 certification. On the other hand, the effect of ISO 9001 certification on performance remains debatable with a number of empirical studies suggesting the irrelevance of ISO certification on performance.

Sebastianelli and Tamimi, (2003) carried out a research to understand the obstacles to TQM Success. They conducted a national study in the US where they interviewed quality managers. Factor study on managers' ratings of commonly cited obstacles to TQM brought out five main causes: insufficient human resources development and management, poor planning for quality, poor management for quality, insufficient resources for TQM and absence of customer focus.

From the above-mentioned analysis it seems there is little scholarly research on implementation challenges affecting FSSC 22000:2010. A small number of studies have been done on the food manufacturing industry and especially in the Kenyan context. Thus, to be able to respond to the implementation challenges, it is useful to investigate and understand the implementation challenges faced by Nestle Kenya Limited for this standard.

This research aims to explore the challenges to implementation of FSSC 22000 in the food manufacturing industry in Kenya using Nestlé Kenya Limited as the unit of study. Specifically, the research seeks to answer the following questions; is FSSC 22000 beneficial to Nestlé Kenya Limited? What are the challenges to successful implementation of FSSC 22000 in Nestlé Kenya Limited?

1.3 Research Objectives

- i. To determine the benefits of FSSC 22000 standard practices at Nestlé Kenya Limited.
- ii. To investigate the modalities in implementing FSSC 22000 practices at Nestlé Kenya Limited.
- iii. To establish the effect of the standard on Nestlé Kenya's competitiveness.

1.4 Value of the Study

Through identification of the challenges faced in FSSC 22000 implementation, the findings of this research will greatly contribute to the realization of Nestlé Kenya's Vision; "To positively enhance the quality of life of the people of Equatorial Africa by all that we do through our people, our brands and other CSV activities." By highlighting the challenges facing FSSC implementation, the study will help the management of Nestlé Kenya Limited to brainstorm on how they could overcome them. Other food manufacturing firms in Kenya will also find this research very beneficial in terms of understanding the benefits of adopting FSSC 22000 practices and what challenges they are likely to face.

The findings will offer good insight into the practices of FSSC 22000 in food manufacturing in Kenya to the policy makers. This knowledge will go a long way in enhancing policy formulation as regards to food production, manufacturing and importation. It will ensure that Kenyans have access to safe and sound finished products for consumption.

Scholars and academicians will as well find this research an instrumental source of secondary data for future studies in the field of food safety. The study will add to the existing knowledge of information on FSSC 22000 in the food manufacturing industry in Kenya. The study will as well offer understandings into the enactment of FSSC 22000 in food manufacturing Kenya.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The food industry is a complex, global collective of diverse businesses that supply much of the food energy consumed by the world population. This chapter focuses on a review of literature on FSSC 22000 standard and how it leads to quality compliance. The chapter begins by a discussion of the concept of FSSC 22000 and then highlights the benefits of adopting the scheme. In a nutshell, the importance of quality compliance for a firm is that it is trusted by its consumers by never compromising on the quality and safety of its products. The chapter also looks at the benefits and modalities to adoption of FSSC 22000 by firms.

2.2 FSSC 22000:2010

Food Safety System Certification 22000 (FSSC 22000) is a comprehensive, founded on ISO, globally recognized accreditation standard for assessing and certification of food safety in the entire supply chain. The scheme employs the current standards ISO 22000, ISO 22003 and technical requirements for section pre-requisite programmes, which were developed through an extensive and open discussion with a large number of associated firms (FSSC 22000, 2014). NQA (2014) notes that FSSC 22000 offers one of the most complete approaches to a food safety management system for manufacturers of food items. Due to its foundation in ISO 22000:2005, the scheme seamlessly integrates into other quality management systems like ISO 9001, ISO 14001 and OHSAS 18001, making it an essential element of any food manufacturer's ability to enhance quality and guarantee safety. Manufacturers that are already ISO 22000 accredited can attain full, GFSI acknowledged FSSC 22000 endorsement by

meeting the requirements of technical specifications for section pre-requisite programmes and other scheme requirements.

The GFSI standards had not been used to approve ISO 22000:2010 mainly because the requirement for prerequisite programmes for food manufacturing was not exhaustive in the standards. The reason for this was essentially the standard's 'entire food chain' coverage. Large food manufacturers comprising Kraft, Nestle, DANONE and Unilever under the auspices of the Confederation of the Food and Drink Industries of the European Union (CIAA) supported further work that led to the introduction of the PAS220:2008 (prerequisite programmes on food safety for food manufacturing) in 2008 (NQA, 2014). The large companies notably support the scheme because FSSC 22000 is ISO 17021 based. It permits provision for site sampling, and so not necessitating that all sites are visited with every audit. This leads to cost savings to the large multi-site organization.

2.2.1 What FSSC 22000 adds to ISO 22000:2005 and PAS 220:2008

Surak, (2006) points out that FSSC 22000 entails further conditions which give emphasis to the standards already covered under the element requirements to which manufacturers and suppliers must conform. These extra stipulations have a number of implications. Manufacturers are required to have an inventory of applicable foreign, monitoring and legislative requirements on food safety, comprising those relating to: raw materials; services provided; and goods produced and delivered. Additionally, the producer has to conform to the code of practice touching on food safety and any other extra requirements on food safety defined by the customer.

The manufacturer needs to make sure that all services comprising utilities, transport and maintenance, which may affect food safety, are covered by defined conditions. They need to be outlined in documents to the level required to carry out hazard analysis and be managed in adherence to the stipulations of PAS 220:2008, clause 9.

The manufacturer is required to have effective management of the employees in the right application of the food safety standards and practices relating to their duties and responsibilities. Lastly, the food safety scheme has to guarantee and exhibit adherence to these conditions.

2.2.2 FSSC 22000 scope

FSSC 22000 is applicable of a wide range of firms of whichever size or complexity in food manufacturing. The place in which a given firm sits in the food chain does not matter. At the same time, profit-making firms, non-profit firms, publicly listed firms and private firms draw benefits from the scheme. This comprises manufacturers of: fresh animal products like packed meat, poultry, eggs, dairy and fish products. Slaughtering and pre-slaughtering are excluded. Fresh vegetal products like packaged garden-fresh fruits and fresh juices, preserved fruits, packaged fresh vegetables, preserved vegetables. Foodstuffs that have a long shelf life and these include canned products, wafers, snacks, oil, drinking water, beverages, pasta, flour, sugar and salt. Food components, apart from technical and technological aids like additives, vitamins and bio-cultures.

2.3 Benefits of adopting FSSC 22000

Sansawat and Muliylil, (2010) note that FSSC 22000 is the most inclusive food safety management systems standard because it incorporates food safety management

straight forwardly with other management schemes like quality, environmental and safety management systems. The scheme wholly integrates ISO 22000:2005, PAS 220:2008 Pre-requisite Programmes (PRPs), HACCP, and the application steps of CODEX.

In terms of universality, FSSC 22000 has a good standing as it is fully recognised by the Global Food Safety Initiative, (GFSI). The scheme's approach is proactive and preventive as opposed to being reactive. The practices it ensures are put in place lessen/eliminate food safety hazards and supports continuous improvement on Food Safety Issues. Reduction of operating costs comes here as well by way of continuous improvement of processes and increase in efficiencies. Pre-requisite programmes, OPRPs and HACCP are integrated with the Plan-Do-Check-Act ideas of ISO 9001 to increase the success of the scheme. FSSC 22000 ensures legal compliance in whatever environment the organization is set. This is because it encompasses a number of other standards which adequately cover legislative requirements. As far as food safety is concerned, traceability of any product from the source to end is fundamental. This is another area where FSSC 22000 is strong and it increases transparency all through the food supply chain (Food Safety System Certification 22000, 2014). Thus, there is increased risk management. The standard is designed in such a way that it enables small and/or less advanced firms to implement it.

A firm implementing FSSC 22000 gains in the marketplace. Consumers have confidence in its products because of the proven enactment and on-going maintenance of the system. As firms along the supply chain adopt FSSC 22000 or become subject

to customer controls along the food supply chain, the market attains guarantee that there are no weak links in the food chain.

There are benefits within the organization that adopts FSSC 22000. The firm's employees have confidence that they have done the right things to provide control over activities that have an effect food safety. The scheme is well-planned, observed, assessed both internally and externally, and feedback is offered within appropriate timelines to decision makers. Other stakeholder relationships i.e. customers and suppliers are also improved. FSSC 22000 certification improves on the ability of a firm to win more business. This is especially the case where procurement specifications have need of certification as a condition to supply.

The scheme is owned by a non for profit Foundation named- the Foundation for Food Safety Certification- with its legal seat in The Netherlands. The Foundation is administered by stringent laws guaranteeing the lasting independency, non-profit nature and transparency. This makes certain that the funds are strictly managed, all costs of the scheme are as low as possible and there is no funding to other firms or individuals. FSSC 22000 is a fully transparent scheme. All facts can be found on their website and there are no costs to obtain this information (Food Safety System Certification 22000, 2014).

FSSC 22000 is run by the Board of Stakeholders. This Board embodies the interests of all involved parties worldwide and includes members from various stakeholder firms representing manufacturers, food service organizations and retailers.

2.4 Modalities in adopting FSSC 22000

FSSC 22000 is mainly a manual process and liable to error as it involves examination of supplier provided information. Every feature for each ingredient lot is to be verified on all received consignments compared to the firm's ingredient specifications. The organization has to go through many supplier provided certificates of analysis in various formats from different vendors (GFSI 2014).

The scheme requires manual records in most cases and this leads to an intensive process in terms of data retrieval to support third-party audits. Another challenge in relation to this is collection of latest supplier certification on a regular basis. When it comes to auditing a supplier's capability to meet compliance requirements, the assessor(s) has to manually comb through hundreds if not thousands of records.

Challenges to FSSC 22000 implementation highlighted by Newslow (2013) include shifting the status quo, organizing and prioritizing the execution and sustaining focus on commitment. Processes and procedures that have probably been in operation for many years have to be validated. It all boils down to commitment and backing from the organization's leadership team. Understanding the accreditation process is at most times confusing. Newslow (2013) further points out that the process of an initial paperwork only audit followed by corrective actions, and then another paperwork assessment and the facility implementation leads to confusion.

In most cases it is very difficult to initially get all staff to buy into the idea of FSSC 22000. There is usually fear of the unknown. FSSC 22000 is a less prescriptive standard and many are left to wonder whether the activities done will fulfil the

standard and ensure food safety. An approach which enables management to lead by example is very vital in this case. Time and other necessary resources have to be provided for any success to be realized.

In other instances, the greatest challenge is learning and comprehending the standard. This may take months and involves bringing in experts in the standard to hasten the process.

2.5 How to get FSSC 22000 certification

NQA (2014) very much recommends that a firm aiming for certification first initiates an association with the accreditation body before implementation the system. This will go a long way in planning for the accreditation procedure in relation to budgeting and planning. As part of the planning process, a pre-audit is recommended. This is to help assess the organization's readiness and to raise the overall likelihoods of passing the initial certification audit the first time.

The certifying organization selected has to be accredited against ISO 17021 and the relevant AB has to have an IAF/MLA signatory. The assessment team allocated by the accreditation body will conduct stage 1 and stage 2 audits. Following the examination and review of the findings, an audit report on the assessment is given. The audited firm then answers and/or accepts the findings before an Executive Committee approval is obtained. A certificate is given with a validity of 3 years with yearly surveillance audits for the following 2 years to sustain accreditation.

In the case where an organization is already ISO 22000:2010 certified, the only requirement will be a further and usually shorter assessment to validate compliance of

the system to the requirements of PASS 220:2008. An FSSC 22000:2010 certificate will be issued following successful audit.

2.6 A Review of Related Studies

Chikophe (2012) carried out a study on the challenges of getting ISO 9000 certification with Kenya Ports Authority being the unit of study. Aluvi and Kimutai, (2011) examined the principle of ISO 9001:2000 and its implementation in the context of Mumias Sugar Company Limited.

Mulela (2013) carried out a study on the effect of ISO 9001:2008 Certification on process Quality using Kenya Power and Lighting Company as a case study. One of his recommendations was that the motivation for ISO 9001:2008 should be purely internal since it leads to improvement of process performance as compared to when the motivation is purely external.

Sebastianelli and Tamimi, (2003) carried out a research on the obstacles to TQM Success. They conducted a national study in the US where they interviewed quality managers. Factor study on managers' ratings of commonly cited obstacles to TQM brought out five main causes: insufficient human resources development and management, poor planning for quality, poor management for quality, insufficient resources for TQM and absence of customer focus.

Ogutu (2012) studied the impact of ISO 9000 certification on internationalization of the University of Nairobi. Zeng, Tian and Tam, (2007) carried out a study on overcoming barriers to sustainable implementation of the ISO 9001 system in china.

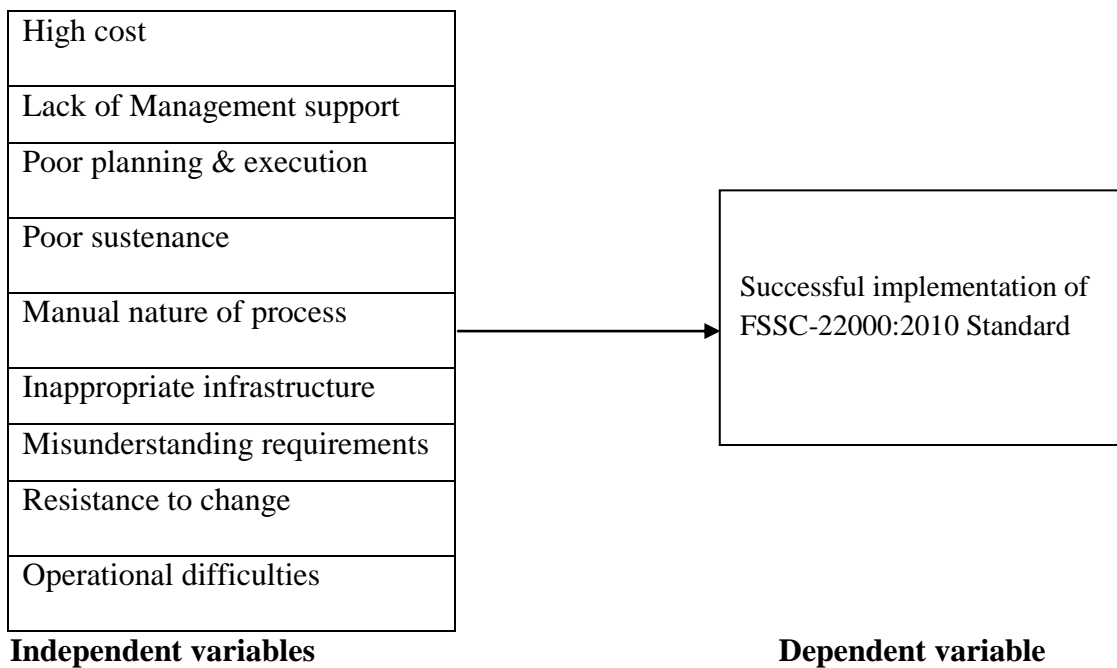
Psomas, Fotopoulos and Kafetzopoulos, (2011) investigated the motives, difficulties and benefits in implementing the ISO 14001 Environmental Management System. The research was carried out in 53 ISO 14001-certified Greek companies.

This research is driven by the fact that few studies have been done on the implementation challenges affecting FSSC 22000:2010 and especially in the Kenyan context. In addition, no research has been done on implementation of FSSC 22000:2010 at Nestle Kenya Limited. Thus, to be able to respond to the implementation challenges, it is useful to investigate and understand the implementation challenges faced by Nestle Kenya Limited for this standard.

2.7 Conceptual Framework

Serakan (2003) defines a conceptual framework as a logically established network of interrelationships among variables thought to be the integral part of the dynamics of the situation being investigated.

Figure 2.1: Conceptual Framework



Source, Author (2014).

In this framework there are 9 factors influencing successful implementation of FSSC-22000:2010 Standard. These are considered as the independent variables. Effective implementation is the dependent variable that is influenced by the independent variables as illustrated above.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter details the research methodology that was adopted so as to meet the objectives set out in chapter one which was to establish the challenges to FSSC 22000 implementation at Nestlé Kenya Limited and determine how they were overcome. The research design and justification, data collection method and data analysis technique are discussed.

3.2 Research Design

The design adopted for this research was a case study method with Nestlé Kenya Limited being the unit of study. A case study refers to a holistic investigation whose aim is to gain understanding, explore the depth and intricacy inherent in an existing phenomenon. It is employed to have an understanding on all particulars and gain thorough knowledge of the chosen sample as opposed to an entire population (Tourki, 2010).

The main purpose for using a case study method for this research is that the truth is captured in great detail. Case studies not only assist in exploration or description of information in a real-life environment, but also help to clarify the difficulties of real life situations which may fail to be captured by way of experimental or survey research (Zainal, 2007). Omondi (2008) argued that case studies excel in bringing out an understanding of complex issues or objects. The study aimed to offer an exhaustive account of FSSC 22000 implementation challenges and how to overcome them.

3.3 Data Collection

The study used primary data relating to the implementation of FSSC 22000 at Nestlé Kenya Limited. The primary data was obtained by way of detailed personal interviews with the Quality Assurance Manager, Production Manager, Factory Hygienist and Food Safety Team members. The variables discussed in the literature review and the research objectives formed the basis of the interview schedule design. Mcgrath (2007) points out that the use of in-depth interviews is effective in case studies as greater depth of information and detail can be obtained as compared to other techniques.

Quantitative data was collected and it consisted of comparison of various figures of before and after implementation of FSSC 22000 Standard. These figures were for; number of major quality incidents, number of consumer complaints and number of quality near misses.

The same set of data was collected from Nestle Zimbabwe which is implementing the FSSC 22000 Standard as well for comparison purposes.

3.4 Data Analysis

The responses from the exhaustive personal interviews formed the basis for content analysis. Content analysis refers to a method for drawing conclusions by objectively and analytically pinpointing specified characteristics of feedback (Kohlbacher, 2006). The tool is used to determine the existence of given words or thoughts within texts or sets of texts. Researchers compute and evaluate the presence, implications and

relationships of such words and ideas, then draw conclusions about the messages within the texts.

Bodolay (2010) justified the use of content analysis in a case study. The qualitative data obtained by a case study is put into numerical form for analysis and comparison. This allows for giving results and drawing conclusions on the subject. Collected data was arranged and reduced by coding into manageable content categories. By reducing the contents of materials into meaningful information, data touching on implementation of FSSC 22000 was analyzed and interpreted.

CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION

4.1 Introduction

The main objective of this research was to establish the modalities of implementation of Food Safety System Certification 22000:2010 standard at Nestle Kenya limited, determine the benefits and effect of the standard on the firm's competitiveness. This chapter presents the analysis and interpretations of the data from the field. The instrument used to collect the primary data was an interview guide which was designed in line with the objectives of the study as well as the FSSC 22000:2010 constructs discussed in literature review.

4.2 Benefits of FSSC 22000:2010 standard practices at Nestlé Kenya Limited

One of the objectives of this research was to determine the benefits of FSSC 22000:2010 Standard practices at Nestlé Kenya Limited. The following are the benefits of FSSC 22000:2010 practices at Nestlé Kenya Limited as explained by the informants. FSSC 22000:2010 has had a huge positive impact on the quality of commodities produced by the firm. This is justified through reduced consumer complaints, reduced quality near misses and zero product withdrawals from the market. The standard is a one stop shop for quality management as it wholly incorporates ISO 22000:2005, PAS 220:2008 Pre-requisite Programmes (PRPs), HACCP, and the application steps of CODEX. As a result the firm does not need to adopt these requirements as separate entities.

| Nestle Kenya Limited | | |
|-----------------------------------|------|--------|
| Number of major Quality Incidents | | |
| 2012 | 2013 | 2014 |
| 0 | 0 | 0 |
| Number of Consumer Complaints | | |
| 2012 | 2013 | 2014 |
| 34 | 24 | 7 YTD |
| Number of Quality near misses | | |
| 2012 | 2013 | 2014 |
| 79 | 47 | 17 YTD |

Source, Author (2014).

The standard has helped foster the culture of continuous improvement in the team. FSSC 22000:2010 style is more proactive and preventive as opposed to being reactive. This means that potential risks are tackled before they occur and preventive measures are always in place. Operating costs have thus been reduced. The firm's quality performance has improved as can be noted from the measures of quality. The key performance indicators for On Time Usage Decision and No. of Blocked Lots due to quality issues have been mostly achieved.

Traceability of product from the source to end has been successfully done through mock recall. This is important in ensuring food safety. Remarkable transparency all through the food supply chain has been demonstrated.

The employees at Nestlé Kenya Limited are more confident that they have contributed to guarantee food safety and quality in their day-to-day work. FSSC 22000:2010 has improved the culture through teamwork activities such as plant ownership teams which constitutes a cross functional team.

Supplier and customer relationships with the firm have gone notches higher. To ensure quality across the value chain, Nestle Kenya Limited has worked with their suppliers to develop them. They also work with their customers like distributors to ensure quality is upheld as their finished goods move to the consumers. Other benefits of FSSC 22000:2010 cited by the informants are; improved housekeeping in the plant, multiskilling of workforce and reduction of waste.

4.3 The modalities in implementing FSSC 22000 practices at Nestlé Kenya Limited

The informants cited changing the status quo, organizing and prioritizing the execution and sustaining focus on commitment as the first major issues to overcome in implementing FSSC 22000:2010. Ways of operation that have been in place for many years have to be validated and changed if need be. Most employees viewed the introduction of the standard as extra work and were not receptive at first. This required clear communication and coaching of employees to change their mind-sets. After a while most of them were able to change their perception and see the importance of the standard.

Lack of understanding of FSSC 22000:2010 as the main barrier affecting the effective implementation of the scheme at Nestlé Kenya Limited was mentioned by most informants. This could explain the initial resistance of employees to successful implementation of the standard. The scheme's practices are also not linked to the reward system thus employees are not driven to participate in its implementation.

Lack of empowerment, lack of motivation and unclear objectives were mentioned as the challenges to effective implementation of FSSC 22000:2010. One of the

informants cited lack of an enabling environment for contribution of new ideas. The general feeling was that it is mainly a top-down approach.

Other issues cited by the informants include; lack of consistency in the follow up of objectives and an organizational culture of 'know it all' which hinders learning. Inadequate skills and capabilities, internal inefficiencies, lack of understanding of a shared objective which was clarified as silo mentality (not my problem) are other issues mentioned by the informants.

One of the main objectives in production is timely delivery of volumes. This at times leads to overlooking the effectiveness of the job done and compromises on the quality of output. Instances of poor inspection of equipment, both by employees and external contractors were cited. This impacts the decision making process making it take unnecessarily longer times. Informants cited instances of misalignment across departments thus hindering support for the Quality Assurance Department.

One of the informants gave details of how some instances of taking shortcuts to accommodate problems has had a negative impact on the effective implementation of FSSC 22000:2010. In some of Nestlé Kenya's material requirements for production there is over-dependency on one local supplier due to high costs of importation. There is also limited or lack of local supply for some raw materials and this poses a risk to consistency of supply. FSSC 22000 is primarily a manual process and prone to error as it consists of analysis of supplier provided information. Every feature for each material lot is to be verified on all received consignments compared to the firm's ingredient specifications. The firm has to go through many supplier provided

certificates of analysis in various formats. Another issue in relation to this is collection of latest supplier certification on a regular basis.

FSSC 22000:2010 requires manual records in almost all cases and this leads to a rigorous process in terms of data retrieval to support third-party audits. When it comes to verifying a supplier's ability to meet compliance requirements, the auditor(s) has to manually comb through hundreds if not thousands of records.

It was mentioned by the informants that successful implementation of the scheme is pegged on commitment and backing from the organization's leadership team. They have to lead from the front to so that other staff can buy into the idea. The team has to also device a way of ensuring there is a clear understanding of the standard and the accreditation process by all employees. The whole process was confusing to a good number of employees. Most importantly, time and other necessary resources have to be provided for any success to be realized.

4.4 The effect of FSSC 22000:2010 standard on Nestlé Kenya's competitiveness

It was gathered from the informants that Nestle Kenya Limited continues with its ambition of right first time and right every time in matters quality. The Food Safety Team members have put measures in place to ensure that all food products, systems and services are compliant with all their internal standards and the external standards that the firm has undertaken. This is as a result of the organization's continuous attention towards its customers and consumers.

The informants cited a significant reduction in the production of non-conforming products following the implementation of the standard. This has led to a positive impact on production costs as there are few write-offs and/or reworking faulty products. With a lower cost of production the firm has been able to competitively price their products against its competitors. This is a good step of quality assurance where quality is built into the production process. All personnel involved in the firm's value chain check all items at all stages of the production process for faults. In this way the entire team takes responsibility for delivering quality.

Most of the informants noted that the firm now guarantees customer satisfaction, has improved on operating efficiencies and has cut on operating costs. They also cited better-quality stakeholder relationships, legal compliance, better risk management, proven industry credentials and capacity to win more business. The attainment and upholding of FSSC 22000:2010 standard brings about competitiveness through these ways.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary discussion on modalities of implementing FSSC 22000:2010, the benefits of FSSC 22000 and the effect of the standard on Nestlé Kenya's competitiveness. A conclusion discussing the general findings of the research is highlighted followed by recommendation based on the findings of the study. The limitations of the study and suggestions on areas of further research are discussed at the end of the chapter.

5.2 Summary of Findings

The research findings revealed that Nestle Kenya Limited has the systems and structures of FSSC 22000:2010 in place. The standard has been implemented effectively and the leadership team fully supports the implementation. The drivers of FSSC 22000:2010 at Nestlé Kenya Limited include: increased competition in the industry, to reduce costs, the need for a comprehensive quality scheme, to foster a continuous improvement culture, ensure traceability, to improve the company's performance and to produce high quality products and services at the right time and place thus satisfying the customer's needs. The benefits of FSSC 22000:2010 cited by the informants include: improved quality, improved performance of the organization, multiskilling of workforce, cost control, reduction of waste and most importantly maintaining good relationship with the suppliers and customers by producing high quality products at the required time.

The barriers cited by the informants were within the control of the management of Nestlé Kenya Limited and were overcome. These barriers include: lack of understanding of FSSC 22000:2010, lack of empowerment, challenging the status quo, lack of motivation, unclear objectives, poor planning, lack of an enabling environment for contribution of new innovative ideas, inconsistency in the follow up of objectives and poor inspection of equipment. The top management is supportive of the concept and the informants are positive about FSSC 22000:2010 standard and are fully participating in the implementation.

5.3 Conclusions

The findings of this research are consistent with the studies done by other scholars. The key driver of implementing FSSC 22000:2010 at Nestlé Kenya Limited is competition. Tourki (2010) noted that lots of firms have become conscious of the crucial need to adopt lean initiatives for them to survive in the global competition. Nestlé Kenya Limited has also in the past undertaken several quality standards. FSSC 22000:2010 encompasses all these standards and has made it easier for the firm to adhere to all the requirements. Sansawat and Muliylil (2010) note that FSSC 22000 is the most inclusive food safety management systems standard as it integrates ISO 22000:2005, PAS 220:2008 Pre-requisite Programmes (PRPs), HACCP, and the application steps of CODEX.

One of Nestlé's core drivers is to delight its consumers by producing high quality products at the right time and cost. Kumar and Kumar (2012) noted that firms that can meet or exceed their customers' expectations have a higher chance of survival. Reduction of costs was cited by the informants as among the key drivers of adoption

of FSSC 22000:2010. Mehta, Mehta and Mehta (2012) explained how lean initiatives not only cut on operational costs but also aims to improve, restore and considerably raise the competitiveness of an organization.

Sebastianelli and Tamimi, (2003) carried out a research on the obstacles to TQM Success. Five main causes issues were brought up and these include; insufficient human resources development and management, poor planning for quality, poor management for quality, insufficient resources for TQM and absence of customer focus. The respondents here were quality managers and the points raised are similar to what this research brought out.

5.4 Recommendations

There is a good understanding of FSSC 22000:2010 and its benefits and hence the organization has to keep up with the standard to continue reaping these benefits. It is essential that the potential benefits of FSSC 22000:2010 are made known to all employees to make sure they are supportive in its enactment.

Generally, very good systems and structures are in place that support FSSC 22000:2010 which if thoroughly effected will improve the competitiveness of the firm in a big way. It is vital that the leadership enacts a measure of tracking the effectiveness of each element of the standard and make sure that there is a regular follow up of the systems and structures in place to ensure they are implemented as required.

The barriers cited by the informants as hampering effective implementation need to be addressed by the leadership of Nestlé Kenya in order to reap the full benefits of FSSC 22000:2010 and significantly improve the quality performance of the company. It is important to note that the leadership is supportive and the employees are also positive about FSSC 22000:2010 concept and are willing to participate in its implementation.

5.5 Limitations of the study

The research was mainly constrained by the short time available. Majority of the informants also had tight diaries and could only offer limited time to provide the required information. Additionally, there was much interference during the interviews due to the nature of their work. The concept of FSSC 22000:2010 was also not well understood by some informants and this posed challenges in getting feedback and gathering information on its implementation.

The Kenyan food manufacturing sector is highly competitive and players have a tendency not to divulge data touching on their production practices or challenges as they doubtfully consider this as a platform for industrial spying. They think this may expose their weakness or strengths to their competitors. This phenomenon has led to limited scholarly articles on the Kenyan case touching on FSSC 22000:2010 thus hampering benchmarking.

5.6 Suggestions for further studies

Food industry plays an important role in the Kenyan economy. On the other hand, the industry faces a lot of challenges that threaten its survival in the globalized market. Adoption of FSSC 22000:2010 is a strategic survival technique for the food

companies in Kenya. Thus it is important that more studies be carried out on FSSC 22000:2010 implementation in the food industry in Kenya.

REFERENCES

- Aluvi A. P., & Kimutai, G. (2011, October). *The role of iso 9001:2000 certification in Kenya's sugar industry: A case of Mumias sugar company*. Paper presented at the Kabarak University First International Conference. Retrieved from <http://www.kabarak.ac.ke/downloads/sbiz/>
- Aly, N., & Mullen, P. D. (2010). Survival strategies of lean Organizations. *California Journal*, 8(1), 100-109.
- American Society for Quality. (2014). *Quality*. Retrieved from <http://asq.org/glossary/q.html>
- Anyango, D. M. O., & Wanjau, K. (2011). *Assessment of the relationship between iso 9001 certification and performance of manufacturing firms in Nairobi*. Paper presented at the University of Nairobi AIBUMA Conference. Retrieved from www.aibuma.org/archive/.../aibuma2011-submission234.pdf
- Bodolay, J. (2010). *Impact of lean practices on printing companies*. (Doctoral Dissertation, University of California).
- British Broadcasting Corporation. (2014). *What is quality?* Retrieved from <http://www.bbc.co.uk/schools/gcsebitesize/business/production/locationanddistributionrev1.shtml>

Chikophe, A. M. (2012). *Challenges of getting iso 9000 certification: The case of Kenya Ports Authority* (Unpublished master's thesis). University of Nairobi.

Easing compliance with FSSC 22000. (2014). *Global Food Safety Initiative 2014*.

Retrieved from

http://cdn2.hubspot.net/hub/301847/file-521645892-pdf/Webinar_Presentations/TraceGains-FoodSafetyTech_2013-05-16_PDF.pdf?t=1392244564000

FAO/WHO. (2005). *Practical actions to promote food safety: Regional conference on food safety for Africa. Final Report Harare, Zimbabwe. 3 – 6 October 2005*.

Retrieved from <http://www.fao.org/docrep/meeting/010/a0215e/a0215e00.htm>

Food, Beverages & Tobacco. (2014). *Kenya Association of Manufacturers*. Retrieved from

<http://www.kam.co.ke/index.php/about-us/organization-structure/industrial-sectors/171-food-beverages-a-tobacco->

Food Safety and Quality. (2014). *University of Nairobi*. Retrieved from

<http://foodtech.uonbi.ac.ke/node/1260/>

Food Safety System Certification 22000. (2014). *Food safety system certification*

Retrieved from <http://www.fssc22000.com/documents/home.xml?lang=en>

Guchu, G., & Mwanaongoro, Z. (2012). *Iso quality management system*

implementation for small to medium manufacturing firms Kenya. Paper presented at the Jomo Kenyatta University of Agriculture & Technology Mechanical Engineering Conference on Sustainable Research and Innovation. Retrieved from <http://ir.jkuat.ac.ke/>

Industry. (2014). *Kenya National Bureau of Statistics*. Retrieved from http://www.knbs.or.ke/index.php?option=com_phocadownload&view=category&id=68:industry&Itemid=1135

International Organization for Standardization (ISO). (2008). *Introduction and support package: implementation guidance for ISO 9001:2008. ISO/TC 176/SC 2/N836 document*.

Kohlbacher, F. (2006, January). The use of qualitative content analysis in case study research. In *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research*, 7, (1).

Kumar, R., & Kumar, V. (2012). Lean manufacturing: elements and its benefits for manufacturing industry. *Proceedings of the National Conference on Trends and Advances in Mechanical Engineering, YMCA University of Science & Technology*.

Matano, O. R. (2010). *Influence of iso certification on customer satisfaction: the case of Kenya Pipeline Company Limited Nakuru region, Kenya*. (Unpublished master's thesis). University of Nairobi.

- McGrath, W. (2007). *Impact analysis of large-scale lean manufacturing initiatives upon manufacturing process innovation in Irish companies* (Doctoral dissertation, Waterford Institute of Technology). Retrieved from <http://repository.wit.ie/974/>
- Mehta, E. R. K., Mehta, D., & Mehta, N. K. (2012). An Exploratory Study on Implementation of Lean Manufacturing Practices (With Special Reference to Automobile Sector Industry). *Y Ö NET Đ M*, 289.
- Nestle Annual Report, 2013. Retrieved from http://www.nestle.com/assetlibrary/documents/library/documents/annual_reports/2013-annual-report-en.pdf
- Newslow, D. (2013). *Food safety management programs: applications, best practices, and compliance*. Hardcover CRC Press; 1 edition (December 20 2013). 317-319.
- Ogutu, P. O. (2012). *The impact of iso 9000 certification on internationalization of the University of Nairobi* (Unpublished master's thesis). University of Nairobi.
- Omondi, D. O. (2008). *Application of lean thinking to business process management: the case of Kenya Revenue Authority*. (Unpublished master's thesis). University of Nairobi.
- Sansawat, S., & Muliyl, V. (2010). *Understanding the FSSC 22000 food*

safety system certification standard. A white paper on the challenges, impacts and opportunities contained in FSSC 22000. Retrieved from <http://www.sgs.com/~media/Global/Documents/White%20Papers/sgs-fssc-22000-whitepaper-en-10.ashx>

Satin, M. (2008). *Food alert!: the ultimate sourcebook for food safety* (2 ed.). New York, NY: Facts On File. ISBN 9780816069682.

Sebastianelli, R., & Tamimi, N. (2003). Understanding the obstacles to TQM success *Quality Management Journal July 2003, Volume 10 • Number 3, 47-54.*

Serakan, U. (2003). *Business research methods. A managerial approach*. Upper Saddle River, New Jersey: Pearson Education.

Surak, J. G. (December 2006/January 2007). A global standard puzzle solved? How the ISO 22000 food safety management system integrates HACCP and more. *Food Safety Magazine*. Retrieved from <http://www.foodsafetymagazine.com/magazine-archive1/december-2005january-2006/a-global-standard-puzzle-solved-how-the-iso-22000-food-safety-management-system-integrates-haccp-and-more/>

Surak, J.G., & Lorca, T.A. (2007). Process audit for food safety. *Food Safety Magazine*. 13(4):12–15. Retrieved from <http://www.foodsafetymagazine.com/magazine-archive1/februarymarch-2013/iso-22000-and-the-beat-goes-on/>

Tourki, T. (2010). *Implementation of Lean within the Cement Industry*. (Doctoral dissertation, University of De Montfort).

What is FSSC 22000:2010? (2014). *National Quality Assurance*. Retrieved from <http://www.nqa.com/en/atozservices/fssc-22000-is-an-international-standard-developed-for-the-certification-of-food-safety-management-sy.asp>

Will, M., & Guenther, D. (2007). *Food Quality and Safety Standards as required by EU Law and the Private Industry with special Reference to MEDA Countries' Exports of Fresh and Processed Fruits and Vegetables, Herbs and Spices. A Practitioners' Reference Book, 2nd Edition*. GTZ – Division 45.

World Health Organization. (2008). *Initiative to Estimate the Global Burden of Foodborne Diseases: A Summary Document*. Retrieved from http://www.who.int/foodsafety/foodborne_disease/ferg/en/index7.html

APPENDICES

Appendix One: University's Letter of Introduction



UNIVERSITY OF NAIROBI
FACULTY OF COMMERCE
MBA PROGRAM – LOWER KABETE CAMPUS

Telephone: 4184160 Ext. 208
Telegrams: "Varsity", Nairobi
Telex: 22095 Varsity

P.O. Box 30197
Nairobi, Kenya

DATE 03/09/2014

TO WHOM IT MAY CONCERN

The bearer of this letter MISIANI GEVIN DNG'ERA


Registration No: DG1/75499/2012

is a Master of Business Administration (MBA) student of the University of Nairobi.

He/she is required to submit as part of his/her coursework assessment a research project report on a management problem. We would like the students to do their projects on real problems affecting firms in Kenya. We would, therefore, appreciate if you assist him/her by allowing him/her to collect data in your organization for the research.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organizations on request.

Thank you.


PATRICK NYABUTO
MBA ADMINISTRATOR
SCHOOL OF BUSINESS



Appendix Two: Interview Guide

Demographic

Interview date: _____

Interviewee: _____

Title: _____

Department: _____

Interview Questions

1. How effective is the implementation of FSSC 22000?
2. What are the modalities of implementing FSSC 22000?
3. What phrase best reflects your top management support of FSSC 22000?
4. What are the employees' opinions to FSSC 22000?
5. While implementing FSSC 22000, have there been any other unexpected changes within your company?
6. What are the driving forces behind implementing FSSC 22000?
7. What did you expect to gain from implementing FSSC 22000?
8. To date, what benefits have you gained by implementing FSSC 22000?

Appendix Three: Comparison with Zimbabwe

| Nestle Zimbabwe Limited | | |
|-----------------------------------|------|--------|
| Number of major Quality Incidents | | |
| 2012 | 2013 | 2014 |
| 0 | 0 | 0 |
| Number of Consumer Complaints | | |
| 2012 | 2013 | 2014 |
| 29 | 17 | YTD 11 |
| Number of Quality near misses | | |
| 2012 | 2013 | 2014 |
| 102 | 77 | YTD 43 |

Source, Author (2014).