

**KAIZEN AND ORGANIZATIONAL CULTURE IN
MANUFACTURING FIRMS IN KENYA**

BY

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DECLARATION

This my original work and has not been presented for a study in any University or College.

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Sign.....

SUPERVISOR

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

Onserio Nyamwange

Date:.....

Sign.....

DEDICATION

This project is dedicated to my parents for their financial support and Lecturers of the University of Nairobi, School of Business for their tireless efforts of supporting me academically and emotionally as their continual guidance and support contributed to the completion of this project within the stipulated timeframe.

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Above all, thanks to my God because of the unwavering provision, love and protection in all moment of lack and despair, fear and discouragement. Individually I take the formatting errors that would be spotted in this script.

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ABBREVIATIONS AND ACRONYMS

CI	Continuous Improvement
TQC	Total Quality Control
PMSs	Performance Measurement
Lean	Produce more (outputs) with less (inputs).
Kaizen	Japanese for "improvement", or "change for the better". Continuous incremental improvement of an activity to create more value with less waste.
Kanban	Is a simple parts-movement system that depends on cards and boxes/containers to take parts from one workstation to another on a production line.
Poka-Yoke	A mistake-proofing device or procedure to prevent a defect during order taking or manufacture.
OPT	Optimized Production Technology - Production scheduling and inventory control system that (unlike manufacturing resource planning) recognizes bottlenecks (capacity constraints) and does not aim at full capacity utilization at all times. OPT's objective is to simultaneously raise throughput while reducing inventory and operating costs, and achieve a smooth, continuous flow of work in process.
BPIs	Best Practice Interventions
COMESA	Common Market for Eastern and Southern Africa
GoK	Government of Kenya

ABSTRACT

The underpinning principle of KAIZEN (Japanese word for continuous improvement) is the use of various problem-solving tools for the identification and solution of work-based problems. The aim is for improvement to reach new 'benchmarks' with every problem that is solved. To consolidate the new benchmark, the improvement must be standardized. Continuous improvement (CI) as a collection of activities that constitute a process intended to achieve performance improvement. In manufacturing, these activities primarily involve simplification of production processes, chiefly through the elimination of waste. In service industries and the public sector, the focus is on simplification and improved customer service through greater empowerment of individual employees and correspondingly less bureaucracy. Acquisition and use of skills for process analysis and problem solving are seen as fundamental to CI in the private and public sectors. Organizational culture of firms in the manufacturing industry is influenced by diverse cultural values of people including: their family structures, educational structures, religious organizations, associations, forms of government, work organizations, law, literature, settlement patterns, and buildings. All of these reflect common beliefs that derive from the common culture that determine organizational performance. The study established that there was positive correlation on Kaizen practices and organizational culture in relation to performance of manufacturing companies.. The study established that motivation among employees like; inability of management to involve them in decision making, lack of promotion, recognition of hardworking employees, lack of training, salary increment and poor working environments were factors that affected Kaizen practices within the organization context. Therefore, this study recommends that management to motivate employees using both monetary and non monetary rewards for better performance.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

In Japanese management, kaizen means “continuous improvement” involving the entire workforce from the top management to middle managers and workers. The origin of Japan’s kaizen movement was the quality control method imported from the United States (US) in the post WW2 period. Japan assimilated and developed this as its own management practice method which later even surpassed performance in the US. This adapted method, which became known as kaizen, spread rapidly among Japanese companies including a large number of small and medium-sized enterprises. It subsequently spread overseas as Japanese business activities expanded abroad and Japanese companies began to build production networks with local companies (Imai, 1997).

Japan offers assistance for kaizen in many developing countries through private channels such as intra-company technology transfer and support for local suppliers, as well as through public channels such as official development assistance (ODA) and guidance provided by various public organizations. By now, kaizen assistance is one of the standard menu items of Japanese industrial support in developing countries. While such assistance initially focused on East Asia where Japan had active business partnerships, it has now been implemented widely in other regions including South Asia, Latin America and Eastern Europe. However, as far as Sub-Saharan Africa is concerned, knowledge

sharing and implementation of kaizen has been rather limited except in a few notable cases. There are a lot of unexploited benefits of selective and well calibrated application of kaizen from which African countries can draw upon to improve their production and service units (GRIPS Development Forum, 2009)

In spite of increasing recognition of kaizen, studies show that the transfer of kaizen is not successfully accomplished by the companies (Fukuda, 1988; Kono, 1982; White & Trevor, 1983). Japanese companies are still transferring kaizen and facing difficulties transferring kaizen (Yokozawa, Steenhuis, & Bruijn, 2010). Kaizen involves changes in organizational culture and structure which allows open-communication, teamwork, and trust development (Imai, 1986; Ohno, 1988; Recht & Wilderom, 1998). Such concept as kaizen which is context-dependent, level of successful transfer is highly dependent on the degree of fit between the national cultures and the organizational culture that kaizen involves.

1.1.1Kaizen

The Kaizen is an originally Japanese management concept for incremental change. According to Imai (1986) Kaizen is defined as continuous improvement involving employees in all levels of an organization. As operationally defined by Brunet and New (2003) the three characteristics of the kaizen system generally require that it be; Continuous, nature that is a never-ending journey for quality and efficiency; usually

incremental in nature, always improving instead of reorganizing or reinstalling; Participative, requiring workforce involvement and intelligence.

Unlike Western business concepts, generally epitomized by the terms innovation or drastic change in order to create fast results, the foundation of the Japanese Kaizen management system was made popular because it was adapted to adhere to a continual process of improvement (Becker and Snow, 1997). More specifically, in business Kaizen includes quality control, automation, workers suggestion systems, just-in-time delivery systems and the 5S process. (i.e., seiri (sorting); seiton (setting straight); seiso (cleanliness); seiketsu (standardization in the workplace); and shitsuke (sustaining self-discipline and promoting a sense of pride in workers in their work and being owners of their responsibility (Genobz , July 15, 2010).

Kaizen involves everyone in the organization and largely depends on cross-functional teams that can be empowered to challenge the status quo and commit to better quality and improve productivity. Based on workers self-criticism and adherence to the constructive critique of the process, Kaizen involves bottom-up decision-making and practices an employee-driven management style that heavily emphasizes teamwork. As narrated by Hhno, Hhno, and Uesu, teams are not only formed across various disciplines, but the teams are given training in the dynamics of teamwork. After „team training is completed, the team groups are given a problem to investigate and asked to submit recommendations for improvement. A unique aspect of this recommendation process is that the team is

empowered by upper management to take action on these recommendations and see them through to completion” (2009).

Kaizen is process-oriented, that is before results can be improved, and process must be improved, as opposed to result-orientation where outcomes are all that counts (Imai, 1986). The process begins with by measuring or defining the current process using value stream mapping to map the current state and future state map so as to identify the gap. Kaizen encompasses several techniques these include; 5S (sorting, setting in order, shining, standardizing, and sustaining), mudadori (eliminating the seven types of waste: transport, inventory, motion, waiting, overproduction, over processing and defects), quality control circles (groups of workers who regularly brainstorm on productivity and quality, bringing improvement from the bottom up), the seven quality control tools, statistical analysis and Total Quality Management (TQM). The key objectives of Kaizen are; Elimination of waste, Control quality of products process, Standardization of work, Delivery on time and efficient use of resources. With such improvement that relates to the key objectives, the organization will achieve superb quality levels, greater efficiencies, teamwork with improved employee morale and higher level of profitability.

1.1.2 Culture and Management Practice

Research (Sonja and Phillips, 2004) assumes that managers in today’s multicultural global business community frequently encounter cultural differences, which can interfere with management practices in organizations. In comparing cultures of different countries,

cross-cultural researchers have concentrated effort on an examination of a set of cultural value dimensions developed by Hofstede. Dominant value systems of different countries can be ordered along Hofstede's set of cultural value dimensions (Hofstede, 1980; Hofstede and Bond, 1988). People's Dominant value systems have been crystallized in the institutions these people have built together: their family structures, educational structures, religious organizations, associations, forms of government, work organizations, law, literature, settlement patterns, and buildings. All of these reflect common beliefs that derive from the common culture. Whereas the value systems affect human thinking, feeling, action, and the behavior of organizations and institutions in predictable ways, the value dimensions reflect basic problems that any society has to cope with but for which solutions differ from country to country (Hofstede, 1983).

Shackleton and Ali (1990) and Chow et al (1991) support the application of Hofstede's (1980) cultural value dimensions because Hofstede's empirical results have been replicated at the national level in fifty countries and three regions. On the other hand, unlike Hofstede's approach, Kluckhohn and Strodtbeck (1961) value orientations' approach does not aggregate work preference across a range of discrete psychological variables (attitudes, work values, sources of satisfaction). Hence, Kluckhohn and Strodtbeck's approach is suitable for a study examining job involvement as an outcome but not appropriate for studies examining work involvement. (Nyambegeera et al, 2001). Job involvement is a specific belief regarding an individual worker's identification with his or her current job. Work involvement is a construct, which relates to all employees' views of work, as it should be or organizational performance. Therefore Hofstede's

approach as opposed to Kluckhohn and Strodtbeck's value orientations approach is more suitable for this paper, which is examining the relationship between culture and Kaizen practices and consequently on work involvement.

1.1.3 Kenya Manufacturing Sector

Kenya's manufacturing sector is among the key productive sectors identified for economic growth and development because of its immense potential for wealth, employment creation and poverty alleviation. Currently the sector employs 254,000 people, which represents 13 percent of total employment with an additional 1.4 million people employed in the formal side of the industry. The sector is mainly agro-based and characterized by relatively low value addition, employment and capacity utilization and export volumes partly due to weak linkages to other sectors (Kenya Bureau of Statistics Report, 2011). In addition, the sector will continue to provide impetus towards achievement of Millennium Development Goals (MDGs) both in the medium and long term particularly goal one on Eradication of extreme Poverty and hunger and goal eight on Global Partnerships for Development. The role of the manufacturing sector in Vision 2030 is to create employment and wealth. The sectors overall goal in the Medium Term Plan (MTP) is to increase its contribution to the GDP by at least 10% per annum over the medium term period 2008 – 2012 as envisaged in the Vision 2030.

A number of interventions are proposed in the Vision 2030 and its first Medium Term Plan which will lead Kenya to be globally competitive and prosperous. The objectives to

be pursued in the medium term period are; to strengthen the capacity and local content of domestically manufactured goods, to increase the generation and utilization of Research and Development results, to raise the share of products in the regional market from 7% to 15 % and to develop niche products for existing and new markets

1.2 Research Problem

Kaizen has been viewed as a key element in Japanese management and has been presented as one of the sources of the competitiveness of Japanese manufacturers (Imai, 1986). Kaizen involves the creation of a culture of sustained continuous improvement focused on eliminating wastes in all systems and process of an organization. The literature indicates that the Kaizen has been transferred within Japanese companies, to overseas subsidiaries (Aoki, 2008) and adopted by non- Japanese companies in the developed economies (Oliver & Wilkinson, 1992) as well as in emerging countries (Humphrey, 1995).

In spite of increasing recognition of Kaizen, studies show that the transfer of Kaizen is not successfully accomplished by the companies (Fukuda, 1988; Kono, 1982; White & Trevor, 1983). Literature indicates that Kaizen implementation is contextual dependent, some scholars suggest that Kaizen practices are embedded in Japanese culture and hence difficult to transfer to another culture. Others suggested that only the rational aspects of kaizen practices were transferable overseas. Recent studies show that Kaizen approaches were not easily adopted in abroad due to such environmental factors as the differences in

national culture and working ethics. Along with national culture aspects, scholar argued that the adoption of Kaizen highly depends on some specific organizational culture such as centralization of authority and cross functional cooperation (Recht & Wilderom, 1998)

There are a number of studies on transferability of the Japanese management practices but none focus on practices compatible with Kenya work culture. Such research literature is by (Mathenge, 2012) on factors influencing implementation of quality standards (Kaizen) in flower industry: a case of Kariuki Limited in Kiambu. His research indicated that that the following factors influenced implementation of Kaizen; team work was leading in influence, followed by training, followed by management support and last was education level of workers. The researcher concluded that team work was very important in the implementation of Kaizen while education level had very little influence in Kaizen implementation.

Research by (Nderi, 2012) on the relationship between Kaizen implementation and operations performance improvement. The results from the study show that Kaizen practices have varying degrees of implementation in Kenyan manufacturing firms; with 5S having the greatest extent of implementation and suggestion system and TPS having the least extent of implementation. On challenges faced in Kaizen implementation, employee attitudes and misconceptions about Kaizen posed the greatest challenge whereas lack of management support and economic constraints posed the least challenge. Results from her regression analysis show that implementation of Kaizen practices in

Kenyan manufacturing firms is significantly related to operations performance improvement.

From literature outside Kenya context is project undertaken by Japan International Cooperation Agency (GRIPS Development Forum October 2009) which shows that Kaizen and other Japanese-made practices relating to quality and productivity are not limited to profit-making business activities or the manufacturing sector. The project involved applying Kaizen to health care, a non-manufacturing sector, in Central America. An Evidence Based Participatory Quality Improvement (EPQI) system was introduced in order to continuously improve health care quality in hospitals. Participants in this project implemented several pioneering EPQI projects in their respective countries and attained a considerable improvement in quality in health care. A regional network of EPQI was organized and regional conferences are now held every year with participants attending from the eight countries of Meso America.

Studies on degree of compatibility between the Japanese company's Kaizen culture and the host country's national culture are limited. Given that there are some leading multinational companies operating in Kenya which are bringing in Kaizen methods including Toyota Kenya Ltd. and GlaxoSmithKline Kenya Ltd as well as Kenya Association of Manufacturers (KAM), which has approximately 600 members, has been actively involved in organizing seminars and training to upgrade the capacity of its members (GRIPS Development Forum 2009). It is critical to study transferability of the Japanese Kaizen Management techniques to manufacturing companies in Kenya which

have a different culture and business environment. Hence the following research questions was sought to be answered by the study:

Is the level of the implementation of Kaizen practices related to the organizational culture in manufacturing companies in Kenya?

1.3 Research Objective

The study aimed to establish fit between Kaizen culture and organizational culture of manufacturing companies in Kenya.

1.4 The value of the study

For the scholars, the study will provide additional information to the body of literature in the field of Kaizen implementation, on influence of organizational culture on transformation of Kaizen practices; various scholars can also conduct a study to verify the study's findings

For Managers the study findings will provide useful and pertinent information and thus enable them to create endogenous undertaking conducive to change organizational culture that would successfully enable Kaizen implementation; various scholars can also conduct a study to verify the study's findings.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter focuses on review of the pertinent literature on basic concept and characteristics of Kaizen. According to Polit (1999) a literature review comprises the searching, identification and understanding of information relevant to the research topic. The chapter is divided into; Concept of Kaizen and Japan assistance in implementation of Kaizen in developing countries.

2.2 Kaizen practices

In Japanese management, Kaizen means “continual improvement” involving the entire workforce from the top management to middle managers and workers. Kaizen focuses on the way people approach work it is result oriented technique, which helps to identify or cause of inefficient working and offer systematic approach to change the attitude of the people, to eliminate the cause of the problems in the process leading to improvement in quality of output and to miraculous organizational changes.

There are a number of studies on transferability of the Japanese management practices; the concept of Kaizen has been presented in different way. One of example of Kaizen practices is the employee suggestion that aims at generating many small improvement and morale boosting benefits of positive employee participation. Literature indicates that, a total of 60 to 70 suggestions per employee per year are written down, shared, and implemented in Toyota Motor Company (Imai, 1997). Thus, findings from the transfer of

Japanese management system can be applied to the transfer of Kaizen. Many studies have been conducted based on Hofstede's (2001) four cultural dimensions model (power distance, uncertainty avoidance, individualism/collectivism, and masculinity/femininity) (Flynn & Saladin, 2006; Lagrosen, 2003; Recht & Wilderom, 1998; Smeds, Olivari, & Corso, 2001).

Recognized as a core of Kaizen, QC Circle activities has been initiated by of Japanese Scientists & Engineers (JUSE) in 1962 with the objective is to develop members' capabilities and achieve self-actualization, make the workplace more pleasant, vital and satisfying, improve the customer satisfaction, and contribute to the society. Recently, QC Circle is expanded to more than 70 countries and regions and gives significantly contribution to the improvement of quality performance over the world (Ohno,(1988). Autonomous maintenance refers to the practice designed to; involve operators in maintaining their own equipment. Autonomous maintenance is regarded as a key component of TPM, which has initiated by the Japan Institute of Plant Maintenance (JIPM) in 1971 based on maintenance concepts developed in the United States in the 1950s. TPM Excellent Awards have been awarded to some 2,000 plants since its establishment in 1964.

Recently, autonomous maintenance and other TPM techniques are widely expanded to other countries and region such as India, Thailand, and Taiwan. The studies on transferability of kaizen practices suggest that the implementation of Japanese continuous

improvement practices in the overseas plants is situated in cultural and social context (Aoki, 2008).

While national culture is defined as collective programming of mind that distinguishes members of one group from another, organizational culture is regarded as the specific collection of values and norms that are shared by people and groups in an organization and that control the way they interact with each other and with stakeholders outside the organization. When Kaizen practices are adopted in an organization, those factors would moderate the teamwork, decision-making process for problem solving, and autonomous activities.

2.3 Hofstede's National Cultural Dimensions

To study the transferability of Kaizen, Hofstede's approach is selected for this study because it sharply differentiates between national and organizational cultural components. Based on Hofstede's four cultural dimensions (Power distance, Uncertainty avoidance, Individualism/collectivism and Masculinity/femininity).

Power distance is the extent to which people believe that the power and status are distributed and unequal distribution is accepted as a proper way for social systems to be organized. Power distance influences the amount of formal hierarchy, the degree of centralization and the amount of participation in decision making in organizations. The plants that are located in high power distance countries tend to be more centralized and employees participate less in decision making.

Implementation of such Kaizen practices as group problem solving or autonomous activities requires empowerment and participative decision making, which mirrors low power distance. Uncertainty avoidance is the degree to which people within a culture are made uncomfortable by situations they perceive to be unstructured, unclear or unpredictable (Hofstede, 2001). In organizations, clarity of plans, policies, procedures and systems helps to avoid uncertainty. Kaizen practices emphasizes on the improvement of processes through scientist improvement methods and statistical process control. This relates to the cultures with high uncertainty avoidance, which greater emphasizes on procedure and routines.

Individualism/collectivism describes the degree to which people are oriented towards acting as individuals versus acting as part of a group (Hofstede, 2001). Literature on Kaizen studies indicated that the implementation of Kaizen requires cooperation, teamwork, and joint decision-making. Masculinity/femininity describes the extent to which aggressiveness and success are valued, versus concern for relationships (Hofstede, 2001) . As indicated in the literature, the Japanese culture made possible a commitment to quality throughout the ranks as had existed in no other country before.

According to Hofstede, 2001, Japanese culture is characterized by long-term orientation (LTO=80), high uncertainty avoidance (UAI=92), moderate power distance (PD= 54), moderate individualism (IDV=46), and strong masculinity (MAS=95). These characteristics allow the Japanese to learn and widely implement the Western quality management techniques in manufacturing companies and achieve high performance. The

study will examine whether Kaizen practices can be adopted in other environment rather than Japan. Three typical Kaizen practices will be used in this study as follows;

Small Group Problem Solving, plants use the small group/team to solve the quality problems. Employee's Suggestion, plants implement the employee suggestion and give feedback to the employees. Autonomous Maintenance, the operators rather than the maintenance staff to daily inspect and monitor the equipment performance Along with national culture, we focused on three different aspects organizational culture as follows. Centralization of Authority, degree of freedom for an individual in the organization. Cooperation: cooperation between managers, workers, customers, and suppliers. Process Emphasis, plants focus on process improvement.

2.4 Empirical Studies

Kaizen is a hot topic in Japanese management studies over the past few decades. The studies on transferability of kaizen practices suggest that the implementation of Japanese continuous improvement practices in the oversea plants is situated in cultural and social context (Aoki, (2008). While national culture is defined as collective programming of mind that distinguishes members of one group from another, organizational culture is regarded as the specific collection of values and norms that are shared by people and groups in an organization and that control the way they interact with each other and with stakeholders outside the organization. When Kaizen practices are adopted in an organization, those factors would moderate the teamwork, decision-making process for problem solving, and autonomous activities (Saka, 2004)

Proliferation of Kaizen in Africa is still very small due to the limited number of players who bring in the practice. Since individual companies cannot be a major force in transferring Kaizen, the activities of organizations such as Kaizen Institute, Japan International Cooperation Agency (JICA), Asia Productivity Organization and International Labour Organization (ILO) are considered vital in transferring the Kaizen method to Africa.

The first JICA project was extended to Singapore, from 1983 to 1990, for productivity management and it was very successful. Building on the success of this cooperative effort, the Singapore Productivity and Standard Board has subsequently grown to become a major organization with external training programs in other countries and regions, including the Southern African Development Community (SADC) under partnership arrangements with JICA (Hhno, and Uesu, 2009).

Similarly, when we look at Kaizen companies operating in transitional countries such as those in Eastern Europe, the Kaizen organizational structure seems to be easily transferable because the employees of these organizations have a hungry mentality” at work and “...are eager to learn advanced technologies and management systems imported from abroad in order to survive in the international competition. At the individual level, due to the lower standards of living, people are striving to earn better lives. Hence, people are motivated to work following the rules and standard operating procedures and also they tend to go above and beyond their job responsibility”

(Yokozawa, and Bruijin, 2010). Hosono also endorses the view that Kaizen as well as Japanese types of Total Quality Circles (TQC) and Total Quality Management (TQM) can be introduced to countries where the culture is very different from that of Japan. To illustrate his argument he gives three Japan International Cooperation Agency (JICA) projects, one in Brazil and two in Central America, where Kaizen were introduced. The following implications can be applied in possibly extending Kaizen in a variety of activities and to different country contexts.

First, Kaizen as well as other quality and productivity improvement approaches (such as TQM), were born and developed in Japan. However, they are applicable elsewhere because “they invoke universal values,” as demonstrated by the experiences, namely those of Brazil and Central America, TQM and other approaches are evolving processes that never stop. These can be adapted to contexts with different cultures and business environments.

Furthermore, Kaizen and other Japanese-made practices relating to quality and productivity are not limited to profit-making business activities or the manufacturing sector. The second implication from experiences shows that they are applicable to public organizations, nonprofit organizations and to non-manufacturing sectors such as transport, health care and other service sectors, among others. An interesting case of “evidence-based quality improvement” applied to health care in Central America.

The third implication from this research is that, in applying Kaizen and other Japanese-made approaches, effort to adapt to the local context is essential. Strong engagement of both workers and managers, and experts and counterparts in case of cooperation projects, is the key for success. In a similar manner to Japan's, each country, society and enterprise must develop its own principle for quality and productivity. This can be done by examining and addressing the needs and desires of all enterprises and segments of society, as the report on Japan's cooperation with Brazil emphasizes. Conceiving these concepts and achieving nationwide understanding are not easy tasks. However, we can learn a lot about the adaptation and internalization of Kaizen and related approach to local context from different experiences in many countries.

CHAPTER THREE: RESEARCH METHODOLOGY

1.1 Introduction

This chapter discusses the methodology that was used in gathering the data. Here the researcher aimed at explaining the methods and tools that were used to present data for analyzing to get proper and maximum information related to the subject under study. It includes Research design, target population, sample design, data collection, and data analysis.

1.2 Research Design

This was a census survey; a census survey is a type of surveys involving the process of collecting information about each member of a given population. The study surveyed representative of the players in the manufacturing industry who are currently practicing Kaizen. The data obtained was to find out if Japanese Kaizen is effective to contexts with different cultures and business environments. The research used primary data which was collected through administered questionnaires.

1.3 Target Population

The target population was manufacturing companies which are practicing Kaizen. According to the Kaizen Institute Africa in Collaboration with Kenya Association of Manufactures (KAM) (2009) report, the client base was twenty three companies practicing Kaizen.

1.4 Data Collection

Data collected was qualitative and quantitative data. Primary data was obtained using a semi structured questionnaire (see appendix 1). The questionnaire on Kaizen practices and organizational culture was evaluated by eight respondents from Direct Labour to Plant Manager on a five-point Likert scale (1 = strongly disagree, 3 = neither agree nor disagree, 5 = strongly agree). Likert scale data was, in principle, used as a basis for obtaining interval level estimates which permits testing of the hypothesis that the statements reflect increasing levels of an attitude or trait, as intended

1.5 Data Analysis

Data collected by structured questionnaire was analyzed by the use of measures of central tendency such as frequency distribution tables, percentages, and means. Measures of central tendency yield the expected score or measure from a group of score in a study. Data was entered, cleaned and coded by creating categories using numeric values. Use of statistical techniques was also used, particularly measures of variations such as standard deviation and correlation analysis. This helped to determine the link between Kaizen practices and organization culture aspects among manufacturing companies in Kenya

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents the analysis of the data collected from the Respondent and discusses the research findings on the kaizen and organizational culture in manufacturing firms in Kenya. All completed questionnaires were edited for accuracy, uniformity, consistency and completeness. The response rate of 23 respondents was achieved from the total target of population of three companies. Summaries of data findings together with their possible interpretations have been presented by use of mean, percentages, frequencies, variances, standard deviation and tables.

4.2 Demographic Aspects of the Population

The respondents were asked to indicate their gender. 52% of the respondents interviewed were male while 48% of them were female. The respondents were asked to indicate their Level of Education. 57% of the respondents were College/university graduates with diplomas and degrees working in the companies. While 43% of them were holders of masters degree and holding management positions. None of the respondents was a high school leaver or primary level holder.

4.3 Duration of work by Respondents in the Company

The respondents were asked to indicate the duration they had worked in the company. 44% of the respondents had worked for a periods of 0-4 years in the company. 46% of them had worked for a period of 5-10 years in the company. 10% of them had worked for a period of 10-20 years in the company. Most of the of the respondents interviewed were middle-level employees in the production department of the organization.

4.4 Kaizen Practices and Organizational Cultures.

The respondents were asked to indicate the extent to which they agreed or disagreed with continuous improvement practices (Kaizen) the organization adopted for operational performance. The findings were summarized in Table 4.1.1:

Table 4.1.1: Kaizen Practices and Organizational Cultures.

Kaizen Practices and Organizational Cultures				
Centralization of Authority	Min	Max	Mean	Std Deviation
Any decision I make has to have my boss's approval	2	5	3.71	.118
There can be little action taken here until a supervisor approves a decision	2	5	3.71	.113
Even small matters have to be referred to someone higher up for a final answer	2	5	3.71	.109
This plant is a good place for a person who likes to make his own decisions.	2	5	3.71	.105
Cooperation				
We encourage employees to work together to achieve common goals, rather than encourage competition among individuals.	2	5	3.37	.129
We work as a partner with our customers.	2	5	3.37	.117

We believe that the need for cooperative relationships extends to both employees and external partners.	2	5	3.37	.107
We work as a partner with our suppliers, rather than having an adversarial relationship	2	5	3.37	.127
We believe that cooperative relationships will lead to better performance than adversarial relationships.	2	5	3.37	.127
We believe than an organization should work as a partner with its surrounding community.	2	5	3.00	.113
Sometimes we encourage competition among employees, in order to improve their performance.	2	5	3.00	.103
Openness, creativity and challenging mentality is encouraged in process improvement	2	5	3.29	.123
In our view, most problems result from the production system, rather than from individual employees.	2	5	3.21	.123
We believe that the process, rather than the people performing the process, is the source of most errors.	2	5	3.18	.123
We believe that process improvements will result in greater quality improvement than human resource initiatives	2	5	3.17	.123
We think that most of our quality problems result from a lack of motivation.	2	5	3.17	.123
Many of our quality problems result from employees who just don't try very hard	2	5	2.88	.123
Small Group Problem Solving				
In the past three years, many problems have been solved through small group sessions.	2	5	3.85	.143
During problem solving sessions, we make an effort to get all team members' opinions and ideas before making a decision	2	5	3.85	.123
Problem solving teams have helped improve	2	5	3.85	.123

manufacturing processes at this plant.				
Employee teams are encouraged to try to solve their own problems, as much as possible.	2	5	3.64	.123
Our plant forms teams to solve problems.	2	5	3.64	.105
We don't use problem solving teams much, in this plant.	2	5	3.64	.109
Management takes all product and process improvement suggestions seriously.	2	5	4.35	.111
We are encouraged to make suggestions for improving performance at this plant.	2	5	4.35	.111
Many useful suggestions are implemented at this plant.	2	5	4.22	.108
Management tells us why our suggestions are implemented or not used.	2	5	4.22	.108
My suggestions are never taken seriously around here.	2	5	4.11	.102
Operators understand the cause and effect of equipment deterioration	2	5	4.22	.122
Operators are able to detect and treat abnormal operating conditions of their equipment.	2	5	4.22	.122
Operators inspect and monitor the performance of their own equipment.	2	5	4.11	.133
Production leaders, rather than operators, inspect and monitor equipment performance.	2	5	3.99	.117
Basic cleaning and lubrication of equipment is done by operators.	2	5	3.99	.117
Cleaning of equipment by operators is critical to its performance.	2	5	3.99	.117

Source: Research data.

As shown in Table 4.1.1, majority of the respondents indicated that, any decision they made was to be approved by their senior managers, little action was to be taken without supervisor approval of the idea, small matters were to referred to someone higher for final answer and individual decision was a challenge in the organization with a mean of

(3.71) This was due to inability of managers to delegate duties to their employees, resistance of managers to encourage bottom up management approach and inadequate employee development within the organization. Majority of the decisions were centralized on top level management that hindered Kaizen practices.

Majority of the respondents indicated that employees were encouraged to achieve common goals, rather than encourage competition among individuals, employees worked as partners for the benefit of customers, employees indicated that they believed in cooperative relationships that extended to both employees and external partners, they worked as partners with their suppliers, rather than having an adversarial relationships and believed that cooperative relationships were to lead to better performance than adversarial relationships with a mean of (3.37). This was due to team spirit that promoted creativity and innovation thus exchange of Kaizen knowledge among workers. Sharing of ideas and strategic partnerships was preferred since it minimized resistance of the new changes in the manufacturing companies with regard to cost reduction and profit maximization.

Respondents indicated that they believed in the organization working to promote social responsibility with the community and encouraged competition among employees, in order to improve their performance with a mean of (3.00). This was because the organization cannot work in isolation of customers and individual performance determined the overall output of the organization. Cooperation among the strategic

partners in the manufacturing industry contributed to improved performance of manufacturing firms based on shared Kaizen knowledge among workers.

Openness, creativity and challenging mentality was encouraged in process improvement by the majority of the respondents with a mean of (3.29). This was due to sharing of information on Kaizen practices and institutionalization of the Kaizen practices in the organizational culture. From the view point of respondents, most problems resulted from the production system, rather than from individual employees with a mean of (3.21). This was due to inadequate technologically advanced machines that were used by the manufacturing companies and inadequate training to employees on Kaizen practices.

Most of the respondents believed that the process, rather than the people performing the process, was the source of most errors with a mean of (3.18). This was due to bureaucratic processes that did not accept change. Employees were determined to reduce errors but affected by the process itself. Respondents indicated that process improvements was to result in greater quality improvement than human resource initiatives and linked most of the quality problems with poor motivation from top level managers with a mean of (3.17). Due to lack of promotion, recognition of hardworking employees, lack of training, salary increment and improved working environment were factors that affected Kaizen practices within the organization. Some of the respondents

indicated that their problems resulted from individual employee inability to work hard to achieve organizational goals with a mean of (2.88).

Respondents indicated that Kaizen practices were achieved through small group discussion for previous years and their companies had been realizing improved performance in the manufacturing industry with a mean of (3.85). Group decision making provided an opportunity to share challenges in the manufacturing sector thus viable and long term solutions. Respondents indicated that employee teams were not encouraged to try to solve their own problems, as much as possible, their plants formed teams to solve problems and team problem solving approach was used in the company on a small extent with a mean of (3.89).

Respondents indicated that management did not take all product and process improvement suggestions seriously and their ability to make suggestions with regard to improvement of performance was quite a challenge with a mean of (4.35). This was due to inability of management to value employee decisions with regard to Kaizen practices. Respondents indicated that their many useful suggestions were not implemented at plant Management did not tell them why their suggestions were implemented or not used with a mean of (4.22). This was due to lack of recognition of employee efforts to the organization.

5.3 Discussions

As indicated in Table 4.1.1, continuous improvement programs have evolved from traditional manufacturing focused systems that concentrate on the production line to reduce waste and improve the product quality, into comprehensive, systematic methodologies that focus on the entire organization, from top management to the workers on the shop floor. More recently, large organizations are developing their own CI methodologies to fit their specific needs by encompassing the various tools and techniques of individual methodologies. This signals the need for hybrid methodologies. While CI has evolved over the decades, the basic underlying factor driving this change has been the endless pursuit of organizations to improve (Hofstede, 1983).

As indicated in Table 4.1.1, the plants that are located in high power distance countries tend to be more centralized and employees participate less in decision making. Implementation of such Kaizen practices as group problem solving or autonomous activities requires empowerment and participative decision making, which mirrors low power distance. People's Dominant value systems have been crystallized in the modern institutions. Their family structures, educational structures, religious organizations, associations, forms of government, work organizations, law, literature, settlement patterns, and buildings (Hofstede, 1983).

All of these reflect common beliefs that derive from the common culture. Whereas the value systems affect human thinking, feeling, action, and the behavior of organizations and institutions in predictable ways, the value dimensions reflect basic problems that any society has to cope with but for which solutions differ from country to country (Hofstede,

1983). As indicated in Table 4.1.1, research shows that CI can take place at three different levels within the organization: at the management, group, and individual levels. At the management level, the implications of CI are on the organization's strategy. Group level CI involves problem-solving tasks at a broad level, while individual level CI deals with improvement on a micro scale, i.e. on low level, day-to-day tasks. In order to reap maximum benefits from a CI program, managers must implement CI at each of these levels (Shackleton and Ali 1990).

As indicated in Table 4.1.1, managers need to evaluate the product design, process choice, and the degree of standardization involved in the organization, and can then decide upon the appropriate methods to use to best implement improvement practices. Managers can evaluate the usefulness of CI programs by monitoring a set of routines and behaviours that are seen as being essential to organizations of all types for CI implementation. As indicated in Table 4.1.1, it is clear that CI does not come without hardships and struggles; without the active involvement of everyone in the organization, and the required resources and support from top management, CI in any organization cannot be successful (Shackleton and Ali 1990).

CHAPTER FIVE: SUMMARY, DISCUSSION, RECOMMENDATIONS AND CONCLUSIONS

5.1 Introduction

This chapter summarizes the major findings of this study. This study sought to find out the kaizen and organizational culture in manufacturing firms in Kenya. In addition, this chapter provides a direction for further studies and also gives some recommendations for policy making by the relevant authorities. Questionnaires were used to gather primary data. The questionnaires comprised of both closed and open-ended questions and were strictly administered by the researcher. Both primary and secondary information was used to determine the results findings of the study.

5.2 Summary of the Findings

This study sought to establish the kaizen and organizational culture in manufacturing firms in Kenya. To achieve objectives like profit maximization, offsetting costs of operations, business survival and gaining competitive advantage in the market, the companies in the manufacturing industry should adopt continuous improvement practices integrated in the organizational culture with regard to; Total Quality Management (TQM) practices, Lean manufacturing/ Lean Thinking, JIT delivery services, benchmarking innovative and creativity, global sourcing, best industry practices and lean supply chain management

The study established any decision they made was to be approved by their senior managers, little action was to be taken without supervisor approval of the idea, small matters were referred to someone higher for final answer and individual decision was a challenge in the organization. Majority of the decisions were centralized on top level management that hindered Kaizen practices. It was established that employees were encouraged to achieve common goals, rather than encourage competition among individuals, employees worked as partners for the benefit of customers in order to promote team spirit thus creativity and innovation thus exchange of Kaizen knowledge among workers. The major aim of strategic partnerships overall cost reduction and profit maximization.

It was evident that the organization needs to value social responsibility initiative for its survival in the competitive market since Kaizen practices always are evaluated based on customer satisfaction. The study established that openness, creativity and challenging mentality was key to Kaizen practices institutionalization of the Kaizen practices in the organizational culture is the key drive of competitive manufacturing firms. The study established that production system was not efficient and effective due to old technology that was used by the manufacturing firms and inadequate trainings to employees on Kaizen practices. It was evident that employee cooperation, strategic partnerships in the manufacturing industry enhanced Kaizen practices within the organizations. Also it was identified that small group discussions/group think provident opportunities of Kaizen knowledge transfer within the organizational context.

The study established that motivation among employees like; inability of management to involve them in decision making, lack of promotion, recognition of hardworking employees, lack of training, salary increment and poor working environments were factors that affected Kaizen practices within the organization context. The study established that real operators of the process were not engaged in the maintenance of the system and were deemed to have inadequate knowledge by management on Kaizen practices thus managers with theoretical know-how were given an opportunity to inspect and maintain equipments which they had little knowledge on.

The study established that quite a number of challenges were experienced by manufacturing companies in Kenya. Some of those challenges included; employee resistance to towards continuous improvement practices due to untimely introduction of change at the workplace. It was established that technology was the driving force of continuous improvement practices among the manufacturing companies in Kenya. This study also established that there was a positive correlation between continuous improvement practices and organizational performance in the manufacturing sector. This was evident based on wastage reduction in production, lower product and service costs during production and distribution, increase operational efficiencies in their value chain and increase innovations (new ideas, products & services). The study established that increased operational readiness efficiency, increased productivity and improved processes capability were the benefits of Kaizen practices in the manufacturing sector in Kenya.

5.3 Conclusions

The study has traced the evolution of CI from its early roots in manufacturing, to the more sophisticated methodologies that can be used in any organization, and that comprise an extensive toolbox for continuous performance improvement. The literature, while extolling the many virtues of CI programs, also makes it clear that achieving the expected results of modern day CI programs is quite challenging as it involves organizational changes on many levels. It is also generally agreed that CI and organizational culture go hand in hand as they seek to achieve excellence through improvement. Furthermore, there is also a need for research in the field of the hybrid CI methodologies that have been developed in the recent past and to determine their applicability and to large and small firms in the market.

5.4 Recommendations

The study established any decision they made was to be approved by their senior managers, little action was to be taken without supervisor approval of the idea, small matters were to be referred to someone higher for final answer and individual decision was a challenge in the organization. Therefore, this study recommends that management to use bottom up approach of management for effective implementation of Kaizen practices. Decisions should be decentralized rather than centralization. It was established that employees were encouraged to achieve common goals, rather than encourage competition among individuals, employees worked as partners for the benefit of customers in order to promote team spirit thus creativity and innovation thus exchange of Kaizen knowledge among workers. Therefore, this study recommends that major

strategic partnerships should be formed by manufacturing companies to drive cost reduction and profit maximization in operations.

It was evident that the organization needs to value social responsibility initiative for its survival in the competitive market. Therefore, this study recommends that social responsibility to be performed by manufacturing companies to promote Kaizen practices like reverse distribution. The study established that openness, creativity and challenging mentality was key to Kaizen practices institutionalization of the Kaizen practices in the organizational culture is the key drive of competitive manufacturing firms. Therefore, this study recommends that Kaizen practices needs to be institutionalized in the organizational culture through employee training. The study established that motivation among employees like; inability of management to involve them in decision making, lack of promotion, recognition of hardworking employees, lack of training, salary increment and poor working environments were factors that affected Kaizen practices within the organization context. Therefore, this study recommends that management to motivate employees using both monetary and non monetary rewards for better performance.

The study established that quite a number of challenges were experienced by manufacturing companies in Kenya. Some of those challenges included; employee resistance to towards continuous improvement practices due to untimely introduction of change at the workplace. Therefore, this study recommends that timely training of employees with regard to Kaizen practices for operational efficiency. It was established that technology was the driving force of continuous improvement practices among the

manufacturing companies in Kenya. Therefore, this study recommends Government intervention initiatives in promoting industrial spirit by allocating funds to support research and development activities of manufacturing firms in Kenya through the relevant ministries.

5.5 Limitations of the Study

Inadequate financial resources affected the results of the study. Accommodation and stationary costs delayed the exercise but early preparation and support from well-wishers and development partners made the study a reality. Getting accurate information from the respondents was one of the major challenges since some of the workers were threatened that the information may be used against them by the management in the terms of performance hence insecurity of their jobs. The challenge was minimized by assuring the respondents of confidentiality of the information they gave. Most of the respondents were unwilling to give the information due to negative perception of the study. The challenge was minimized by giving incentives to respondents in order to get positive response and accurate information.

The staffs of manufacturing firms in Kenya were usually very busy and therefore they required a lot of time in order to fill in the questionnaires. The challenge was overcome by giving the respondents the questionnaires at the right time. The location in distance and terrain while trespassing Nairobi county proved to be a bone of contention coupled with dusty grounds which posed a danger to personal health as far as common colds are concerned.

5.6 Suggestions for Further Research

Future studies should attempt to explore the reasons behind the low adoption of CI practices and organizational culture in the by manufacturing companies in Kenya. Researchers should go ahead and establish the relationship behind kaizen and organizational culture in manufacturing firms in Kenya.

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APPENDICES

Appendix 1: Questionnaire

Section A; Personal Details

1. Your name (optional).....

2. Your companies name.....

3. Gender

Male ()

Female ()

4. Your level of education

None Primary () High school () college/university () post graduate ()

5. For how long have you been working in this FMCG Company? (Yrs)

0 – 4 years ()

5-10 years ()

10-20 years ()

Over 20 years ()

6. What is your current position in the Company?

.....

Indicate the Department/Section of the company you are currently working

.....

Section B: Kaizen Practices and Organizational Cultures.

Please mark the appropriate box that indicates to what extent the following aspect of organizational culture apply in your organization.

	1 = strongly disagree	4 = neither agree nor disagree	7= strongly agree
A. Centralization of Authority- respondent (Direct Labor, Human Resource, and Supervisor)			
Even small matters have to be referred to someone higher up for a final answer			
This plant is a good place for a person who likes to make his own decisions.			
Any decision I make has to have my boss's approval			
There can be little action taken here until a supervisor approves a decision			
B. Cooperation- respondent (Inventory Manager, Plant Manager and Supervisor)			
We work as a partner with our suppliers, rather than having an adversarial relationship			
We encourage employees to work together to achieve common goals, rather than encourage competition among individuals.			
We work as a partner with our customers.			
We believe that cooperative relationships will lead to better performance than adversarial relationships.			
We believe that the need for cooperative relationships extends to both employees and external partners.			
We believe than an organization should work as a partner with its surrounding community.			
Sometimes we encourage competition among employees, in order to improve their performance.			
C. Process Emphasis- respondent (Process Engineer, Supervisor and Plant Superintendent)			
We believe that the process, rather than the people performing the process, is the source of most errors.			
In our view, most problems result from the production system, rather than from individual employees.			
Openness, creativity and challenging mentality is encouraged in process improvement			
We believe that process improvements will result in greater quality improvement than human resource initiatives			
We think that most of our quality problems result from a lack of motivation.			
Many of our quality problems result from employees who just don't try very hard			

	1 = strongly disagree	4 = neither agree nor disagree	7= strongly agree
<ul style="list-style-type: none"> Small Group Problem Solving- respondent (Direct Labor, Quality Manager, and Supervisor) 			
During problem solving sessions, we make an effort to get all team members' opinions and ideas before making a decision			
Our plant forms teams to solve problems.			
In the past three years, many problems have been solved through small group sessions.			
Problem solving teams have helped improve manufacturing processes at this plant.			
Employee teams are encouraged to try to solve their own problems, as much as possible.			
We don't use problem solving teams much, in this plant.			
<ul style="list-style-type: none"> Employee Suggestions- respondent (Direct Labor, Process Engineer, and Supervisor) 			
Management takes all product and process improvement suggestions seriously.			
We are encouraged to make suggestions for improving performance at this plant.			
Management tells us why our suggestions are implemented or not used.			
Many useful suggestions are implemented at this plant.			
My suggestions are never taken seriously around here.			
<ul style="list-style-type: none"> D. Autonomous Maintenance- respondent (Process Engineer, Supervisor and Plant Superintendent) 			
Cleaning of equipment by operators is critical to its performance.			
Operators understand the cause and effect of equipment deterioration			
Basic cleaning and lubrication of equipment is done by operators.			
Production leaders, rather than operators, inspect and monitor equipment performance.			
Operators inspect and monitor the performance of their own equipment.			
Operators are able to detect and treat abnormal operating conditions of their equipment.			

Please indicate any other comment

Thank you for your time and participation in this study

Appendix 2: List of Manufacturing Companies in Kenya

1. Associated Battery Manufacturers Ltd
2. Barrick Gold Mining Ltd
3. Bidco Oil Refineries Ltd
4. Blow Plast Ltd
5. Britania Allied Industries Ltd
6. Comcraft Group
7. East African Growers Ltd
8. English Press Ltd
9. Friendship Container Manufacturers Ltd
10. General Printers Ltd
11. Haco Industries Ltd
12. Insteel Ltd
13. James Finlay Ltd
14. Kenafric Industries Ltd
15. Kenchic Ltd
16. Mabati Rolling Mills Ltd
17. NAS Airport Services Ltd
18. NAS Plastics Ltd
19. Securex Ltd
20. Spinknit Group
21. Sumaria Group
22. Unga Ltd
23. Everlady East Africa Ltd