

**EFFECT OF KAIZEN STRATEGY ON THE PERFORMANCE OF ROTO  
MOULDERS LTD**

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NAIROBI**

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## **DECLARATION**

I declare that this is my original work and has not been presented to in any other University or college.

Sign.....

Date.....

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**D61/84475/2016**

## **SUPERVISOR**

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

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## **DEDICATION**

I dedicate this project to my parents for the financial support, my supervisor and lecturers of University of Nairobi, School of Business for supporting me academically as their continual guidance contributed to the completion of this project within the stipulated timeframe.

## **ACKNOWLEDGEMENT**

Above all, thanks to my God because of the unwavering provision, love and protection in all moment of lack and despair, fear and discouragement. I wish to acknowledge and appreciate the efforts of my supervisor, Dr. Kennedy Ogollah who took time to guide me and offer intellectual advice in writing of this document.

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## **ABBREVIATIONS AND ACRONYMS**

<b>BPI</b>	Business Process Improvement
<b>RML</b>	Roto Moulders Ltd
<b>ISO</b>	International Organization for Standardization
<b>PI</b>	Process Improvement
<b>QMS</b>	Quality Management System
<b>TQM</b>	Total Quality Management
<b>TOC</b>	Theory of Constraints
<b>5S</b>	Stands for Sort, Set in Order, Shine Standardize, Sustain
<b>JIT</b>	Just in Time
<b>KAM</b>	Kenya Association of Manufacturers
<b>KEPSA</b>	Kenya Private Sector Association

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## ABSTRACT

KAIZEN, a Japanese business management concept that calls for continuous improvement that promotes quality and productivity improvement as well as human resource development. It was implemented to improve organization efficiency by standardizing working procedure and eliminating wasteful activities through the collective effort of managers and staff of the organization. Kaizen was selected and implemented in Roto Moulders Ltd as working systems in order to improve processes and standardizing the working procedure by eliminating was full activities and reducing the long work flow. The purpose of this study was to establish the effects of kaizen strategy on the performance of Roto Moulders Ltd. The study was guided by three theories, the theory of lean management, Value Chain Theory and Theory of constraints. The data was collected using an interview guide, and the targeted respondents were 6 top managers. The study used a case study research design while the data was analyzed by use of content analysis since it was a qualitative data. The study found that kaizen strategy improves performance of RML, in addition it 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 also recommended that to determine the actual performance of the Kaizen system, organizations should bridge the bureaucratic barriers and allow the top management to interact freely with the lower hierarchy members of the organization and build a proper rapport to enhance effective communication, efficient development of ideas and avoid dismissing the simple little ideas given by the junior staff about improvement of the organization.

# **CHAPTER ONE**

## **INTRODUCTION**

This chapter discusses the background of the study in particular the concept of Kaizen, organizational performance, manufacturing firms in Kenya and Roto Moulders ltd. It also discusses the research problem and the research objective and the value of the study. It finally discusses the value of the study.

### **1.1 Background of the study**

According to Imai (1986), KAIZEN is a Japanese concept of business management that explains about development of employees at personal level in an organization. Manufacturing process can be increased if all the staffs from senior level to lower management level work together. According to (Brunet, 2003), he explains features of kaizen system that are supposed to be constant; it is a process that never stop at on the quality and efficiency improvements, the system keeps refining continually instead of reconstructing and it comprise of needing the contribution of all available workforce. KAIZEN is a never ending towards the elimination of waste, improving the productivity and utilizing the resources efficiently. Civilization of workplace can easily be done if only the strategy is implemented properly.

This civilization includes teaching people on how to minimize the wastes emanating from the manufacturing process as well as helping them to perform to their level best. Several ways have been brought forward that are aimed at improving the performance in the manufacturing process over the years. The suggested ways range from business process engineering, study on operations and lastly lean manufacturing but their implementation differ from one to another. Based on worker's 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. Kaizen forms a different management strategy as compared to several other management strategies since it wholly concentrates on how people do their work (Imai, 1997).

This research is based on three major theories which are; the value chain theory, lean management theory and theory of constraint. Michael Porter (1985) developed the value chain theory. Further in his work, he explained the activities that provide the competitive strength to organizations. In the year 1988 John Krafcik developed lean management theory. Lean is explained to mean the efficient minimization of waste in the manufacturing firm without affecting the productivity. Lastly, the theory of constraints was developed by Dr. Eliyahu Goldratt in the year 1984. In regards to it, it is a methodology that is applied in identifying some of the most vital limiting factors that could be affecting reaching the set goals by resulting to systematic improvement of the constraint until it no longer be a limiting factor. It is as well referred to as bottleneck in manufacturing.

This study was motivated by the emergence of competition amongst the local and international business which has made the manufacturing firms deviate from their processes so as to meet the requirement in the market. Establishment of sustainable competitive advantage is one of the most important objective of a manufacturing firm for corporate and functional level strategies, this is according to (Ireland et al, 2007). The key to organizational success in a competitive environment is therefore changing from conventional way of thinking to strategic thinking. In such cases therefore, Kaizen is the most preferred strategy that need to be applied in the manufacturing sector this study will thus enable to label the effects it results to in the performance of Roto Moulders Ltd.

### **1.1.1 Kaizen strategy**

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 & 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, 1997).

Kaizen is the strategy created on various rules that are different considering their details from one company to another, this is according to (Demeter, 2011). This study will consider kaizen as a Japanese strategy that is aimed at improving the business concept which could mean involving the employees of all levels in an organization. Business operation is improved using this strategy at every level of organization right from CEO to the middle (Worker Shah, 2003).

The fundamental concepts are similar, be liberal minded, uphold a positive attitude, abandon excuses and seek solution by taking actions. Immediate implementation of ideas, failure to seek perfection, doing what has to be done, identifying the source at hand and making use of all teams' knowledge. Professionals are more often found on the factory floor in disregard of the rank. Equality is ensured in all members as they all have to contribute something; they just have to do it.

Improving processes and activities by elimination of all the available wastes in the business operation system is the main objective of adopting the kaizen strategy. Coordination among the employees is reached upon the successful implementation of kaizen strategy which in turn results to the enhancement of the performance together with other improvements. The performances include having better working environment, better products and services and cost reduction, this is according to Imai (1986).

Every individual in an organizational structure are included and mostly they are dependent on the selected groups of people that can be taken through training in order to face the current situations bring about the improved productivity and better quality and services. From a self-motivated teamwork, a good teamwork can be made depending on specific disciplines, this is according to (Brunet, 2003). Every individual is associated with a certain group after training where they conduct the research and bring about recommendations also the ways in which they are supposed to be made in use.

Ideas are required to be developed by each group and implementing those results to the solution to the faced problems. The group is further required to come up with some new processes where they make changes to all the existing processes in an organization. Members of the group are not only required to provide plans but also to move the machinery. Lack of ranking make these members of the group to get demotivated and frustrated since they get tired and dirty in the process.

### **1.1.2 Organizational performance**

Organisational performance is the measure of how efficient and effective a firm spends some of its resources in its operation to generate revenue. According to Bititci (2007), he noted that key issue for scholar have been measuring the firm's performance since it lacks parameter on its own that can be employed to determine financial performance. Determination of the performance analysis employs mostly the operating income and net value assets which stands as indicators of financial performance, this is in reference to Emiliani et al (2009).

In any case, the administrators in control need to understand the financial condition that the firm is working on all together for the best possible working and the development of performance in any manufacturing firm. Uncertainties are high on the performance since there is limited understanding of the closest environment and some of the staffs in the managing positions are developed and an environment forces are not recognized.

Kaplan (1996) outlined in their balanced score card model that overall success of a firm is determined by the financial performance of the firm. In regards to their explanation, four perspectives need to be joined in order to achieve financial performance; financial performance that shows that optimal allocation of firms financial resources is one of the ways of achieving financial performance. coming second is customer preservative that is concerned with the creation of firms' values through the satisfaction of the customers who either are internal or external. Additionally, international process consider organizational performance through the eye of quality and finally efficient provision of the products and other business processes. The study views the organizational performance as the effectiveness and efficiency in provision of products then the quality achieved.

### **1.1.3 Manufacturing firms in Kenya**

A manufacturing business is any business that uses components, parts or raw materials to make a finished good. These finished goods can be sold directly to consumers or to other manufacturing businesses that use them for making a different product. Manufacturing forms one of the most dynamic sectors in Kenya accommodating and creating employment, wealth and finally alleviating people from poverty.

254,000 people are employed in the sector forming 13% of the entire employment in the country with another 1.4 million people being formally employed in the industry. It is agro-based and adding little value in the process, employment opportunities capacity utilization and export volumes as a result poor connection with other sectors. The sector is so vital when it comes to the accomplishment of MDGs through the reduction of poverty and thus reducing hunger, this is according to (Kenya Bureau of Statistics Report, 2011).

#### **1.1.4 Roto Moulders Ltd**

In the year 1991, Roto Moulders Ltd was established in Kenya under the company's act. The company has recorded significant growth and becoming a leader in the rotational Moulding market in East Africa. The company has the link with ARM-USA with the large product line covering from water tanks, ball shaped underground tanks, the rectangular loft tanks and the septic tanks. Compared to other firms, Roto portrays superior designs in the same industry in the East African region.

Kaizen strategy was introduced by Roto Moulders Ltd in the year 2014 which came as a result of the management idea. Kaizen institute of Africa was invited by the company to train management and the employees at large, then kaizen department was introduced with the experienced and trained professionals was supervised to ensure that kaizen is well understood and adopted in the company. The strategy has been reported to be working positively for the firm and also resulting to positive changes that can be seen including reduced costs, minimized cases of accidents in the production and easy file retrieval in all the departments.



## **1.2 Research problem**

Majority of the manufacturing firms in Kenya are faced with challenges of technological gap. They also have limited knowledge on the variety of the managerial strategies such as kaizen and lean. It is less demanding and quicker for the firm to receive with the administrative limits when contrasted with designing since administration methodologies are carefully fit to be utilized by all the accessible specialists and are additionally simple to be executed.

According to Nderi (2012), kaizen practices vary in their degrees in which they are implemented in the Kenyan manufacturing firms. Some of the cited challenges faced in the implementation process of kaizen are; the inadequate management support, bad attitude of the employees and the economic constraints. Regression analysis showed a positive relationship in the implementation of kaizen practices by the manufacturing firms in the country to the performance improvement.

Studies have been done on the manufacturing firms around Nairobi from various local researchers. Locally, White (1983) found that companies do not effectively accomplish the transfer of kaizen and therefore least knowledge for actual methodology of kaizen strategy. Internationally, Aoki (2008) found out that lack of organizational capabilities facilitate an incremental organization-wide innovation greatly hindered implementation of kaizen in Chinese firms.

Analysis of Kaizen Implementation in Northern Ethiopia's Manufacturing Industries by Asayehgn Desta (2014) found that the companies reduced the costs of production, improved quality, reduced lead time and improved customers' satisfaction. These studies used questionnaires to collect data. This study will fill the gap by use of interviews to collect data and thus will enable the researcher to collect qualitative data and resulting to the clarity of the findings on the effects of kaizen strategy performance of the manufacturing firm.

### **1.3 Research objective**

The main objective of this study was to identify the effect of kaizen strategy on the performance of Roto Moulders Ltd.

### **1.4 Value of the study**

To the researchers, this study gives additional information to the effects of kaizen strategy in the generation of the literature review of the future research on the performance of firms; this research will as well aid in pointing out the existing knowledge gap in the literature. It is valuable and add platform for further research for other academicians and scholars whereby various scholars can conduct a study to verify the study's findings. The study adds value to the Roto Moulders Ltd management as it is able to identify the areas they need to improve on in order to gain the benefits of use of Kaizen Strategy.

Managers got valid information to enable them to come up with endogenous undertaking conducive to change the culture in an organization to successfully enable for kaizen's full implementation. Important implications for the firms' executive are provided for by the results of this study which shows the relationship among the cost management strategy and the financial performance of the firm. Firms are bound to achieve goals and better performance upon the implementation of cost management strategy.

The government acquired useful information in policy making concerning kaizen strategy as it makes easier to advice the manufacturing companies to go past the normal supervision towards adopting the strategies which have impact on finance performance. Further, these results will help the firms to consider kaizen strategy in their executive meetings. Finally, the study was also imperative in that it showed the depth and brought out lessons learned in implementing kaizen strategy in public health organization in a devolved system of government

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter presents theoretical foundation of the study. They are theories which are closely related to the objective of the study. The chapter finally discusses the Empirical review which aims to discuss the effect of kaizen strategy in the performance of RML.

#### **2.2 Theoretical Foundation**

The section highlights the theories and concepts relevant to the topic of study. A theory is an explanation of an aspect of the natural world that can be repeatedly tested. The key theories that form the theoretical foundation of this study include theory of value chain theory, theory of lean management and theory of constraint.

##### **2.2.1 Value Chain Theory**

Value chain theory was established by Michael porter in 1985. The theory best clarifies the interrelationship between association's operations and interior organization's esteem chain (Kaplinsky, 2000). Porter clear up esteem chain as a social affair of activities which firms takes after remembering the ultimate objective to pass on quality merchandise and ventures to its customers in the market. Value analysis was originally introduced as an accounting analysis which shed light on the value added by separate steps in complex manufacturing processes in order to determine where cost improvements could be made or value creation improved, or both.

The value chain came to be comprehended with regards to the interior exercises of an organization that make an incentive for its clients in view of the original work of Porter (1985). Researchers refined the value delivery idea, it turns out to be evident that the framework, including its providers, accomplices, producers and clients was the vital core interest. The value chain for any association in any business is the connected arrangement of significant value creating exercises right from basic raw material sources for component suppliers through to the final endues product supplied to the client (Johnson, 2002). Each firm is seen as an accumulation of significant value activities that are performed to configuration, create, advertise, convey and bolster its item or administration for component suppliers through to the ultimate endues product delivered to the customer.

The main assumption of value chain is that companies are substantially more than random collection of machines, cash and individuals (Johnson and Scholes, 2003). These assets are of no value unless they are sent into activities and sorted out into schedules and subsystems that guarantee goods or services are delivered and are valued by the client. Optimization of the premeditated capacity of an institution involves recognizable proof of independent value activities and breaking down value contributed by every movement.

Access to every one of the abilities in a value chain is required with a specific end goal to contend over the long term in a business (Thompson, 2007). In any case, an institution can pick up this entrance in a number of ways. The primary objectives of value chain are; to quantify the value properties and acknowledge how different capacities or exercises inside inventory network add value.

### **2.2.2 Theory of Lean Management**

John Krafcit presented the theory of Lean Management in 1988, where he clarifies survival of organizations and expansion of profits. It expresses that for an organization to maximize in its profits, it needs to bring down its expenses of operation or increase its costs for goods and services. In any case, because of the rising competition from the competitors, organizations focus more on cost reduction as opposed to raising costs. For this situation lean administration is utilized as a part of lessening expenses and change of procedures by organizations. The review of the procedures helps with recognizing duplication of process and dispensing with any superfluous stages to most extreme. Through lean administration expenses will go down and turnover expands making clients more fulfilled. To guarantee a steady and flawless process is set up, organizations set up nonstop change framework for observing the outcomes.

Lean Management theory assumes that the received lean creation model will be effective in light of the fact that every individual from the workforce acs the pertinent devices and comprehends the approach. This may not be the situation since a few people among the work power may not comprehend the strategy consequently cause lean framework fall since there is no standard procedure.

### **2.2.3 The Constraints Theory**

The Constraints Theory created by Dr. Eliyahu Goldratt in (1984). It is a philosophy for recognizing the most essential restricting factor that frustrates finishing a goal and after that purposely improving that constraint until no longer the restricting component. In the manufacturing companies, the impediment is much of the time insinuated as a bottleneck.

The Constraints Theory receives an intelligent technique to change. It evaluates that each mind boggling system, including manufacturing shapes, contains various associated works out, one of which goes about as a basic upon the entire structure. Thus, a complete target of most collecting associations is to make a benefit both for the short and long time.

Constraints Theory gives an effective arrangement of instruments for accomplishing that objective. It involves the five focusing steps which include a system for recognizing and taking out requirements, the reasoning procedures which are instruments for breaking down and settling issues and ultimately throughput bookkeeping which is a technique for measuring performance and controlling institution choices. Constraints theory assumes that the rate of objective accomplishment by goal-oriented framework is restricted by no less than one requirement. The contention by reduction advertisement absurdum (Latin for "diminishment to ridiculousness) expresses that if there was nothing keeping a framework from accomplishing higher throughput, its throughput would be vast which is unimaginable in a genuine framework. Just by expanding move through the imperative would overall be able to throughput be expanded.

A few critique of constraints incorporates Goldratt himself where he regards the hypothesis as an item to offer and he goes about as a businessperson. Likewise, some say Goldratt's hypothesis of imperatives obtains thoughts and ideas from past investigations and speculations; however, Goldratt does not recognize these commitments to his hypothesis.

### **2.3 Empirical Review**

A study conducted by Aoki, (2008) on Transferring Japanese Kaizen exercises to overseas plant in China found that, Kaizen activities in the nations outside Japan, for example, US, China, Australia, Sweden and the UK propose that the idea, methodologies, and practices of Kaizen have turned out to be routinely acknowledged all through the world. The study made use of the readily available secondary data from the government bodies governing organizations in the respective countries. The study showed that the organization culture fundamentally impacts the selection of Kaizen practices. The greatest obstacle to Kaizen achievement is the centralization of expert and absence of cross useful collaboration. So as to improve the odds for effective Kaizen selection, two aspects of organizational culture are necessary: control appointment and strengthening, and high collaboration between supervisors, laborers, clients, and providers. The point of the study is to fill the gap by use of primary data.

Nderi (2012) did a study on “the effects of implementation of Kaizen on the performance improvement of manufacturing firms in Kenya”. A contextual study design was utilized to conduct the study. The researcher discovered that this training has distinctive usage methodology in assembling firms in Kenya. 5s technique was the most favored implementation system while TPS was the minimum favored usage method. Worker's demeanor and misconception of Kaizen were laid out as the basic difficulties faced in usage of Kaizen while absence of satisfactory management support was slightest test in the execution. After the investigation of information gathered, it was discovered that performance improvement is emphatically affected by selection of Kaizen methodology.



The exploration filled the gap by utilization of content analysis to break down the information. Another study done in the country by Ngware (2006) on impacts of TQM utilizing KAIZEN on implementation of business performance in nearby administration associations with reference to Kenya Wildlife Services. Data collection was done by use of survey method. The management should demonstrate commitment to quality issues since this impacts achievement of the quality administration rehearses. It was deduced that management must confer adequate assets for fruitful usage of quality issues. The momentum research will fill the hole by utilization of meeting.

Finally, an investigation by (Muthengi, 2005) on adequacy of KAIZEN System in improving financial performances in Kenyan firms which had utilized Kaizen technique over a time of more than 10yrs. The research found that it requires duty and forfeit in acing the viability of Kaizen framework received. Experienced experts offer long haul rules that are referred to time to time as featuring principal of accomplishment. This specialist found that appropriation of Kaizen positively affects the budgetary execution. The long haul advantages ought to incorporate contribution of workers in improving their procedures (Womack, 2003). The concentration was to see the Kaizen technique over a brief timeframe rather than a drawn out stretch of time.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

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

#### **3.2 Research Design**

Research design refers to the steps that are taken in linking research question, data collection, analysis and interpretation (Hartley, 2004). The research adopted a case study design intended to establish the effects of Kaizen on the performance of Roto Moulders ltd. By using case studies, researchers are also able to collect data and explain phenomenon more exhaustively.

According to Cooper & Schindler (2003), a study concerned with finding out who, which, when, where, and how of a phenomenon is a descriptive design. This study was therefore mapped on a similar concern. The case study method was chosen because it gives an in-depth understanding of the effects Kaizen has on the performance. Previous studies that have adopted this design successfully include: Marete (2010) and Karoney (2008).

### **3.3 Data Collection**

The data was collected using an interview guide. The targeted respondents were 6 managers who are majorly involved in the Kaizen formulation team; The Chief Executive Officer, Kaizen manager, finance manager, production manager, sales and marketing manager and general manager. One advantage of interviews as noted by Mark (2003), is that it helps in collecting valid and reliable data that are found important in answering the research questions in order to achieve the objectives of the study and also to understand the reasons behind some opinions and attitudes of the respondents.

The study used primary data, in-depth interviews were conducted by the researcher with an aid of interview guide developed for the purpose. The primary data was the raw data that was collected using a comprehensive open ended interview guide. The interview guide had bio data of the interviewees and questions on kaizen effect on the performance of RML.

### **3.4 Validity and Reliability of Data.**

The interview guide was constructed to obtain a complete coverage of the topic, with a strong attention on the general objective in order to ensure content validity. Content validity involves the degree to which the study is measuring what it is supposed to measure. More simply, it focuses on the accuracy of the measurement (John, 2007). To increase validity, the interview questions were framed in a very clear and concise manner to make sure each question measures a variable at a time.

Reliability estimates the consistency of the measurement or more simply, the degree to which an instrument measures the same way each time it is used under the same conditions with the same subjects (John, 2007). The aim when discussing reliability is to lessen the errors and biases in the study. The researcher attempted to avoid any partiality in the research by maintaining a high level of consistency during the interview.

### **3.6 Data Analysis**

The analysis of data is the process of critically examining cleaning and transforming data with the aim of identifying useful information and coming up with some conclusions that could be used in the decision making. Techniques that were used to analyze data in this study were discussed in this section. Before coming up with the responses, the preparation of data was done in the interview process through editing, coding and entering of data. Content analysis was used to analyze all the collected data from the field.

The content analysis is suitable for analyzing this type of qualitative data, because it helps in obtaining detailed and in-depth information from the qualitative data that will be received. Babbie, (2001) noted that the aspect of the message is measured by the content analysis. It is flexible and this makes it a wide ranging tool that could be used as a stand-alone methodology as a problem solving technique. The responses generated by respondents were recorded and categorized in accordance the objective of the study.

## **CHAPTER FOUR**

### **DATA ANALYSIS, FINDINGS AND DISCUSSION**

#### **4.1 Introduction**

This chapter discusses the analyses, findings of the study based on the primary data collected through interviews from Roto Moulders Ltd. The findings of the study are presented according to the objective effect of Kaizen strategy on the performance of Roto. The results presented were based on the research questions. From a target of 6 respondents, 5 availed themselves for the interview representing 83%.

#### **4.2 Demographic Data of the Respondents**

The researcher tried to build up the demographic information for the respondents. In this case, the researcher sought to find the age of the respondents. According to the findings, 1 of the respondents was aged between 25-35 years, 2 were aged 36-45 years and 2 were aged between 45-50 years.

#### **4.3 The duration of work by respondents in the company**

The study sought to study the duration of work by the respondents. The question which was administered was for how long have you worked in this company? The respondents were 5 top managers. They included The General Manager; he started working there for less than 1 year. Chief finance manager has worked in the company for more than 15years, Kaizen Manager has worked for more than 1 year, the production manager has worked for more than 5 years and sales and marketing worked for more than 5 years.

#### **4.4 Kaizen formulation**

Kaizen formulation occurs where managers meet to undertake a process of developing an annual work plan which contains the priority objectives, outputs and activities to be undertaken by the Organization. This process is undertaken in the top level management then it is communicated to the employees of each department. The Kaizen Manager narrated that, kaizen strategic plan formulation is done by Directors of RML, and top managers including, The Chief Finance Officer, General Manager, Production Manager, Kaizen Manager and Production Manager, sales and marketing manager, information and technology manager and human resource manager

The study sought to investigate Kaizen formulation process, Respondents noted that this is undertaken when the Kaizen strategy is being prepared and during the process of problem analysis. In the process of formulation meetings are held, where managers in different levels in the firm are involved. The Kaizen management team leads the process. The study identified that Kaizen strategy formulation includes setting of targets which guides in monitoring and evaluation of performance during strategy implementation phase.

The study revealed that the organization faces many challenges when developing kaizen strategies and plans. Inadequate funds were one of the biggest challenge. Others were having competing tasks when the process is being undertaken, low staff morale in participation of the process, lack of competent staff to be involved in the process, missing data and failure to involve the right people and staff in the process. The study revealed that there is low level of participation of lower level staff

#### **4.5 Kaizen set standards**

The study sought to investigate if there are set standards. This was determined by asking the question; are there Kaizen set standards for both organization and processes? Kaizen manager explained that there are tight set standards for every department, different departments have different set standards due to different work they undertake. Every head of department has a mandate of ensuring the set standards are followed.

It was established from the study that, both organization and processes have set standards. In that, the organization as whole is expected to meet certain Kaizen requirement. From the accounts department, sales department, dispatch department to production, they are supposed to follow the 5S accordingly, the general manager applies management by walking around to ensure these are followed. At the end of every month all set goals are reviewed, where the department did not follow the set standards corrective measures are taken.

#### **4.6 Use of the Kaizen 5S**

The study sought to find out if Roto Moulders Ltd made use of the essential 5s in Kaizen strategy. This was established by asking the interviewees the question, do you use 5s in your daily activities? The general manager explained that this is the Centre of kaizen strategy and it was emphasized to every employee follow the 5S in their daily activities. It was determined from the study that Roto Moulders Ltd use 5S Kaizen on its daily activities. The 5S which stand for Sort, set in order, Shine, standardize and sustain, charts are displayed on open places to remind every employee on the use of them.

Chief Finance Manager expounded this explaining how all files and all documents on the shelves are well labeled for easy retrieval and identification. All other documents which are no longer used are destroyed to avoid congestion of the shelves with non-important files. The production manager highlighted that equipment in the factory and the working areas are well arranged since the introduction of Kaizen, the machineries which are not under use are kept away to avoid congestion and movement for everyone. The study found that kaizen 5S contributed to quality improvement, including customer satisfaction, reduction of cost and lead time. The company's involvement in 5S kaizen increased staff involvement and innovation. In addition, after going through the kaizen training the respondents believed that kaizen would likely contribute to a reduction of the workforce.

#### **4.7 Reduction of waste**

The study sought to investigate if there was any reduction of waste in areas like inventory, overproduction and excess quality. The respondents were asked is there reduction of waste after the introduction of Kaizen strategy? The respondents noted that, they saved a lot on the after introduction on JIT. They indicated have being a tremendous reduction of waste in inventory and overproduction, when Kaizen is successfully implemented it brings about reduction of wastes since processes are done effectively and efficiently. Kaizen manager highlighted the following as the wastes they have reduced.



**Table 4.1: Wastes and descriptions**

1	Overproduction	Producing too much or too soon resulting from poor flow of information
2	Defects	Frequent errors, product quality problems or poor delivery performance
3	Excessive transportation	Excessive movement of people, information of goods, resulting in wasted time, effort and cost.
4	Waiting	Long periods of inactivity for people, information or goods.
5	Inappropriate processing	Going about a long process using the wrong set of tools, procedures or systems, when a simpler approach may be more effective
6	Unnecessary motion	Poor workplace organization, resulting in poor ergonomics, for example excessive bending or stretching, or searching for frequently lost items
7	Unnecessary inventory	Excessive inventory because of delay of product, resulting in need for extra storage.

**Source: Researcher, (2017)**

#### **4.8 Challenges faced on implementation stage**

The study sought to investigate if there were challenges faced on the implementation of the study. The researcher determined that by asking the question, are there challenges that are faced during the implementation stage? The general manager said that they face a number of challenges including inadequate support from the employees. He indicated that Kaizen practices were achieved through small group discussion. Group decision making provided an opportunity to share challenges in the organization thus viable and long term solutions. He concluded by noting that, High employee turnover and transfer from one place to the other was also a challenge the company was facing thought they are trying to minimize.

The Kaizen manager indicated that employee teams were not encouraged to try to solve their own problems, and team problem solving approach was used in the company on a small extent, this is because the teams might end up making decisions which are not well thought the impact they will bring in a long term perspective, that might affect the operation of the company. Lack of prioritization of programs and trying to do many things at the same time, accordingly this affected the implantation.

The finance manager highlighted that, they lack the support from the employees, he explained that might arise because of employees might lack motivation due to; inability of management to involve them in decision making, recognition of hardworking employees and salary increment. 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. The study revealed that there was a lag in the implementation of the kaizen management system. That is, there was inconsistency in the usage of the kaizen tools and techniques during the implementation period.

#### **4.9 Review of the Kaizen strategy**

The study sought to find out how often the Kaizen strategy was reviewed. The respondents were asked the question; how often do you review the Kaizen strategy in case you don't meet your set objectives? The Kaizen manager narrated that Kaizen is a daily activity where corrective measures are on daily bases, he then explained that management team meet monthly to carry out the assessment of the progress of laid plans. They take corrective measures where the strategies have not been well followed, for the ones which work they ensure they are maintained.

Kaizen manager explained that, he goes round daily to ensure the Kaizen activities planned are put into action. The production manager explained that, his team in the production department, they review the set kaizen plans on a weekly basis, all the team leaders meet and are expected to give a report on how they have implemented the set goals. If they faced any challenge, then the corrective actions are discussed and a solution is found.

#### **4.10 Positive performance after introduction of Kaizen**

The main objective of the study was to determine the effect of the Kaizen strategy on the performance of Roto Moulders Ltd. Thus it was the more emphasized and the respondents were urged to clarify on this. The researcher started by asking the question, is there any positive performance change noticed after introduction of Kaizen?

The Finance manager indicated that, there are many positive changes after the introduction of Kaizen. He explained that cost of production had reduced since the introduction of kaizen, he emphasized on the cost of materials saying that, the materials usage per production of one tank reduced due to the excess usage of materials before introduction of kaizen. Thus the kaizen strategy ensured the exact quantity of material.

The production manager respondent to the question by accepting there has been a positive change in the performance of the firm. Since the introduction of Kaizen the numbers of accidents in the factory have reduced due to well-arranged working area. There is efficiency in the work done in accounts, sales and dispatch department as compared to the condition before Kaizen.

The study also sought to find out the key indicators of improved performance. The respondents were asked, since the formulation of Kaizen, what are (if any) the performance indicators in the firm? The sales and marketing manager explained that the performance indicators on his department were on time delivery to the customers, the demand of customers was adequately met. The tanks were also being produced of the right quality as compared to the time before introduction of kaizen where tanks were highly reported to burst, currently, complains of breakage of tanks reduced because the production of tanks was well monitored, using the right procedure with the right quantity of material.

The general manager said that there was a reduction on the costs incurred during the production of tanks. Also the time used in the production has reduced due to various Kaizen activities practiced in the factory, time management has been observed by employees especially in the production department. This is because the employees strictly follow the Kaizen 5S.

#### **4.11 Discussion**

Objective of the study was to determine the effect of kaizen on the performance of Roto Moulders Ltd. The findings indicated that kaizen does not only focus on the production line to reduce waste and improve the product quality but also on comprehensive, systematic methodologies that focus on the entire organization, from top management to the workers. It was also found, in the process of solving some problems, RML is developing their own continuous improvement methodologies to fit their specific needs by encompassing the various tools of individual methodologies.

The study found quite a number of challenges which were experienced by the firm. Some of those challenges included; employee resistance to towards continuous improvement practices due to untimely introduction of change at the workplace, hence a solution to these challenges. Kaizen 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 in any organization it cannot be successful (Shackleton & Ali 1990).The findings are the same with the study carried by kariuki, (2014) about the implementation of kaizen practices on Kenyan manufacturing firms.

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). To determine the performance improvement brought about by the introduction of kaizen, it was found that there was improvement on performance which increases more every year. The company kept an investigating eye on the past performances and compare with the current performances of the company.

The study found that introduction of the kaizen is not an automatic catapult to the great performance of the manufacturing companies, but patience and dedication should be invested among the employees and the management system in the organization to earn the expected results. The study also found that the introduction of Kaizen strategy is a process which is formulated by the senior management but it should start with training the staff members, ensuring the supervisors understand that small but gradual improvement are only possible when they bridge the bureaucratic barriers.

The study established that motivation among employees like; inability of management to involve them in decision making, lack of promotion, recognition of hardworking employees were factors that affected Kaizen 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 equipment which they had little knowledge on. A similar study by Kruiger, (2015) revealed that employees need to be motivated for them to implement the kaizen strategy.

The study revealed that to achieve objectives like profit maximization, offsetting costs of operations, business survival and gaining competitive advantage in the market, RML should adopt continuous improvement practices integrated in the organizational culture with regard to total quality management practices, Lean manufacturing, JIT delivery services, benchmarking innovative and creativity, global sourcing, best industry practices and lean supply chain management, at the same time giving importance to the theory of constraint which will help in identifying the limiting factors in the operation .

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMENDATION**

#### **5.1 Introduction**

The main objective of peace study was to determine the effect of Kaizen on the performance of RML. This chapter entails the summary of key findings as presented in chapter four; conclusions will then be drawn based on the findings and recommendations. This chapter will thus be structured into conclusion, recommendations and areas for further research.

#### **5.2 Summary of the findings**

This study sought to establish the effects of kaizen on the performance of Roto Moulders ltd. To achieve objectives like time management, offsetting costs of operations, business survival and gaining competitive advantage in the market, the company should adopt continuous improvement practices as indicated in Kaizen strategy, including Total Quality Management (TQM) practices, Lean manufacturing, JIT delivery services, benchmarking innovative and creativity and best industry practices.

The study established any decision 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. Majority of the decisions were centralized on top level management that hindered Kaizen practices, 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.

The study established that openness, creativity and challenging mentality was key to Kaizen practices institutionalization of the Kaizen practices is the key drive of a competitive firm. The study established that production system was efficient and effective due to new technology that was used by the Roto and trainings to employees on Kaizen practices though the training need to be continuous due to the dynamic business environment. It was evident that employee cooperation, strategic partnerships in the manufacturing industry enhanced Kaizen practices within the organization. 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, 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 equipment which they had little knowledge.

From the findings on the effects of kaizen system on the performance of Roto Moulders ltd the analysis found that in the short run, there was a difference between performance of the company before introduction of Kaizen strategy and after introduction of kaizen system. It was also believed that in a long run, there would be a significant steady performance of the company for the years after introduction of Kaizen system.



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 in Kaizen strategy practices due to untimely introduction of change at the workplace. It was established that technology was the driving force of continuous improvement practices in Roto. This study also established that there was a positive relationship between Kaizen practices and organizational performance in the firm. 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. The study established that increased operational readiness efficiency, increased productivity and improved processes capability were the benefits of Kaizen practices in Roto Moulders Ltd.

### **5.3 Conclusions**

The study concluded that Roto Moulders Ltd should adopt the Kaizen strategy for their improved performances. Although it is not immediate improved performance since growth has to be steady and visibly bigger in the long run. When adopting kaizen strategy, the company should always keep an investigating eye on the past performances and compare with the current performances of the company but on the other hand should also investigate what other factors might have played to the improvement of the performance of the performance of the company. The study also concluded that introduction of the kaizen is not an automatic catapult to the great performance of the manufacturing companies, but patience and dedication should be invested among the employees and the management system in the organization to earn the expected results.

The study further concluded that the introduction of Kaizen strategy is a process which is formulated by the senior management but the training of staff members should be emphasized, ensuring the supervisors understand that small but gradual improvement are only possible when they bridge the bureaucratic barriers and engagement of employee and relying on their views is very critical to the success of the Kaizen system.

#### **5.4 Recommendations**

The study established that any decision made was to be approved by 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. This study recommends that management to use bottom up approach of management for effective implementation of Kaizen.

The limited adoption of kaizen by many firms in Kenya, both manufacturing and service firms is mainly due to the limited knowledge on kaizen and its effectiveness by the Kenyan population. This scenario should be reversed by having kaizen promotion and sensitization activities across all sectors of the economy by all industry players including public and private sector through sectoral organizations such as KAM and KEPSA and the government through the concerned ministries. To complement findings of the present study, further study covering many manufacturing firms across all regions of Kenya is recommended. Moreover, further study should attempt to explore factors influencing acceptability and feasibility of KAIZEN among Kenyan manufacturing firms.

The study further recommended that to determine the actual performance of the Kaizen system, organizations should bridge the bureaucratic barriers and allow the top management to interact freely with the lower hierarchy members of the organization and build a proper rapport to enhance effective communication. The study finally recommended that even after introduction of Kaizen, the organization should keep checking the milestones achieved by the introduction of the system to determine the growth and performance of the company.

### **5.5 Limitation of the study**

Kaizen strategy was assumed to be the cause of any improvement of company performance from the year the kaizen system was introduced in the company. This was a limitation because some other factors might have also contributed to the improvement of the performance in such a time.

The study findings were generated on a company that is well established making it less compatible to being generalized to startup companies. It is however believed that Kaizen system can be adopted by any company or organization whether small or big. The findings for this study however concentrated of bigger companies and not the startups businesses, meaning the results might not really be quiet matching the findings for startup business.

## **5.6 Areas of further study**

This study focused on the effect of kaizen on RML which is a manufacturing firm. However kaizen is applicable in all sectors of a country including the service sector, government organizations and non- governmental organizations. The researcher proposes that a more detailed study be carried out of the manufacturing sector in Kenya using more in-depth data collection methods involving collection of both primary and secondary data, and evaluate of the impact of kaizen on the performance of these manufacturing organizations.

Roto Moulders Ltd has applied Kaizen strategy for 4 years. Kaizen is believed to be effective over a long period, and the improvement is more attained the longer its practiced. The study suggest that future scholars should carry out the study in the view of identifying the relationship between financial performance before introduction of Kaizen strategy and after introduction of Kaizen but over a period beyond 10 years to bring out the inferences from a long run perspective.

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## APPENDICES

### Appendix I: Introduction Letter



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DATE 30/10/2017

#### TO WHOM IT MAY CONCERN

The bearer of this letter Ann Mwakali Nzawala

Registration No. DG.1. (84475) 2016

is a bona fide continuing student in the Master of Business Administration (MBA) degree program in this University.

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 your assistance to enable him/her collect data in your organization.

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  
SENIOR ADMINISTRATIVE ASSISTANT  
SCHOOL OF BUSINESS





## Appendix II: Interview guide

1. What is your age?
  - a. Less than 25 years ( )
  - b. Between 25-35years ( )
  - c. Between 35-45years ( )
  - d. Between 45-50years ( )
  - e. Above 55 year ( )
  
2. What Is your position in Roto Moulders Limited and how many years have you been with the institution?
  
  
  
  
  
  
  
  
  
  
3. Who is involved in the strategic plan formulation?
  
  
  
  
  
  
  
  
  
  
4. Are there Set standards for both organization and processes? If yes, are they keenly followed?
  
  
  
  
  
  
  
  
  
  
5. Do you use 5S-KAIZEN in your daily activities?
  
  
  
  
  
  
  
  
  
  
6. After the introduction of Kaizen strategy is there reduction of waste in areas such as inventory, overproduction and excess quality

7. Are there challenges faced at the implementation stage either departmental or the whole organization?
  
8. How often do you review the Kaizen strategy in case you don't meet your set objectives?
  
9. Is there any positive performance change noticed with the staff in your department after introduction of Kaizen strategy? Give reasons for your answer
  
10. Since the formulation of Kaizen, what are (if any) the performance indicators in the firm

**THANK YOU FOR ANSWERING THIS INTERVIEW.**