



**ST. MARY'S UNIVERSITY**  
**SCHOOL OF GRADUATE STUDIES**

**THE EFFECT OF KAIZEN IMPLEMENTATION ON ORGANIZATIONAL  
PERFORMANCE: THE CASE OF PEACOCK SHOE FACTORY**

**BY**  
**ABEBE DEGU BELAY**

**JUNE, 2023**

**ADDIS ABABA, ETHIOPIA**

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**A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY SCHOOL OF GRADUATE  
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MASTER IN BUSINESS ADMINISTRATION (MBA)**

**JUNE, 2023  
ADDIS ABABA, ETHIOPIA**

## **Statement of Declaration**

This research paper is entirely my original work except where otherwise acknowledged. It has also not been presented for award of MBA degree in any other university.

Declared by:

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## Endorsement

I hereby confirm that the thesis entitled "**The effectiveness of Kaizen implementation on organizational performance: The case of Peacock shoe Factory**" is prepared by Abebe Degu under my guidance and satisfies the standard for oral defence.

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SHOE FACTORY**

**BY  
ABEBE DEGU**

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## **Acronyms**

BPR:	Business Process Re-engineering
BSC:	Balanced Score Card
EKI:	Ethiopian Kaizen Institute
JICA:	Japan International Cooperation Agency
JIT:	Just in time
KAIZEN:	Kanban, Approach, Improvement, Zero Defects, Effectiveness, Networking
PDCA:	Plan, Do, Check Act
QCC:	Quality Control Cycle
PPESA:	Privatization and Public Enterprise Supervising Agency
SPSS:	Statistical Package for the Social Sciences
TPM:	Total Production Management
TQC:	Total Quality Control
TQM:	Total Quality Management
QMS:	Quality Management System
5S:	Five (Sort, Set in Order, Shine, Standardize, and Sustain)
MC:	Management commitment

## **Abstract**

*Kaizen, a continuous improvement methodology, has gained popularity among organizations seeking to improve their performance. This study examines the effectiveness of Kaizen implementation on organizational performance at peacock shoe factory. A mixed research approach was employed, and data were collected from 160 sample were selected from the total employees of peacock shoe factory through stratified sampling technique first and then simple random sampling technique. Structured and semi structured questionnaire and employees in-depth interview are the main data collection methods to investigate the effectiveness of kaizen implementation at peacock shoe factory. The study was employee thematic content analysis to analyse the qualitative aspect of data and descriptive statics in the form of mean, frequency tabulation and inferential statistics mainly binary regression analysis methods were employed for the quantitative data analysis. The findings indicate a statistically significant positive relationship between Kaizen implementation and organizational performance. The study found that Kaizen implementation positively impacted key performance indicators such as five S, just in time, waste elimination and management commitment. The study also found that employee involvement, communication, and training were critical factors in the success of Kaizen implementation. The study concludes that Kaizen implementation can significantly improve organizational performance and recommends that organizations adopt a Kaizen culture to sustain continuous improvement.*

**Key words:** 5SKaizen, just in time, seven waste, management commitment, peacock shoe factory

# **CHAPTER ONE**

## **INTRODUCTION**

This chapter begins by providing an overview of the research background. It then outlines the statement of the problem, research questions, objectives, significance of the study, limitation, and followed by scope of the study and an organization of the study paper.

### **1.1 Background of the Study**

The business must continuously improve the quality of its goods and services to stay competitive in the industrial environment. As Japanese firms desperately tried to catch up to the standards of American and European manufacturers after the mid-1940s, different initiatives were made to increase productivity and product quality. These initiatives led to the development of the kaizen approach. First, efforts were undertaken to absorb the statistical quality control techniques used in western management systems. The introduction of the Deming Prize, an annual award for quality management, has raised awareness among businesses and given opportunity to study best practises. Through this procedure, the Japanese and Western approaches to management were eventually blended to create the Kaizen system.

Kaizen, a Japanese word, refers to ongoing development. The term suggests progress that engages everyone managers and employee and costs nothing (ImaI, 1997). Kaizen is a Japanese quality strategy that Ima further defined as being so deeply embedded in the brains of both managers and employees that they frequently do not even realise they are thinking Kaizen. Kaizen depicts the daily problems employees face in the workplace and how they are overcome, making it more than merely a tool for progress. Any area that needs to be improved can use kaizen. Although the kaizen principle is primarily applicable to the industrial sector, the majority of the service sectors are currently utilising kaizen as their primary quality management method. Applicability areas of kaizen are not limited to manufacturing rather it can be applied in different sectors of the economy that require continuous improvement in their activities.

The idea of continuous quality and productivity improvement is perfect when there is no stressful work, a fair wage, good employee social conditions, organization-wide group

activities based on the Kaizen mindset, and self-disciplined personnel. Despite these and other difficulties, many organisations are benefiting from the use of the Kaizen management technique. Therefore, experts in the field have been contending that addressing and resolving the current issues and difficulties would require a solid grasp of the policy instruments, methodology, culture, and application techniques of the kaizen concept. As was already noted, Ethiopia has been practising kaizen for a decade. Research shows that there are challenges during launching time for the effective implementation of kaizen such as team work was leading in influence, followed by training, followed by management support and last was education level of workers (Samrawit, 2020). As kaizen is continues improvement it will take some time to see the effectiveness.

Kaizen in Ethiopia has its roots in a 2009 agreement between Ethiopia and Japan for a pilot project involving 30 manufacturing firms and technical support from JICA (the Japan International Cooperation Agency). Kaizen Institute of Ethiopia (EKI) is established by regulation issued by council of ministers proclamation number 256/2004 Ethiopian Calendar for further transfer and implementation of the philosophy after the pilot project's success in those particular manufacturing industries (Kaizen, 2013). To increase the institute's capability, the second project sought to train Ethiopian Kaizen consultants. 133 trainers from Technical and Vocational Education and Training (TVET) Institutes and 57 Kaizen consultants both got training for this project. The Ethiopia Kaizen Institute enthusiastically launched the Kaizen movement in large-scale sugar, textile, and leather companies using trained consultants. Highly promising quantitative and qualitative changes were recorded. The change in attitudes and the creation of smooth relationships in situations where there was strong conflict between management and the workforce were the most outstanding results. The monetary values of achievements attained each year amounted to hundreds of millions of birr.

Peacock shoe factory started to implement kaizen as continues improvement mechanism to excel its service provisioning capacity than it was before. As for implementing kaizen overall the factory would introduced of 5S as a primary activity towards its quality improvement strategy. Thus, the purpose of this study is to assess the level of kaizen implementation on organizational performance. The factory is facing in achieving its



objectives from kaizen implementation. Based on the assessments, the researcher forwarded possible recommendations that will contribute for the proper implementation of kaizen.

## **1.2 Statement of the Problem**

Increasing competition in the industrial world requires the company to make continuous improvements in the quality of products and services offered (Winy, 2011). Product/service quality and productivity improvement are the critical global agendas that require new management systems like kaizen. Kaizen has become a global project that spread by various international and domestic business organizations and their employees aimed to improve quality and productivity to achieve organizational mission and objectives (Maarof & Mahmud, 2016; Garcia & Rivera, 2016; Glover et al., 2011). The advantages from kaizen implementation are enormous and reported along economic, social, and technical dimensions of firms and include cost reduction, productivity improvement, decrease in defects, and improvement in workers' ethics and incentives for better results (Bessant, 2003).

Nowadays, organizations have been forced to live in a highly competitive environment both global and local. It may be too difficult for any organization to survive these intense competitions with 'business-as-usual' way of doing things; rather they are required to look for several change tools that may, when applied, enable them to effectively and successfully compete. Equally well, in order to ensure e-economical utilization of the scarce resource that is available for any organization, it is inevitable that it has to change the way it has been doing business (Samrawit, 2020).

According to Seid (2012) Kaizen is a management philosophy having its own systems, methods, procedures and problem solving tools. Kaizen is more to do with a philosophy and daily practices rather than techniques. The beauty of kaizen is that it can realize productivity improvements with little additional investments. Simplicity and cost effectiveness are the major reasons why kaizen is well appreciated globally. However, there are a few challenges in implementing kaizen in Ethiopia. It may be a challenge for managers to change their attitude and trust the workers in gemba.

According to Boca (2011), the successful implementation of kaizen will reduce consumption and costs, increase productivity, reduce delivery time and increase flexibility in meeting customer requirements. Based on these Kaizen have been implemented across different industries and manufacturing sectors successfully in Ethiopia, as these result significant achievements have been attained through the implementation of the Kaizen concept (EKI, 2016).

Currently, many manufacturing companies are facing problems such as high-quality rejection, high inventories, high lead time, high costs of production, and inability to meet the delivery date. By implementing and practicing the kaizen system these problems can be solved without employing high-tech and high-touch approaches but by involving all layers of people on the shop floor in Kaizen activities daily (Desta A., 2014; Arash G., 2013). So that Kaizen refers to continuous improvement in performance, cost, and quality

In Ethiopia, where Kaizen is a recent phenomenon and its impact on the performance of enterprises, especially manufacturing firms is yet at its cradle. As the study conducted by Demis (2020) indicated little is known about the effect of kaizen management practices on business performance in companies that implement kaizen in Africa in general and Ethiopia in particular. Kaizen implementation has resulted in some minor improvements in the performance of manufacturing companies in Ethiopia (Otsuka, Jin, & Sonobe, 2018) and (Desta, Asegedom, Gebresas, & Asheber, 2014), and the level of achievement is different.

Haftu, et.al. (2020) investigated the effect of Kaizen philosophy on organizational performance in Ethiopian manufacturing industries by using two social factors (leadership and people) and four technical factors (strategy, process, resource, and partnership) of conceptual variables. The result of the study showed that effective implementation of the Kaizen philosophy results in enhancing organizational performance.

When we come to peacock shoe factory, based on production area observation, supervision and quarters report about current Kaizen implementation in the factory the study tried to examine the practice of kaizen from 5Ss, Just-in-time, 7 Muda and MC perspectives.

In addition, to the best of the researcher's knowledge, there was no study conducted on the implementation of kaizen specifically with respect to peacock shoe factory. Thus, the

researcher was motivated to study the effect of the implementation of Kaizen practices on the performance of peacock shoe factory in terms of 5Ss, Just-in-time, 7 Muda and MC which have been implemented at peacock shoe factory in AA city. Therefore, the main research questions of this study are stated as follows.

### **1.3. Research Questions**

This research has been carried out on peacock shoe factory in order to find out the effectiveness of kaizen implementation. In light of the above problem statement the study provides possible solutions to the following basic research questions:

- 1) What is the relationship between 5s' of Kaizen (sorting, set-in-order, shining, standardizing, Sustaining) implementation and organizational performance in peacock shoe factory?
- 2) To what extent is just in time implementation actually improved organizational performance in peacock shoe factory?
- 3) To what extent kaizen implementation minimizes deadly wastes in peacock shoe factory?
- 4) How does management commitment and support improve kaizen implementation in peacock shoe factory?

### **1.4. Objectives of the Study**

#### **1.4.1. General objective**

The general objective of the study was to investigate the effectiveness of Kaizen implementation in the case of peacock shoe factory.

#### **1.4.2. Specific Objectives**

Specifically, the research has the following key specific objectives:

- ❖ To identify the effectiveness of kaizen (5S) implementation in the peacock shoe factory
- ❖ To find out the overall implementation of just in time in peacock shoe factory,

- ❖ To examine the effectiveness of kaizen implementation in seven waste reduction peacock shoe factory and
- ❖ To assess management commitment and support for kaizen implementation effectiveness in peacock shoe factory

### **1.5. Significance of the Study**

It is envisage that the finding of this study would generate significant benefits for the following parties:

- ❖ **To top Level managers of peacock shoe factory:** these managers get jobs done effectively and efficiently. Kaizen can support top-level management by strategic alignment; reducing costs and improving efficiency, employee engagement, helping organizations gain a competitive advantage and by improving customer satisfaction.
- ❖ **To Employees of peacock shoe factory:** it helps employees to their task more efficiently and effectively. They minimise cost of operation and maximize productivity, they will put their organization at the top in return customer satisfaction will be realized. This study also support empowering themselves, developing their skills and knowledge, improving their job satisfaction, create a safer work environment and to reducing work-related stress and improving work-life balance.
- ❖ **For peacock shoe factory :** the factory will improve its work operation and practice, minimise its cost and avoid wastage, ensure total quality , adopt kaizen as normal work practice which in return it will ensure continuous work improvement. This mean that the company can improve quality, increased productivity, and empowered employees.
- ❖ **For customers:** customers will receive service in timely manner, quality services, ultimately it will bring customer satisfaction. The study can support customers by improving the quality of products and services, deliver products and services more quickly, to deliver customized products and services, to offer products and services at a lower cost and to improving customer satisfaction and loyalty.

### **1.6. Limitation of the Study**

This study was covering the effectiveness of Kaizen implementation in peacock shoe factory. Due to Time and budget constraint ,the study was collect data by selecting representative samples from this factory and would employees questionnaires and in-depth interview to collect data which was collected ones (cross-sectional). Moreover, this study

was employee descriptive survey research design. The other constraints facing the researcher were limited access to data, selection bias, resource constraints, and lack of standardization and hawthorn effect.

### **1.7. Scope of the Study**

The main focus of this study is investigating the effectiveness of Kaizen implementation in peacock shoe factory. The studies will show Kaizen as a tool of change and improvement for implement in each department of peacock shoe. To that end, it will revolved around employees and top level managers commitment in effectiveness of kaizen implementation, the real outcome of kaizen practice and challenges faced by peacock shoe factory in implementing kaizen. Methodologically, this study is adopting the positivist research paradigm which follows an explanatory research design and mixed research approach. The study was also conducted in peacock shoe factory in AA, Ethiopian in the fiscal year of 2023GC.

### **1.8. Organization of the Study**

This research was organized into five Chapters. Chapter one which will introduce the study background , statement of the problem, objectives of the study, significant of the study, operational definition of terms used in the study, scope of the study, limitations of the study, and the organization of the thesis. Chapter two is presents on review of related literature enclosed in Kaizen. It will also present conceptual framework. The third chapter will describe the research design and methodology, target population and sampling, data collection instruments, methods of data analysis an ethical concerns considered in the study. The Fourth chapter will present both quantitative and qualitative data, their analysis, findings and interpretation. Chapter five will present summary of major findings of the study, draws conclusions from those findings which are substantially supported by empirical evidence and then will forward credible recommendations based on the finding of the study with suggestions for further study.

## **CHAPTER TWO**

### **REVIEW OF RELATED LITERATURE**

#### **2.1. Concept and Definition of Kaizen**

According to academics, kaizen is defined in various ways. In light of this, the concept of Kaizen is described as the spirit of improvement based on the spirit of dedication and collaboration, which is applicable in all aspects of life personal, domestic, social, and professional—(Brunet, 2000). According to Imai (1986), the goal of kaizen in the workplace is "ongoing (and relatively expensive) improvement involving top management, managers, and workers." The term "kaizen" refers to a process of continuous improvement of the work and is also a compound word involving two concepts: Kai (mean change) and Zen (mean for the better); the term also derives from "Gemba Kaizen," which is "continuous improvement" involving the entire workforce from the top management to middle managers and workers. Therefore, kaizen is a Continuous improvement of the core strategies for excellence in production of SMEs.

Imai (1986) claims that the Kaizen concept was initially created in Toyota Corporation and spread to other Japanese firms as they became well-known on the global market for producing high-quality goods in the 1980s. Imai was the first to introduce kaizen to an international audience with his book, *Kaizen*. According to Imai, kaizen is an umbrella concept that means improvement, an ongoing improvement involving everyone, top management, managers, and workers. Since other Japanese companies also improved their performance, Kaizen has been viewed as a key component in Japanese management and has been presented as one of the sources of the competitiveness of Japanese manufacturers.

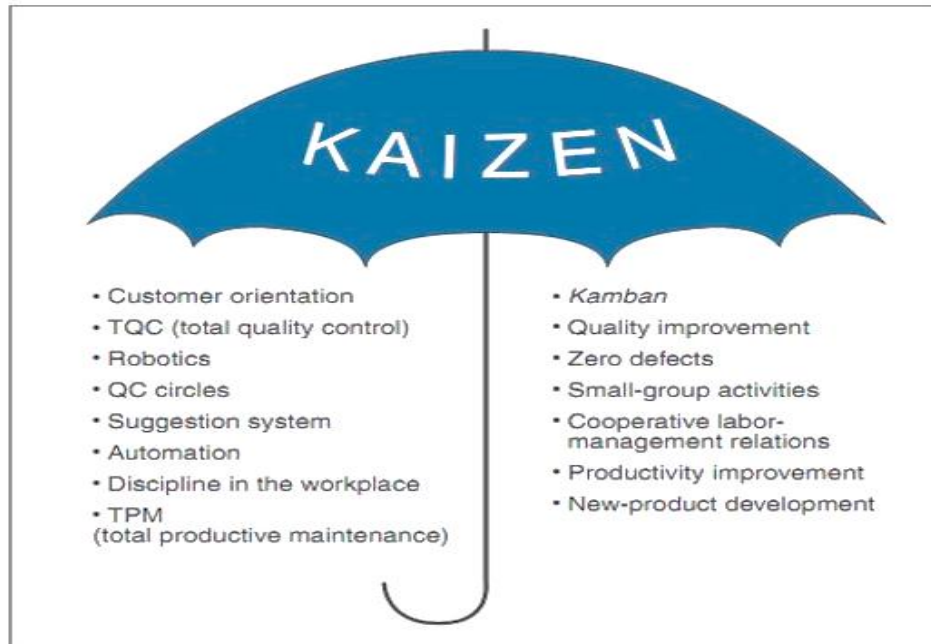
After the Second World War, when Japan was attempting to rebuild factories and rethink various systems, the concept of Kaizen was first established. In the 1950s, the idea of Kaizen really started to take off (Imai, 1986). The father of the Kaizen strategy, Masaaki Imai, claims that it is the most crucial idea in Japanese management and the secret to the country's economic success. The Kaizen principle, which seeks harmony through constant development, is founded on old Japanese tradition and philosophy. In its modern incarnation, it serves as a tool for personal growth as well as for streamlining and enhancing

organizational operations. The meaning of improvement in Kaizen should not be seen in isolation, but in a wider context, which is the real meaning of this expression borrowed from the Taoist and Buddhist tradition, focusing on improvement for all the society (Imai, 1986).

Imai (1997) went on to define the idea of Kaizen by saying that it is not only a management technique but also a way of thinking that prescribes how a person should live their own life. This indicates that Kaizen was primarily concerned with how individuals approached their jobs. Additionally, it demonstrated how both management and employees may alter their perspectives to increase productivity. Imai (1997) added that there are two categories of improvement: Kaizen and innovation. Kaizen denotes incremental gains brought about by continual work. Innovation is a significant improvement brought about by significant financial investment in new machinery or technology. Imai adds that management in the context of kaizen has two primary roles: upkeep and development. Maintenance refers to activities directed towards maintaining current technologies, managerial and operating standards, and upholding such standards through training and discipline.

Therefore, Kaizen under its maintenance function, management performs its assigned tasks so that everybody can follow standard operating procedure.

Kaizen is a philosophy of management as far as it stems from the view that any particular improvement should not be made to the detriment of the customers and wider community. Therefore, we should always have this wider context in mind when talking about the specific concept of Japanese management which integrates all the components within a dynamic whole and clarifies the underlying importance of social harmony (Imai, 1986).



Source: Imai (1986, p.4)

Figure 1: Kaizen umbrella

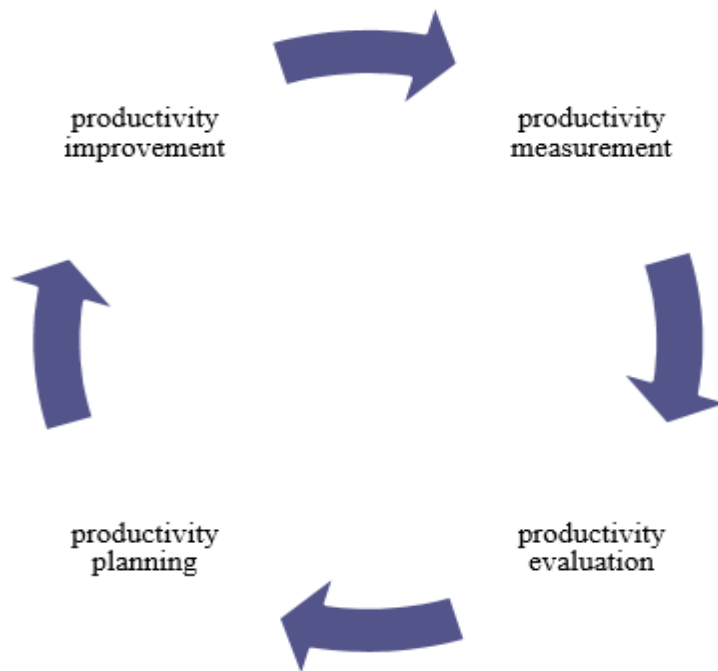
Kaizen, as seen in the aforementioned figure 1, is an umbrella concept that encompasses the majority of those "uniquely Japanese" practices, such as customer orientation, TQC (total quality control), robotics, QC circles, suggestion systems, automation, workplace discipline, TPM (total productive maintenance), *Kamban*, quality improvement, zero defects, small group activities, cooperative labor management relations, productivity improvement, and new-product development. Imai (Imai, 1986) condensed the principle and tools into a single word under the canopy.

## 2.2. Productivity Cycle

As demonstrated within the figure2 underneath, appears the efficiency cycle schematically (David, 1979), at any given time, an organization that's within the middle of an on-going "efficiency program" may be included in one of the four stages or stages: Efficiency Estimation, Efficiency Assessment, Efficiency Arranging, and Efficiency Enhancement. We truncate these four stages MEPI, where, M, E, P, I stand, separately, for Estimation, Assessment, Planning, and Change; organization that starts a formal efficiency program for the primary time can start with efficiency estimation and once the efficiency levels are



measured, they need to be assessed or compared against arranged values. Based on this evaluation, target levels of productivity are planned on both short- and/ or long-term bases.



**Figure 2 Productivity cycle**

Source: David, 1979

Efficiency estimation, assessment, arranging, and enhancement, which frame a nonstop prepare; truncated PMEPI (David, 1979), to realize the arranged targets, efficiency change takes put in a formal way. In arrange to evaluate the degree to which the change will take put following period, efficiency levels must be measured once more. This cycle in this way proceeds for as long as the efficiency program works within the organization. The efficiency cycle concept appears that efficiency enhancement must be gone before by estimation, assessment, and arranging. All four stages are vital, not fair efficiency measurement or fair efficiency change. Moreover, this cycle emphasizes the "method" nature of the efficiency issue. A efficiency program isn't a one-time venture, but or maybe a ceaseless, on-going handle (Davd, 1979).

Kaizen executions inside the organization create imperative abilities like, issue fathoming, group working, obtaining preparing, finding a arrangement freely, etc. Consequently,

laborers ended up considering laborers and are more cognizant almost the inactive position. This aggregate, slow and proceeds alter makes a difference to realize huge step developments by executing BPR or benchmarking (Assefa, 2014). Assefa too contends, a re-engineered venture presented dynamism and gets up the organization from its conventional position and might have obtained a culture for alter and change which is supportive to execute Kaizen. He too claimed expressing the other way circular, after a radical alter within the prepare, persistent enhancement would maybe be seen as contributing to alterations.

### **2.3. The Kaizen Philosophy**

Change has ended up an necessarily portion of speculations and models of alter, such as Structure Hypothesis (Pettigrew, 1990), perfect sorts of alter and cycles of organizational changes inside progressive, piecemeal, centered, separated and incremental changes. (Imai, 1986) Presented kaizen into the Western world when sketched out its center values and standards in connection to other concepts and the hones including the advancement prepare in organizations.

The Kaizen logic picked up acknowledgment and significance when it was treated as an overarching concept for Add up to Quality Administration (TQM) (Imai, 1986); Leather treater and Roncarti, 1994; Elbo, 2000), Add up to Quality Control (TQC) or Company Wide Quality Control (CWQC) citing hones such as Toyota Generation Frameworks (TPS) and Fair in time (JIT) Reaction frameworks pointed at fulfilling client desires with respect to quality, fetched, conveyance and benefit.

With the center on advancement, the Kaizen logic come to reputation in organizational advancement and alter forms and has been clarified as the “missing link” in Western Commerce Models and one of the reasons why Western firms have not completely profited from Japanese administration concepts. As kaizen infers alter and ended up great, after lock in in kaizen, hence, is anticipated to go past one’s contracted role(s) to ceaselessly distinguish and create modern or made strides forms to realize results that contribute to superior realization of organizational objectives. Kaizen can be caught on as having a soul

of advancement established on a soul of participation of the individuals, proposing the significance of groups as a crucial plan in this approach (Elbo, 2000).

Kaizen philosophy, however, includes the concept of kaizen (Continuous Improvement) and Kairyo (Process Improvement). (Imai, 1986) Further proposes that the kaizen philosophy embraces main principles; Processes must evolve by gradual improvement rather than radical changes. in practice, Kaizen can be implemented by improving every aspect of a process in a step by step approach, while gradually developing employee skills through training education and increased involvement resulting in quality improvement. With quality improvement, employees meet together to discuss the current operations of the company. They decide what things can be changed that will improve the quality of the company and of the products (Pettigrew, 1990).

Human assets are the foremost critical company resource Kaizen must be practiced in pair with "Regard for Individuals" not coming about in results such as cutbacks. Kaizen has gotten to be fruitful with numerous fabricating companies since the representatives are included. They feel that their conclusion is critical and this boosts the representative assurance. Keeping the workers upbeat will cause them to be more profitable and fulfilled with their occupations (Imai, 1986).

Teamwork one of the biggest principles of the kaizen approach is the ability to work in teams. Each department is considered a team and they will be responsible for making small changes that impact the organization. All employees from top manager to front line workers should share common values, business objectives, and information. And, should fulfill their respective role properly, enhancing their capabilities through exercising autonomy and creativity. The teams will then report to their manager. The manager takes this information to management and the entire process of kaizen is evaluated (Imai, 1986)

Discipline In order for kaizen to be effective, discipline is necessary. Management as well as workers needs to believe in the Kaizen idea and strive toward obtaining the small goals in order to reach overall success. A strong commitment to discipline and to the kaizen method will prove success for a company (Pettigrew, 1990).

Persistent advancement Enhancement must be based on factual or quantitative assessment of handle execution. The little changes will lead to greater advancements all through the complete company. Typically why kaizen is called a "ceaseless prepare advancement" framework or a "ceaseless advancement strategy." Indeed with the changes, there are still little things representatives can do to change the way they work. There are straightforward things you'll do to assist your workers work quicker and ended up more productive. All representatives ought to have firm conviction that the work put must support a want for nonstop enhancement Kaizen requests item or benefit quality is moved forward and is observed on a nonstop premise (Elbo, 2000).

## **2.4. The Three Pillars of Kaizen**

Agreeing to (Imai, 1986), kaizen administration methods of insight and hones, the three columns are summarized as takes after: 1) housekeeping, 2) squander end & 3) standardization and as he expressed as, the administration and workers must work together to fulfill the prerequisites for each category. To be guaranteed victory on exercises on those three columns three components have moreover to be taken account. Those are: Visual administration, the part of the boss, and the significance of preparing and making a learning organization.

### **2.4.1. Housekeeping / 5s**

Housekeeping could be a prepare of overseeing the work put, known as “Gemba” in Japanese, for advancement purposes. Other essayist too demonstrates that (Imai, 1997) presented the word “Gemba”, which suggests “real place”, where esteem is included to the items or administrations some time recently passing them to another handle where they are shaped. So the thought of “the right things to the proper place” is the prerequisite of Gemba within the learning division of the colleges after wrapping up the preparing sessions.

For proper housekeeping a valuable tool or methodology is used. The term “Five S” is derived from the first letters of Japanese words referred to five practices leading to a clean and manageable work area: seiri, seiton, seiso, seiketsu and shitsuke. The English words equivalents of the 5S’s are sorting, set in order, Shine, Standardization and sustain (Imai, 1986) (Imai, 1997) Other writer like (Foss, 2004) 5s is a philosophy and checklist for good

housekeeping to achieve greater order, efficiency and discipline in the workplace. Thus applying 5s in the learning department are important for the trainees, trainers and the college's community to use time, energy and material effectively. Additionally the training system will be facilitated in smooth and attractive way.

Imai (1986) Exhorted that 5S usage implies applying the taking after exercises within the workshop: Sorting Set in arrange, Sparkle, Standardization and sustain.

**Sorting:** - it could handle that includes selecting what you would like to total the work and expelling everything else from your work range. It centers on evacuating all superfluous things from the working environment. In this way applying it working environments will increment and increment monetary wage by sold the undesirable fabric.

**Set in order:-**Straightening specifically customizes your workstation and surrounding area to meet your work area needs. Arrange remaining items so they are easy to select, use, and return to their proper location. Hence it helps to use time and material effectively and efficiently in proper ways. It focuses on efficient storage and location methods. In simplest terms "a place for everything and everything in its place".

**Shine:** - Its Emphasis is on the removal of dust, dirt, and grime. It focuses on cleaning up the place now that all the disorder and trash has been removed. Obviously one benefit of this step is to make the workplace cleaner and brighter where everyone will enjoy working.

**Standardized:** - Standardizing creates a work area free of checklists; if appropriate standards are put in place it will be easier to maintain and continue improving. By implementing this we make sure that the first three steps are maintained.

**Sustaining** is the end result of how well we have performed the previous four S's. In the Sustainment stage, think of ways to eliminate effort in maintaining an area. It is by far the most difficult where you need to make it habit to properly maintain the new processes.

Benefits of applying 5s in any organization to the workers exhorted by (ImaI, 1997)are: Makes cleanliness, clean, wonderful, and secure working situations; it revives work put "Gemba" and significantly moves forward representative resolve and inspiration; it disposes of different sorts of squander by minimizing the ought to seek for instruments, making the

operators' occupations simpler, lessening physically depleting work, and liberating up space; it creates a sense of belonging and cherish for the place of work for the representatives. It needs everybody to preserve 5S rules. To preserve Teach, we got to hone and rehash until it gets to be a way of life. Teach implies making a consistent propensity of appropriately keeping up rectify strategy.

Time and effort involved in establishing proper arrangement and orderliness will be in hopeless if we do not have discipline to maintain it. If we do not do 5S, we can't do any other work efficiently. They are features which are common to all places and are the indicators of how well an organization is functioning. Thus kaizen involves setting standards and then continually improving those standards. To support the higher standards kaizen also involves providing the training, materials and supervision that is needed for employees to achieve the higher standards and maintain their ability to meet those standards on an on-going basis. The 5S approach is, thus, a step-by-step method which is responsible for identifying items not needed (idle machines, parts not needed, etc.) eliminate these, arrange the rest in order, schedule and carry out cleaning of the workplace and keep on the improvement action and make it your habit

#### **2.4.2. Waste (Muda) Elimination**

The Japanese word "Mud" implies squander or any non-value-adding activity which Concurring to (established, 2011), the so-called "seven dangerous squanders" are classified as: "Muda of overproduction, 'Muda' of stock (Pointless stock), 'Muda' of holding up, 'Muda' in transportation, 'Muda' of inadequate things, 'Muda' of movement and 'Muda' in handling". Hence, a combination of these squanders, in case they are not recognized early and got freed of, will lead organizations to disintegration in execution and eventually to lower benefit. Each squander has its possess causes and comes about in negative results.

1) **Over Production**:-Producing items for which there are no orders, which generates such wastes as overstaffing and storage and transportation costs because of excess inventory.

2) **Excessive Inventory**:-Excess raw material, work-in-process, or finished goods causing longer lead times, obsolescence, damaged goods, transportation and storage costs, and

delay. Also, extra inventory hides problems such as production imbalance, late deliveries from suppliers, defects, equipment downtime, and long setup times.

3) **Waiting**:-Workers merely serving to watch an automated machine or having to stand around waiting for the next processing step, tool, supply, part, etc., or just plain having no work because of stock outs, lot processing delays, equipment downtime, and capacity bottlenecks.

4) **Motion**:-Any wasted motion employees have to perform during the course of their work, such as looking for, reaching for, or stacking parts, tools, etc. Also, walking is waste.

5) **Transportation**:-Carrying work in process long distances, creating inefficient transport, or moving materials, parts, or finished goods into or out of storage or between processes.

6) **Rework/defects**:-Production of defective parts or correction. Repair or rework, scrap, replacement production, and inspection mean wasteful handling, time, and effort.

7) **Over Processing**:-Taking unneeded steps to process the parts, inefficiently processing due to poor tool and product design, causing unnecessary motion.

### 2.4.3. Standardization

Where there are no benchmarks, no change can be realized. Guidelines are set and the execution of machines, workers or forms are measured against these measures. Standardization is one of the foremost vital pillars of Kaizen. It is additionally "one imperative column of TQM". (Imai, 1986)"Standards require consistent modification and updating". By regularly investigating guidelines and taking activities organizations can accomplish sensational advancements. This includes information collection, information examination and empowering groups to carry out issue - tackling errands. For organizations to outlive competition by giving quality products/services, standardization is one of the foremost vital exercises to consider. As S.N. Chary (2012) clearly puts in his book 'Production and Operations Management'; "quality in products/services comes through: physical measures – quantifiable guidelines; framework benchmarks – strategy - arranged; behavioural measures – way of collaboration and philosophical measures – ways of considering or attitudinal and motivational angles".

Measures are set by administration, but they must be able to alter when the environment changes. Companies can accomplish emotional change as investigating the guidelines intermittently, collecting and analysing information on surrenders, and empowering groups to conduct problem-solving exercises. Once the benchmarks are input and are being taken after at that point in the event that there are deviations, the labourers know that there's an issue. At that point representatives will audit the measures and either remedies the deviation or exhortation administration on changing and making strides the standard.

Concurring to Imai, there are two sorts of benchmarks in gemba kaizen. The primary one, administrative measures, which are essential for overseeing workers for regulatory reason and which incorporate regulatory rules, work force rules and approaches, work depictions, rules for planning cost accounts, etc. The other is called operational measures, which got to do with the way individuals do a work to realize QCD. Whereas managerial standards relate to the inner reason of overseeing representatives, operational measures relate to the outside request to realize QCD to fulfil clients.

J.K. Liker (2004) in his book "The Toyota Way" takes M. Imai's explanations of standardization as "It is impossible to improve any process until it is standardized?" He also suggests as "one must standardize, and thus stabilize the process, before, continuous improvements can be made." That is, adaptation to the standard is required before trying to improve the standard. This can best be illustrated by using Deming's PDCA cycle (Plan - do - check - Act) which can help in adapting the standard (stabilize).

Accordingly, the PDCA cycle of continuous improvement can be described as follows: "Plan: identify what to improve and develop future actions to undertake based on opportunities of improvements and internal assessments; do: carry out the plan; check: evaluate the result against the plan and finally, act: adjust the process (plan, do and act) as required. In the process, it can then enable the organization or work units to see the opportunities of improving the standards.

## **2.5. Change Management**

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intermittently, collecting and analysing information on surrenders, and empowering groups to conduct problem-solving exercises. Once the benchmarks are input and are being taken after at that point in the event that there are deviations, the labourers know that there's an issue. At that point representatives will audit the measures and either remedies the deviation or exhortation administration on changing and making strides the standard.

Concurring to Imai, there are two sorts of benchmarks in gemba kaizen. The primary one, administrative measures, which are essential for overseeing workers for regulatory reason and which incorporate regulatory rules, work force rules and approaches, work depictions, rules for planning cost accounts, etc. The other is called operational measures, which got to do with the way individuals do a work to realize QCD. Whereas managerial standards relate to the inner reason of overseeing representatives, operational measures relate to the outside request to realize QCD to fulfil clients.

There is no doubt that such a process change at the point of conception, evaluation and/or implementation requires a great deal of financial resources and management time and leads to high expectations. Therefore, any failure can be disastrous. To prevent such a failure, attention should be given to change management at all stages. According to Jones, G. and George, Change management can be defined as the process of planning; organizing, coordinating and controlling the compositions of the environment, internal and external to ensure that the process changes are implemented according to approved plans and the overall objectives of introducing the changes are achieved with as little disruption as possible. It may be impossible to effect change without any inconvenience to the existing processes and processors. In effect, change management is intended to prevent disruptions and any other deliberate or inadvertent acts that would frustrate the process change and to resolve any disruptions.

Change management is not restricted to one level of management instead; it cuts across the lower, middle and top levels of management, depending on the circumstances and the level of authority at each level. Organizations and working places are in continuous change, and these changes occur because Of external powers, which are making the organizations adapt to the environment, or internal Organizational challenges may appear. Organizational Change can be the result of decreasing Productivity, changes in the core production or

organizational structure. It is natural to Separate between planned change and change as a reaction to the surroundings or internally within the organization (Jones, and George, J. 2006)

## **2.6. Organizational Changes**

There are many reasons why planned organizational changes may be necessary. In most organizations, change is typically used to improve organizational performance in some capacity and may involve targeting one or more of four categories: structural, cost-cutting, process, or cultural change (Burnes, 2004).

### **2.6.1. Organizational Change Management**

Implementing change management frequently required an organization to undergo cultural and structural adjustments. The disruption of our expectations for the future, which is perceived as a loss of control, is a significant alteration, though (Marshall & Conner, 1996). Organizational change is becoming a constant aspect of organizational existence, according to Burnes (Burnes, 2004). Particularly when it is unclear what the overall objective of the operation is and who would profit from the changes, people are unlikely to alter the way they have been (successfully) functioning (Doppler and Lautenberg, 2000). Fear of the unknown and uncertainty is often the source of challenges in change management. People need predictability, which has something to do with our basic need for security.

Therefore, change has been carefully planned, and the process of change must be managed and supervised. Bridges and Mitchell claim that by assisting individuals in navigating uncharted ground, organizational change management has proven to be an effective technique for facilitating successful cultural transitions. According to Mitchell and Bridges (2000) in order to deal with the change process, various models, strategies, and instruments have been developed. It is crucial to halt and address resistance right away. The required change frequently dictates the tools and techniques that are used.

### **2.6.2. Change Readiness**

It has been established that changes, both when intended and implemented can bring about Emotional disorder. It has also been described that organizational change has an effect on

such work related to social and psychological constructs as job satisfaction, levels of Uncertainty and organizational commitment. In the propositions and hypothesis outlined in the introduction it is proposed that these constructs should be investigated in relation to levels of so called "change readiness". A major organizational change often starts slowly are incrementally implemented and are subject to change as information is gathered. Certainly that is the method usually adopted by those who have an understanding in planned organizational change. This description of change implementation can be non-inclusive to employees at initial stages. The uncertainty Involved in such a work environment can be very stressful and eventually cause considerable resistance to change (Klein, 1996).Van de Ven and Poole (1995) suggest four theories of change, life cycle- , teleology, Evolutionary and dialectical theory. Each presents differing conceptual motors driving change. Within the dialectical theory of change resistance plays a essential role. The theory begins with the Hegelian assumption that organizations are best portrayed by two opposing internal forces.

## **2.7. Challenges of Change Management**

The organizational change management process faces several difficulties, including opposition, a lack of expertise and commitment, as well as effects on the entire organization and the people that work there. People dislike changes of any kind. It may be in human nature to have a "strong preference for stability and continuity" (Brooks and Bate, 1994, p. 181). People only desire to change when the pull and push pressures are so powerful that they no longer regard any other option as an option. There is no way that a purportedly "much more challenging business environment" and a "vision" of a "more business-like" company will persuade workers to alter their everyday habits at their workstations.

People are also very sensitive to the technical components of change projects, such as how change is introduced, conveyed, and discussed, and whether and how their opinions are not just heard but also taken into consideration seriously. According to Kirkpatrick, many people continue to have the belief that an organization should be much more than a profit-making machine. Such beliefs and ideals may be very deeply ingrained in the attitudes and culture of a company (Kirkpatrick and Ackroyd, 2000).Any change initiative must take into account the following: According to a substantial body of literature, changing organizational culture is challenging because it is deeply ingrained in an organization's

fundamental norms and values and cannot be imposed from above. According to Diefenbach (2006), many people appear to be opposed to top-down, paternalistic leadership styles and the centralization of authority. But the cynical use and abuse of lofty ideals for individual and group interests is perhaps what most people oppose.

People resist ambitious senior managers who join organizations they do not know, who are only interested in furthering their own career and market-value, mess with several change management initiatives, and then leave the organization in a state worse than before for good and with a golden handshake. People resist managers who have only little understanding of the business, who do not care for the ideas and needs of their employees, and the organizational necessities and opportunities, with managers who pretend to be busy and important, even crucial for the sake and survival of the unit but at the end of the day are only interested in their career and the increase in their market value, in strengthening their position and securing their pension scheme.

In the literature on change management, the idea of employee resistance to change frequently comes up. Kotter (1996) and Ajzen (1991), among others, have written about the crucial roles that employee behavior and resistance to change play in the change process. Various academic studies revealed that resistance to change is still a significant problem in the current change management process. There does not, however, seem to be agreement on what causes resistance or how to get past it. Employees oppose changes because they believe they will result in unfavorable outcomes. Others study resistance to change from a more individualist perspective, contending that people's responses can be extremely complex and vary greatly. One advocate of such thinking is Shauloreg who proposed that resistance to change is based both on personality and also the context in which the change occurs. In his initial study (2003) he developed and tested a scale called the "Resistance to Change Scale" (RTC) which he conceptualized as a stable personality trait. In his following study he found a positive and significant relationship between the individuals' RTC score and their affective and behavioral resistance to change (Milliken, 2000; Nemeth, 1997)

## **2.8. Change Management Tools**

Models and research on change management are still applicable in the twenty-first century. The issue is not with their value or relevance. The issues and difficulties facing organizational leaders, organizational development professionals, and researchers are related to the complexity and speed of change needed in the modern world. In addition, we offer a relatively fresh strategic model and fresh takes on tried-and-true change management models and theories. There are various change management models, each based on a different body of literature. Some of them are well known and implemented in Ethiopia. Result oriented system, Business Process Reengineering (BPR), Quality Management System (QMS), Balanced Score card (BSC) and Kaizen are main ones. It is better to see each of them to understand their difference and similarity.

### **2.8.1. Result Oriented System**

This is somewhat similar to BPR, but the focus is on the outcome rather than the process in a results-oriented environment. It is intended to assess an individual's or a team's effectiveness through the development of goals and metrics. To save waste and expenditures, government and semi-government organizations employ this technique.

### **2.8.2. Business Process Reengineering (BPR)**

As opposed to ASIS (the current system), it is a system that starts from scratch. The system was created by looking at the beginning and end of the process. It places less emphasis on the current system and departmentalization. Additionally, governmental organizations use it. But many of the organizations where it was implemented failed.

### **2.8.3. Quality Management System (QMS)**

ISO (2000:2005) defines it as a management system to guide and control an organization with regard to quality. The quality management function of a company, according to ISO (2000:2005), "falls within the overall management function of a company." The emphasis in this context is on comprehending and meeting customer requirements and expectations as well as getting it right the first time. The organizational structure, practices, and resources required to implement quality management are included.

There are eight of them, according to the Ethiopian Conformity Assessment Enterprise's (2009) QMS manual. The guiding principles are: customer focus, leadership, people development, process approach, and system approach to management, ongoing improvement, fact-based decision-making, and a relationship with suppliers that benefits both parties.

The manual also states benefit of QMS as follows:

- Improve management confidence.
- Improve the awareness of company objectives.
- Improve communication.
- Responsibility and authority are adequately defined.
- Improve traceability to root cause of quality problems.
- Improve utilization of resources.
- Fewer rejects.
- Increase productivity.
- Increase profitability and company growth.
- Easy to access to external market.
- Improve customer satisfaction.

#### **2.8.4. Balanced Score Card (BSC)**

Kaplan and Norton ( 1996 ) introduced the concept of the balanced scorecard in the 1990s to help show the importance and need to balance four different organizational elements: financial, external (for example, customers), internal learning, and operations. Lingle (1999) extended that thinking further by adding two additional scorecard elements (people and environment) and a way to connect the elements of the model in a cause - effect value chain (or value map). This was followed similarly by Kaplan and Norton (2004) with a related mapping model. According to Balanced Score card training manual of Ethiopian Management Institute (2014), BSC is a strategic planning and management system that is used extensively in business industry , government and nonprofit organizations worldwide to align business activities to the vision and strategy of the organization , improve internal and external communications and monitor organization performance against strategic goals.

The manual also stated some of the benefits as:

- it increase focus on strategy results
- Improve organizational performance by measuring what matters.
- Align organizational strategy with the work people do on day to day basis.
- Focus on the drivers of future performance.
- Improve communication of the organization's vision and strategy.
- Prioritize projects/ initiatives.

### **2.8.5. Total Quality Management (TQM)**

Organizational behavior is impacted by quality management as a result, and quality programs need to be reevaluated as a key factor in determining organizational change. A variety of levels can be used to study changes that result from the implementation of quality programmers within an organization (Almaraz, 1994). This implementation may be a deliberate effort on the part of the organization to become more competitive. Additionally, one can observe that different units or teams are created to uphold the various quality goals, and that these units or teams are empowered by the quality paradigm, at the unit level.

The key Determinants for success, from top managers and down to the various employees, are the issue of resistance to change and the institutionalization of quality concepts, and at all levels, the successful implementation of a quality programmed requires top management commitment. Total Quality Management (TQM) refers to a management process directed at establishing organized continuous process improvement activities, involving everyone in an organization in a totally integrated effort towards improving performance at every level (Alamaraz, 1994).

### **2.8.6. Kaizen**

Kaizen is said to be derived from the Japanese words "Kai" and "Zen," which mean "change" and "better," respectively, in accordance with the Ethiopian Kaizen Institute manual (2006 E.C). Kaizen is described as a continuous improvement philosophy.

According to Michael Colenso's book, Kaizen Strategies for Successful Organizational Change, published in 2000, kaizen is not an initiative but rather an ongoing organizational culture that is actively engaged in the process of improvement.

It also defines sites culture of learning. Numerous studies have shown that there are many difficulties in managing and implementing change, including resistance, ignorance, a lack of commitment on the part of management and staff, and others. Some of them summarize as follows; According to Michael Colenso (2000), for a change initiative to succeed in an organization, the people involved must adopt beliefs that are different from their current ones and alter their behavior to support those beliefs, which create a momentum for helping others.

Research made on change management on worldwide base by NiwosuIkechukwu and Nick Anderson (2011) shows some of the reasons of failure as follows; cultural toxicity of failed change, if people don't trust you, people can't be bothered, what's in it for me?, not knowing purpose of it all, poor leadership embeds and accelerate resistance. According to Mildred Golden Pryor and Sonia Tanej (2008), in order to be able to be a winner in the change environment, processes and relationships must be streamlined, no value-added activities must be eliminated and people at all levels in organizations must be empowered to rapidly make decisions and held accountable for those decisions.

In the decade of 1980, management techniques focusing on employee involvement, and empowerment through team work approach and interactive communications and on improving job design were not new, but Japanese companies seemed to implement such techniques much more effectively than others. The business lesson of the 1980s was that Japanese companies showed a greater commitment to the philosophy of continuous improvement than did Western companies in their quest for global competitiveness. For such a philosophy the Japanese used the term Kaizen.

Kaizen is a Japanese philosophy for process improvement that can be traced to the meaning of the Japanese words 'Kai' and 'Zen', which translate roughly into 'to break apart and investigate' and 'to improve upon the existing situation'. Kaizen means continuous improvement involving everyone in the organization from top management, to managers then to supervisors, and to workers. In Japan, the concept of Kaizen is so deeply engrained in the minds of both managers and workers that they often do not even realize they are thinking Kaizen as a customer driven strategy for improvement. This philosophy assumes according to Imai that "our way of life be it our working life, our social life or our home life



deserves to be constantly improved''. There is a lot of controversy in the literature as well as the industry as to what Kaizen signifies. Improvement begins with the admission that every organization has problems, which provide opportunities for change. It evolves around continuous improvement involving everyone in the organization and largely depends on cross functional teams. The foundation of Kaizen is the idea that those who perform a task are the most knowledgeable about it; as result, by involving them and having faith in their abilities, process ownership is elevated to the highest possible level.

In addition, the team effort encourages innovation and change and, by involving all layers of employees, the imaginary organizational walls disappear to make room for productive improvements. From such a perspective, Kaizen is not only an approach to manufacturing competitiveness but also everybody's business, because its premise is based on the concept that every person has an interest in improvement. The goal of a Kaizen workshop is to simplify people's tasks by disassembling, analysing, and improving them. At can be empowered to challenge the status quo.

The message is extended to everyone in the organization, and thus everyone is a contributor. So, when Kaizen for every individual could be an attitude for continuous improvement, for the company also is a corporate attitude for continuous improvement. According to James Womack in his book '' The Machine That Changed the World '' (1991), with Kaizen, the job of improvement is never finished and the status quo is always challenged.

Kaizen techniques became famous when Toyota used them to rise to world automotive leadership. Rather than undertake large projects, Toyota's staff was encouraged to identify problems, no matter how small, trace their root causes, and implement all necessary solutions. Improvements through Kaizen have a process focus. Kaizen generates process-oriented thinking, is people-oriented, and is directed at people's efforts. Rather than identifying employees as the problem, Kaizen emphasizes that the process is the target and employees can provide improvements by understanding how their jobs fit into the process and changing it. The companies that undertake a Kaizen philosophy place an emphasis on the processes on the 'how' of achieving the required results .A process emphasis goes beyond designing effective processes; it requires the teams to understand why a process

works, whether it can be modified or replicated somewhere else in the company and how it can be improved.

Kaizen deals with the management of change and is a methodology in the right direction to improve manufacturing operations, on a continual and incremental basis following the right steps

- ✓ Establish a plan to change whatever needs to be improved,
- ✓ Carry out changes on a small scale,
- ✓ Observe the results, and
- ✓ Evaluate the results and the process and determine what has been learned.

In Kaizen philosophy, the aim is to eliminate the seven types of waste (7 deadly wastes) Caused by

- 1) Overproduction – Production more than production schedule
- 2) Inventory – Too much material ahead of process hides problems
- 3) Defects – Material and labor are wasted; capacity is lost at bottleneck
- 4) Motion – Walking to get parts because of space taken by high WIP
- 5) Processing – Protecting parts for transport to another process
- 6) Waiting – Poor balance of work; operator attention time
- 7) Transportation – Long moves; re-stacking; pick up/put down

## **2.9. Challenges and Practice of Kaizen Implementation**

### **2.9.1. Challenges of Kaizen Implementation**

Many studies note that, in both Japan and abroad, especially in the cases of American and European companies, leadership is the single most important factor for successful implementation and sustainability of kaizen (Imai, 1986)). This implies that it is possible to apply kaizen in countries with different socio cultural contexts but that application must be conducted under proper leadership and with adjustments that reflect the uniqueness of the targeted society.

Workers who feel that the organization is committed to them are likely to have a positive attitude. Organizational commitment is an attitude, which exists between the individual and

the organization where it considered as a relative strength of the individual's psychological identification and involvement with the organization.

Communication is an integral part of all management functions. In order to lead, plan, organize, and control, managers have to communicate with their subordinates. The term communication has a wide range of meanings. Communication is "a two way process by which certain information is conveyed or transmitted from a communication source to a receiver. (Lowe, 1995, p.6) defines it as "a purposeful process, which involves sources, messages, channels, and receivers'. Effective communication should be done within the organization to obtain a common understanding of quality and associated benefits and a clear understanding of how the quality program fits into the vision and mission of the organization.

Knowledge of motivation helps companies to understand the utilization of employee involvement to achieve process improvement (Naidu.et.al, 2006). Motivated employees are willing to exert a particular level of effort for a certain amount of time toward a particular goal.

### **2.9.2. Practice of Kaizen**

Kaizen is an approach to creating continuous improvement based on the idea that small, ongoing positive changes can reap significant improvements (Samrawit , 2020). Typically, it is based on cooperation and commitment and stands in contrast to approaches that use radical or top-down changes to achieve transformation. Kaizen is core to lean manufacturing and the Toyota Way. It was developed in the manufacturing sector to lower defects, eliminate waste, boost productivity, encourage worker purpose and accountability and promote innovation.

As a broad concept that carries myriad interpretations, it has been adopted in many other industries, including healthcare. It can be applied to any area of business and even on the individual level. Kaizen can use a number of approaches and tools, such as value stream mapping -- which documents, analyzes and improves information or material flows required to produce a product or service -- and Total Quality Management -- which is a management framework that enlists workers at all levels to focus on quality improvements. Regardless of

methodology, in an organizational setting, the successful use of Kaizen rests on gaining support for the approach across the organization and from the CEO down.

Here are some of the best practices associated with Kaizen:

#### **2.9.2.1. Focus on the Process, Not the Goal**

Process focus might be the most significant difference between kaizen management and traditional management styles. Kaizen is based on a philosophy of slight, incremental, continuous improvement. When this style is fully operational, it creates a self-sustaining cycle of opportunities and solutions to reduce waste of time, money, and resources. Goal-oriented management focuses on control with a limited definition of success, while kaizen is flexible and adaptive. It uses metrics for evaluation rather than to measure the improvements and meet a predefined number. Finally, process-oriented management looks at the big picture, while goal-oriented management is more narrowly focused on the short term.

#### **2.9.2.2. Go after the Low-Hanging Fruit**

As mentioned, kaizen management focuses on small, incremental improvement. Employees are encouraged to seek opportunities for change that are low-risk and low-cost. This enables change to be effected quickly, creating a momentum that carries through to the next project. It also keeps the energy level high, providing greater engagement on the part of employees. These changes create the building blocks that form the culture of continuous improvement.

#### **2.9.2.3. “Do It Better, Make It Better”**

Everyone is familiar with the saying, “If it ain’t broke, don’t fix it.” In traditional business models, if a process or system appears to be functioning reasonably well, it’s assumed that it’s operating at maximum effectiveness. Kaizen management assumes that every element of a company can be improved. Employees are encouraged to look at established policies and methods with a fresh eye. Instead of thinking up reasons why something can’t be done, they’re urged to ignore conventional limitations and figure out how it can be done.

#### **2.9.2.4. Eliminate Waste in All Forms**

For many companies, waste is looked at from a financial perspective. For Kaizen management, waste applies to all resources. One resource that can never be replenished is time. Every action should add some value to the company, and employees are encouraged to look for ways to increase efficiency and reduce waste. The workplace is constantly adjusted to be organized in such a way that no unnecessary steps are taken.

#### **2.9.2.5. Don't Throw Money at Problems**

Some improvements will require capital, but spending money or hiring people is not kaizen's first line of defense. Instead, the most successful teams use innovation, creativity, and experimentation to improve before writing a check. In fact, budget-constrained organizations have even more reasons to practice Kaizen.

### **2.10. Employee participation and Involvement**

Employee involvement is one approach to improving quality and productivity. Its use is credited for contributing to the success enjoyed by the Japanese in the world market place. Employee involvement is not replacement for management nor is it the final word in quality improvement. It is a means to better meet organization's goals for quality and productivity at all levels of an organization (Dale et.al, 2004).

Suggestion system is designed to provide the individual with the opportunity to be involved by contributing to the organizations. Most of the ideas for continuous improvements will come from the team approach: They must make it easy employees to suggest improvements, review them promptly and implement them (Masaki Imai, 2000). Kaizen needs a supportive culture or sentiment within the company to be able to thrive. If the values of this philosophy cannot be installed into the hearts and minds of a company's employees, the chances of long-term success are slim. Also, the values of kaizen have to match the actions of its employees, and especially its management. As the kaizen philosophy is essentially based on the values of openness, trust, exchange, and a "supportive corporate culture", the introduction of a new system in conjunction with an old repressive frame of mind will eventually backfire.

### **2.11. Motivation and Perceptions of Employees**

Knowledge of motivation helps companies to understand the utilization of employee involvement to achieve process improvement (Naidu.et.al, 2006). Motivated employees are willing to exert a particular level of effort for a certain amount of time toward a particular goal. Besides recognition is a form of employee motivation in which the organization publically acknowledges the positive contributions an individual or team has made to the success of the organization (Dale et.al, 2004). A motivated employee is responsive of the definite goals and objectives he/she must achieve, therefore he/she directs its efforts in that direction. Naidu.et.al, 2006 reported that motivation formulates an organization more successful because provoked employees are constantly looking for improved practices to do a work, so it is essential for organizations to persuade motivation of their employees (Jens.et.al, 2007). People like to be recognized, either as a team or individually. A person's feeling of achievement, value to the organization, knowing the organization cares, and having peer recognition maybe more important than any reward (Jens.et.al, 2007).

### **2.12. Management Commitment**

Everyone is responsible for quality, especially senior management and the CEO; however, only the later can provide the leadership systems to achieve results. Kaizen implementation begins with senior management and, most important the CEO's commitment. Delegation and rhetoric are not sufficient- involvement is required.

By way of introduction, top management must put forth very careful and very clear policy statement. It must then establish an implementation schedule and demonstrate leadership by practicing kaizen procedure within its own ranks (Masaki Imai, 2000). Improving quality will be hampered if poor communication impedes the flow of information to and from employees. Senior management commitment should be obsession, not lip service. It is possible to detect real commitment; it shows on the shop floor, in the offices, in the hospital ward – at the point of operation. Management should be dedicated to the regular improvement of quality, not simply a one-step improvement to an acceptable plateau (Anthony.et.al 2005).

Naidu.et.al, 2006 also explained the function of management in the implementation of kaizen in such a way that, management has two major functions: maintenance and improvement. Maintenance refers to activities directed towards maintaining current technological, managerial, and operating standards and upholding such standards through training and discipline. Under its maintenance function, management performs its assigned tasks so that everybody can follow standards operating procedures. Improvement, meanwhile, refers to activities directed toward elevating current standards.

### **2.13. Outcomes of Kaizen Implementation**

Through there is shortage of literatures on the concept of Kaizen in general and in Kaizen outcomes in particular, practitioners have been developing the concept of technical and social system outcomes of Kaizen after (Imai, 1986) publication. Cudney (2009) also suggested that, lean transformation (focuses on eliminating and preventing waste and improving flows) requires continuous change in the technical system, the behavioural system, and management system. Implementation of Kaizen leads to improved quality and greater productivity in the short term. He also narrated, manager may see from the short term Kaizen performance productivity increase by 30 percent, 50 percent, and even 100 percent and more, all without major capital investment. According to Kosandal and Farris (2006), the technical system outcome, targeted during Kaizen implementation includes: Floor space, Productivity Part travel time, and Lead time, Work- in – process (WIP) Set-up time, Percent on time delivery, Productivity, Throughput and product design.

They also suggested the magnitude of improvement on the technical system outcome ranges from 25 percent – 100 percent of improvement, which is also similar with Imai's conclusion.

According to Kosandal and Farris (2006) the social system outcome aligned with Kaizen continuous improvement such as: Employee knowledge, skill and attitude, according to (Kosandal and Farris, 2004) these three dimensions (knowledge, skill and attitude) describe employee characteristics that are required to adequately perform desired tasks. According to them, Knowledge refers the body of necessary information, Skill refers to psychomotor capability and Attitude describe desire to perform a given activity. Farris, also further

stressed the importance of employee commitment, training and skill development for sustainability.

### **2.13.1. Success and failure factors of kaizen implementation**

Studies on the key success and failure factors of kaizen implementation attempted to identify different sets of factors (Grover et al., 1995; Attaran and Wood, 1999; Allen and Fifield, 1999; Al- Mashari and Zairi, 1999; Ahmad et al., 2007). These factors include change management, management competency and support, organizational culture, project planning and management, information technology (IT) infrastructure and financial resources. Besides, Attaran (2000) claimed that the difference between success and failure did not depend on company size or resources, but on appropriate planning and avoidance of pitfalls.

### **2.13.2. Top management support factors**

According to Brad Power (2017), the biggest challenge to sustaining process improvement in an organization is getting and retaining the attention of top executives. Without it, investments in process design, training, and systems changes won't get funded. Worse, turf issues between departments and functions critical to cross-functional process improvement won't get resolved.

### **2.13.3. Information technology (IT) factors**

According to Tim Monahan (2018), that IT should, first and foremost, enable and support the objectives of the business and one of the crucial objectives any business needs is to be fixated on is **continuous Improvement**. Ultimately, this means to delight the customers which makes perfect sense as they are the ones who pay for the products and services the business provides. Despite these insights, traditional **IT focuses internally** on software, infrastructure, and even on what is commonly referred to as the 'internal customer' or 'business users' productivity. But does this inward focus translate into increased revenue or increased reach to more customers? Does it make the firm easier to do business with? Does it lower costs and increase profits? Will it mean better cash flow, speed to market or better products and services which gives a competitive edge?



#### **2.13.4. Management's inertia and fearness**

The importance of change management to successful continuous improvement initiatives cannot be expressed enough. Anytime there is a change it needs to be managed. Otherwise the transformation initiative is bound to fail. Studies have shown that more than 60 percent of transformational initiatives fail, not due to the lack of technical or resources, but rather due to the lack of proper change management. (Lean six sigma Experts, 2018).

Any leader who wants to drive a successful continuous improvement program should keep in mind that the soft stuff is the hard stuff. Just hiring a Black Belt or Lean Expert with the right credentials is not going to ensure the success of the initiative. We have always seen that continuous improvement programs have been successful only when there was visible senior leadership support and commitment to the program as well as a planned change management initiative tied to the program to ensure that all employees are moving from the current state to the expected future state with the program. (Lean six sigma Experts, 2018)

In fact, we have observed that putting a program management office in place to start with the program management in itself is a change management initiative. This becomes more important when an organization has an existing Enterprise PMO and a separate Enterprise Quality never motivated enough to support his Six Sigma initiative. (Lean six sigma Experts, 2018).

#### **2.14. Kaizen in Ethiopia**

Ethiopia's manufacturing sector's GDP contribution is even lower, according to the Ethiopian Kaizen institute manual (2006 E.C). In contrast to the 40.3% from the service sector and the 46.3% from the agricultural sector, it was only 5.1% in 2006–07. Ethiopia has a very low concentration of multinational corporations when compared to Kenya. However, some talented local business owners have benefited from having access to a market of almost 80 million people at the same time. Ethiopia has not yet learned about kaizen due to the lack of significant multinational corporations.

Public enterprises predominate in Ethiopia's manufacturing sector, which is one of its traits. 154 public enterprises produced 44% of the value addition from the manufacturing sector in 2006–2007. The Ethiopian government is dedicated to modernizing and increasing productivity in its public enterprises. The implementation of Business Process Reengineering (BPR) among public manufacturers is the responsibility of the Privatization and Public Enterprise Supervising Agency (PPESA), a division under the Ministry of Trade and Industry. BPR introduces benchmarking practices and intends to review the needs for restructuring organizational missions and activities. Although kaizen has not been adopted as a productivity improvement method by PPESA, it is considered that BPR and kaizen are complementary since BPR is a tool needed for innovation or radical transformation, while kaizen is needed for bringing in gradual and sustainable improvement to daily operations.

The leading manufacturers in Ethiopia have adopted TQM, and the private sector there is also aware of the need for increased productivity and quality. The lack of a visual monitoring system prevents real-time production and quality control, though. Additionally, the adoption of 5S is hardly noticeable. Kaizen's introduction will support TQM initiatives already underway in those manufacturers. In the case of Geo synthetics Industrial Works PLC, this essay will evaluate the practices and difficulties of Kaizen.

## **2.15. Empirical Literature**

Manufacturing industries all over the world are interested in profit maximization by maintaining their level of quality and increasing their market share in the competitive market.

The philosophy of Kaizen has kindled considerable interest among researchers because it increases the performance and productivity of the company and helps to produce high-quality products and services with minimum effort. Several authors have discussed the concept of Kaizen and many researchers have performed case studies to cover a wide range of benefits like increased productivity, improved quality, reduced cost, improved safety, and faster deliveries, etc[i]. (Alberto, 2018)

According to Desta et.al. (2014) the implementation of kaizen has significant improvements in productivity, quality of products and services and motivated several companies to apply

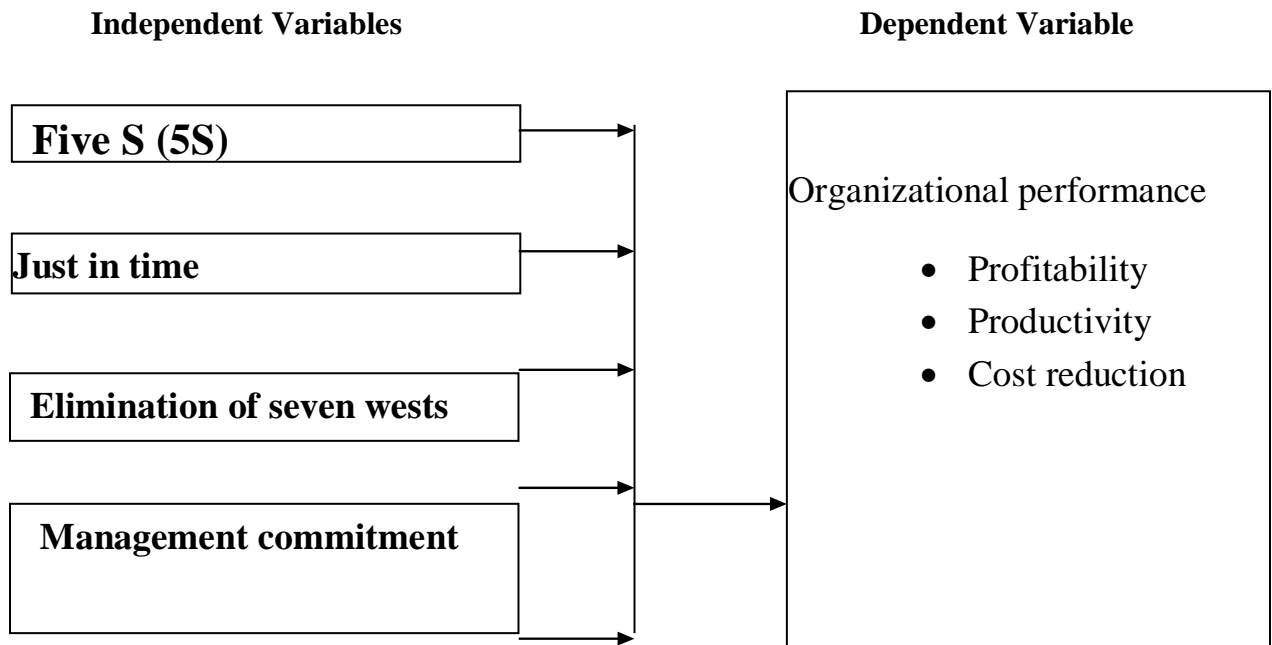
kaizen in their respective companies in many countries outside Japan. as discussed in various case studies and surveys, corporations in the developed world have proven that successful Kaizen approaches can deliver increased productivity, maximization of profit, customer satisfaction, and market share (Admasu, 2015) and (Desta, Asegedom, Gebresas, & Asheber, 2014)

According to Chanda et.al.(2017) Kaizen Practices and Performance Improvement in Zambian Manufacturing Companies studied that the implementation of Kaizen practices leads to significant operations performance improvements in manufacturing companies in the form of productivity, quality, and overall equipment effectiveness.

Most of the studies that have focused on Japanese manufacturing have illustrated the importance of kaizen in the improvement of organizational performance (Liker, 2004). Research shows that kaizen can be used as a strategic instrument for achieving organizational objectives ((Titu et al., 2010). Further, Thessaloniki (2006) also found a strong link between kaizen practices and improvement in performance in the agriculture sector.

## **2.16. Conceptual Framework**

The conceptual frame work stated some point about dependent and independent variables conceptually. In such cases, the researcher may have to “synthesize” the existing views in the literature concerning a given situation both theoretical and from empirical findings. In this regard the elements that was aligned kaizen practice independent variables are 5’s, just in time, management commitment, and elimination of seven waste and dependant variable is organizational improvement the graphical relationship of the independent variables and the dependent variable are represented as the conceptual framework of this study as follows.



**Figure 3: Conceptual Framework**

Source: Researchers Own Construct

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1. Introduction**

This chapter presents a description of the research methodology that would use in this study, presents in detail the procedure that were used to answer the research questions by discussing the research design, the research philosophy, the research strategy, the research method, the target population, the sample and sampling techniques, research instruments, data collection, and data analysis. When deemed necessary and appropriate, the presentation and discussion in each section was supported by a justification based on the expert opinion of the philosopher.

#### **3.2. Research design**

Research design refers to the general plan that integrates the distinctive mechanisms of the study in a logical way, ensuring that the studies effectively address the research problem (De Vaus, 2011). Different researcher Mathoko (2007) additionally argued that a research design as a procedural plan adopted by the researcher to answer research questions in an objectively, precisely, validly and economic way; therefore, research designs the arrangement of conditions for data collection and analysis of in a way that seeks to combine relevance with the purpose of the research. It constitutes the blueprint for the collection, measurement and analysis of data and guides the researcher to know what to do throughout the research process. According to Saunders, Lewis & Thornhill (2009) argued that research questions like what, how and why answers using an explanatory research design method. Therefore in this study, the researcher was applied an Explanatory sequential mixed research design method in which the researcher first performs quantitative research analysis and then builds on the results to explain them in more detail with qualitative research, since the initial quantitative data results with the qualitative data was further explained trying to understand the transformation phase and the factors that make up impacting the process, trying to explain the topic under study and trying to answer the question of what, how, and

why. Transformation implies change and therefore a process. Studying factors impacting this process requires a little exploration, which can be serving the purpose of this study.

### **3.3. Research philosophy**

According to Saunders and Thornhill (2009) the research philosophy is important for the development of the research background, research knowledge and its nature. Research philosophies vary depending on the goals of the research and the way in which those goals are achieved. Other researchers Christensen (2008) also argued that research philosophy is the independent approach that individual researchers take, knowing the underlying principles of design, implementation, and evaluation, and ensuring that a particular problem motivates the researcher to investigate and develop a temporary or permanent solution. It is strongly recommended that the researcher take into account the various research philosophies when conducting the research as these parameters describe perceptions, beliefs, assumptions, nature of reality and truth, and individual values of the researcher. The study was applied an explanatory sequential mixed research design method for the choice of research strategy, formulation of the problem, data collection, processing and analysis.

### **3.4. Research method used**

The main aim of this study was to investigate the effectiveness of kaizen implementation in peacock shoe factory and the researcher wants to generalize the findings to a population therefore this study adopted a mixed methods approach. The combined method approach specializes in on gathering, analyzing and mixing both quantitative and qualitative data. The use of every quantitative and qualitative technique in combination gives higher information of study issues than both approach achieves on my own. Mixed method research includes both gathering and analyzing quantitative and qualitative data either sequentially or simultaneously.

### **3.5. Target Population**

The target populations of the study were all permanent employees of peacock shoe factory at Addis Ababa. This is due to the fact that permanent employees have stayed within the factory permanently, have an exposure to see changes done within the company

uninterruptedly. The target populations comprise the management which includes (plant managers, Division Managers, and Department Managers), technical (production department) that include (engineering, quality, packaging, and checking), sales and marketing department and admin staff which consists of employees working in various departments (HRM, finance, procurement). There are 267 permanent employees in the company who are considered to be relevant with the information needed on the topic under investigation.

### **3.6. Sampling technique and sample size**

Sampling is the process of selecting a number of study units from a defined study population (Kothari, 2009). In this study, the population does not have a homogeneous group therefore Proportionate stratified sampling technique was used. The departments considered as strata were the Management body, technical /production department (engineering, quality, packaging, and checking), and sales and marketing department, Admin staff (finance, HRM, and procurement). Then, after the sample size of each stratum or department was calculated, simple random.

Currently, the number of permanent employees in peacock shoe factory is 267 in total. To get representative sample, the researcher used Yemane (1967) formula by considering confidence level of 95% and the level of acceptable margins of error 5%. Then, the total sample size (n) was calculated by using the following formula.

$$n = \frac{N}{1 + N(e)^2}$$

Where n is the sample size, N is the population size, and e is the level of precision.

Therefore 160 respondents will be selected for this study as follow:

$$160 = \frac{267}{1 + 267(0.05)^2}$$

Table 1: Sample Size Determination by using Proportionate Stratified Sampling

<b>Strata</b>	<b>Population</b>	<b>Computation</b>	<b>Sample size</b>
Management body	<b>25</b>	<b>160*25/267</b>	<b>14</b>
Technical (Production Department)	<b>177</b>	<b>160*177/267</b>	<b>105</b>
Sales And Marketing Department	<b>32</b>	<b>160*32/267</b>	<b>18</b>
Administrative staff	<b>33</b>	<b>160*33/267</b>	<b>23</b>
Total	<b>267</b>		<b>160</b>

Source: primary data, 2023

### 3.7. Data Collection Methods and Instruments

In search of relevant and genuine data to reach valid and reliable conclusion, the study was employee survey method of data collection in the form structure and semi-structure questionnaire and employees' in-depth interview. To that end, in the structured questionnaire five point likert scales was constructed to measure employees' perception about kaizen application, association of top level managers and employees commitment with overall outcome of kaizen implementations. Similarly, the semi structure questionnaire was constructed to explore detail information about challenges and practice of kaizen, as result; the qualitative part was supplementing the quantitative one. In addition to questionnaire, the study wills also employee in-depth interview with selected samples to offset possible leave out of semi structure questionnaire and to get in-depth information about kaizen implementation practice.

### 3.8. Data Analysis Methods

Employing appropriate analysis methods plays unparalleled role to generate sound conclusion. Inline of this research principle, this study will employee descriptive statistic data analysis in the form of frequency tabulation, mean score and standard deviation and inferential data analysis method mainly binary regression analysis for the quantitative data part. For the qualitative data analysis, the study wills employee thematic content analysis method.



Table 2 Data analysis methods

No	Objective	Data analysis method
1	Objective 1	Qualitative thematic analysis
2	Objective 2	Qualitative thematic analysis
3	Objective 3	Qualitative thematic analysis and descriptive statistics
4	Objective 4	descriptive statistics

Source: researchers own construct

### 3.9. Model Specification

To examine the effect of kaizen practice on organizational performance, the following linear regression model was developed. Variables were carefully selected in the review of literature, which needs to be specified. The equation of regressions on this study was generally built around two sets of variables, namely dependent variable organizational performance and independent variables (5S, just in Time, seven wastage/ elimination and management commitment). The basic objective of using the regression equation in this study was to make the study more effective at describing, understanding, and predicting the stated variables. The regression equation is presented as follows:

$$OP = \beta_0 + \beta_1 FS + \beta_2 JIT + \beta_3 SWE + \beta_4 MC + \varepsilon$$

Where,

OP = Organizational Performance

FS = Five S (5S)

JIT = Just in time

SWE = Seven Waste elimination

MC = management commitment

$\varepsilon$  = Error term

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$  is the coefficients of the predictor variables

### **3.10. Variable definition**

According to (Creswell, 2009), to make it is clear to readers what groups are receiving the experimental treatment and what outcomes are being measured; the variables need to be specified in quantitative researches.

#### **3.10.1. Dependent variable**

Organizational performance can be dependent variable of the study. Organizational performance would be measured using profitability, productivity and cost reduction.

#### **3.10.2. Independent variable**

The independent variables are Five Ss, waste elimination, just in time and management commitment. Measures of Independent variables are

- Five Ss measured by using sort, set in order, shine, standardize and sustain
- Waste elimination measured by using motion, transportation, inventory, defect, waiting, over production, over processing
- Just in time measured by using inventory turnover, lead time, cycle time, defect rate and customer satisfaction.
- Management commitment measured by using way of communication, resource allocation, employee engagement, decision making, and role modeling.

### **3.11. Validity and Reliability of research instruments**

#### **3.11.1. Data Validity**

Validity of an instrument is the success of a scale in measuring what it units out to degree so that differences in individual ratings can be taken as representing actual differences on the characteristics under observe. Content validity refers back to the subjective settlement among specialists that a scale logically seems to mirror accuracy of what it purports to degree (Kothari, 2005). The pattern of instrument changed into pre-tested to enhance its validity and relevance to the goals of the take a look at. The questionnaires content, shape and sequence will be correctly amended to do away with any ambiguities and to enhance

content material validity. To determine the content material validity of the questionnaire objects, studies experts will be used to have a look at them and their suggestions and comments may be used as a foundation to alter the research items. In this study, validity of the instrument was conducted by a wide review of the literature and a pilot study were conducted on adapted questionnaires were distributed to 20 selected managers, quality managers, supervisors and employees of the `peacock shoe factory. Those respondents were selected based on their industry experience. The results were positive based on the feedback obtained from each group of respondents some modifications were made on the questionnaires.

### **3.11.2. Reliability**

Reliability refers to the consistency that advice demonstrates while implemented repeatedly under similar situations (Kerlinger, 2003). To determine reliability of research contraptions, the tool can be pre-testing complete a peer evaluate with pilot observe before the actual information series to enhance reliability. The significance of pre-testing a questionnaire according to Creswell (2003) is to help the researcher understand the means of the questions to be put to the respondents and how they arrive at their reaction. According to Saunders, Lewis & Thornhill, (2007) when the value of alpha 0.9 it is taken as excellent as, greater than 0.8 is very good, greater than 0.6 is acceptable, greater than 0.5 up to 0.59 is poor and that less than 0.5 is unacceptable. The average value of Cronbach's alpha 0.9089 showed an excellent internal consistency within the data.

Table 3 Data reliability test

<b>Variables</b>	<b>No. of Items</b>	<b>Sign</b>	<b>Alpha</b>	<b>Internal Consistency</b>
<b>Organizational Performance</b>	<b>20</b>	<b>+</b>	<b>0.9039</b>	<b>Excellent</b>
Profitability	6	+	0.9071	Excellent
Productivity	7	+	0.9027	Excellent
Cost Reduction	7	+	0.9069	Excellent
<b>Five S (5's)</b>	<b>20</b>	<b>+</b>	<b>0.9006</b>	<b>Excellent</b>
Sorting	4	+	0.9029	Excellent
Set in Order	5	+	0.9026	Excellent
Shine	4	+	0.9031	Excellent
Standardize	3	+	0.9070	Excellent
Sustain	5	+	0.9091	Excellent
<b>Waste Elimination/Minimization</b>	<b>20</b>	<b>+</b>	<b>0.8999</b>	<b>Excellent</b>
Motion	4	+	0.9045	Excellent
Waiting	3	+	0.9057	Excellent
Defects	3	+	0.9051	Excellent
Inventory	4	+	0.9008	Excellent
Transportation	2	+	0.9044	Excellent
Over Production	2	+	0.9018	Excellent
Over Processing	2	+	0.9018	Excellent
<b>Just in Time (JIT)</b>	<b>20</b>	<b>+</b>	<b>0.9048</b>	<b>Excellent</b>
<b>Management commitment (MC)</b>	<b>20</b>	<b>-</b>	<b>0.9186</b>	<b>Excellent</b>
<b>Test Scale</b>			<b>0.9089</b>	<b>Excellent</b>

Sources: primary data, 2023

### 3.12. Research Ethics Consideration

In this research, in pursuit of finding the best training practice, research ethics shall not be left for negotiation for the sake of once privilege. The researcher will assure all the privacy and confidential matters of the actors and participant of this research will be maintained at high level. Moreover the research will be conducted in comply of research ethics. Similarly, no one of participants forced to give any information which they may consider not indispensable to disclose. Every activity will be conducted with pre consent of participants .the research also will avoids committing any biases among the research participant throughout the conduct of this study.

## CHAPTER FOUR

### 4. DATA ANALYSIS, PRESENTATION AND INTERPRETATION

#### 4.1. Introduction

This study was carried out on the effect of kaizen implementation on organizational performance in peacock shoe factory. This chapter presents the findings obtained from different respondents, their demographic characteristics, and data analysis in form of charts, table's correlation, regression and their relevant interpretation following the objectives of this research study.

#### 4.2. Response rate

The study comprised of a simple size of 160 respondents and all the respondents as planned in the sample size participated in the study and this therefore shows that the response rate was 100%.

#### 4.3. Demographic characteristics of the respondents.

##### 4.3.1. Gender distribution of respondents.

The age of respondents was investigated to find out if there was a certain age bracket that dominated the study. The findings from the respondents were revealed in table 4.

Table 4 Gender respondent

No	Item	Frequency	Percentage
1	Gender		
	Male	98	70
	Female	48	30
	<b>Total</b>	<b>160</b>	<b>100</b>

Source : primary data 2023

Concerning the age status of respondents, 160 (70%) of the respondents were male whereas, 48 (30%) of the respondents were female. This indicates that the sex composition of respondents is characterized by a number of male respondents greater than that of female respondents. This shows that high percentage of male respondents

reflects the general pattern in the peacock shoe factory which is largely dominated by male employees compared to females. In this study having respondents who are males and females as shown above therefore implies that the study was gender sensitive and therefore the views of all sexes were captured and represented in this study.

#### **4.3.2. Age distribution of respondents**

The age of respondents was investigated to find out if there was a certain age bracket that dominated the study. The findings from the respondents were revealed in table 4.2

**Table 5 Age of respondent**

Age in Years	Frequency	percentages
20-30	60	37.5
31-40	70	43.75
41-50	25	15.63
Above 50	5	3.12
<b>Total</b>	<b>160</b>	<b>100</b>

Source: primary data2023

As it can be seen from the table 5 a above, it indicates that the age of the respondent in the organization employees have the age of 20-30 years were 60 (37.5%), 70 (43.75%) of the respondents were between the age of 31- 40 years, 25(15.63%) of the respondents between 41-50 years, and the rand greater than 50 years of the respondents which was only 5(3.12 %)). The result indicates that most of the respondents were aged from 31 - 40 years which is 70 (43.75%) in the peacock shoe factory. This might indicate the organization has young and age categories and dominated by active and productive age groups that can apply better use of methods so as to improve kaizen implementation

#### **4.3.3. Marital status**

The aspect of marital status was also considered and according to the findings, the following was revealed as shown in table 6.

**Table 6 Showing marital status of respondents**

Marital Status	Frequency	percentages
Single	66	41.25
Married	94	58.75
Total	160	100%

Source: primary data 2023

From table 6 shown above, out of the 160 respondents, 58.75 % were married and while 41.25 were single. This seemed an important aspect of the study due to the fact they were of sound knowledge and were therefore able to understand the topic with ease and thus provided reliable information. This shows that there was a big number of married respondents comprising of 94(58.75%) of respondents followed by those who are single 41.25(66).

#### **4.3.4. Education background**

Educational background of loan officer is an important factor to be considered with regard to making business decision. Education improves the skill, capacity, communication and access to development endeavors. Therefore, education being an important factor, it was analyzed to investigate whether most of the respondents were educated masters and above level. This helped the researcher to know whether they were able to understand what is meant by kaizen and its effect on the organizational performance in peacock shoe factory.

**Table 7 Education background of respondent**

Education background	Frequency	Percentage%
Diploma	58	36.25
Degree	77	48.13
Masters and Above	25	15.63
Total	160	100.0

source: primary data 2023

Table 7 shows that all respondents were educated at different levels as it corresponds to their qualifications. According to the above table, many respondents completed university

Degree 77(48.13%) of the respondents, 58(36.25%) of the respondents completed diploma level of education while 25(15.63%) had completed masters and above level of education.

#### 4.3.5. Work experience related kaizen

The study sought to find out the duration of the respondents had been engaged kaizen implementation and practice related experience that would be selected at least serve greater than one year in peacock shoe factor kaizen related work. This aspect was also considered so as to help the researcher identify the length the respondents have spent in their particular occupations.

**Table 8 Kaizen Related Experience**

kaizen Related Experience	Frequency	Percentage%
kaizen Related Experience		
1-5	56	35
6-10	65	40.63
Above 10	39	24.37
<b>Total</b>	<b>160</b>	<b>100.0</b>

Source: primary data, 2023

The above table clearly shows that 65 (40.63%) of the respondents were leading and had been employed for a period of 6-10 years and followed by 56 (35%) who had been employed for a period between 1-5 years and the least number of respondents had been employed for a period between above 10 years shown by 39(24.37%) . From the above findings therefore a big number of the respondents have been involved in kaizen related experience. Majority of respondents are greater than six years of experience this the most important input for my research.

#### 4.4.Descriptive Analysis

The descriptive statistics are presented in the section that follows; the information was sought in relation to the study objectives. In this section the study used descriptive statistics, which include, mean and standard deviation. According to (Agresti,2009), Mean (  $\bar{x}$  ): is



the average value calculated by adding up the values of each case of the study variables and dividing by the total number of cases, mean was used to measure the central tendency of the data. The standard deviation is a value which indicates the degree of variability of data. It indicates how close the data is to the mean. The evaluation of mean was done in accordance to (Aggresti ,2009) who indicated that a mean of 1.00 -2.49 was evaluated to be very weak, 2.50 -3.49 Weak, 3.50 -4.49 Strong and 4.50 - 5.00 Very Strong, while for standard deviation of greater than 0.5 was evaluated to indicate homogeneity and a standard deviation less than 0.5 indicates heterogeneity of data.

#### **4.5.Factors indicating effectiveness of kaizen implementation**

##### **4.5.1. Effectiveness of 5S implementation**

**Table 9 Effectiveness of 5S implementation on organizational performance**

<b>Variables</b>	<b>Obs.</b>	<b>Mean</b>	<b>Std. Dev.</b>
<b>Five S (5's)</b>	<b>160</b>	<b>3.783</b>	<b>0.567</b>
Sorting	160	4.014	0.651
Set in Order	160	3.752	0.769
Shine	160	3.745	0.724
Standardize	160	3.736	0.549
Sustain	160	3.681	0.877

Source: primary data, 2023

From the above table 9 the application of 5s implementation in peacock shoe factory strong and highly implemented. The subscales mean value of the respondents view in sorting higher level of implementation with the mean value of 4.014 and SD 0.651 and the remaining five S such as Set in Order, Shine, and Standardize and sustain are modernity highly implemented ranges from 3.752, 3.745, 3.736 and 3.681 and the standard deviation 0.769, 0.724, 0.549, and 0.877 respectively. The average means value and SD of the five S shows 3.783 and 0.567 with modernity high-level implementation. But since kaizen always assumes there is always a better improvement, the company is expected to sustain it and look for better.

As a result they concluded that the after implementation of 5S workspace can be attractive and suitable for work activity. Besides this, the workspace area 5S led to a perceived increase in workspace as the majority of respondents responded strongly agrees. The storage cabinets attached to the walls of the production area made it difficult to save workspace. However, after 5S, workspace was freed up.

In relation to shine as the responded in the table above shown after implementing 5S, working environment will improve 5S led to a perceived positive increase in working environment as the majority of respondents responded strongly agree in association about Shine. The respondents responded that Weekly cleaning exercise is conducted regularly for continuous periods of time, everyone is actively involved in cleaning & the store & production areas are free from gas & Oils. In general result showed after implementing kaizen showed that there was a perceived improvement in the working environment.

In relation to standardization the respondents were asked four question responded that after implementing 5S safety (standardize) will improve 5S led to an increase in perceived workspace safety. All the respondents were responded there is established production & store rules, respondents responded there is standard operating procedures of the respondents responded there is best floor marking as well as color coding & with regards to safety manual they responded of respondents responded there is safety manual. Generally majority of respondents responded that there is store rules, standard operating procedures, best practices in the company.

*According to the data collected through interview from the sampled Peacock shoe factory taken in this study that “by implementing the five S's, organizations can improve productivity, reduce waste, and create a safer and more efficient workplace. The had also argued that 5S is a methodology used to organize and improve the workplace performance.” (Key informant general manager, production manager & technical supervision team).*

#### 4.5.2. Effectiveness of seven waste elimination /minimization

The elimination/minimization of the seven wastes is an effective Lean manufacturing principle that can lead to increased productivity, reduced costs, improved quality, enhanced customer satisfaction, and engaged employees. By implementing this principle, manufacturing organizations can achieve greater efficiency and competitiveness in their industry.

**Table 10 Effectiveness of seven waste elimination/ minimization on organization performance**

<b>Variables</b>	<b>Obs.</b>	<b>Mean</b>	<b>Std. Dev.</b>
<b>Waste Elimination/Minimization</b>	<b>160</b>	<b>4.169</b>	<b>0.474</b>
Motion	160	4.203	0.546
Waiting	160	4.068	0.669
Defects	160	4.178	0.655
Inventory	160	4.243	0.616
Transportation	160	4.162	0.514
Over Production	160	4.159	0.709
Over Processing	160	4.135	0.679

Source: primary data 2023

The above table 10 indicated that mean value for Waste Elimination/Minimization is 4.169, which suggests that waste elimination/minimization activities are generally carried out at a high level within the peacock shoe factory process. The standard deviation for each variable indicates the variability or dispersion of the data points around the mean value. A smaller standard deviation suggests that the data points are relatively close to the mean value, while a larger standard deviation suggests that the data points are more spread out. For example, the standard deviation for Waiting is 0.669, which is larger than the standard deviation for Waste Elimination/Minimization (0.474), suggesting that there is more variability in the Waiting data points than in the Waste Elimination/Minimization data points.

In summary, the table provides information about the mean values and standard deviations for eight variables related to waste elimination/minimization in a peacock shoe factory process. This information can be used to evaluate the effectiveness of waste elimination/minimization activities and to identify areas for improvement. By analyzing the data and developing targeted strategies to address areas of weakness, manufacturing organizations can improve their efficiency and competitiveness in the marketplace.

*One of the key informants said that “seven wastes can take various forms, including regulatory compliance costs, over productions, and unnecessary motions. Unlike the other forms of waste, seven wastes do not add value to the product or service and cannot be eliminated entirely. However, organizations can still take steps to reduce seven wastes, such as identifying the sources of seven wastes, improving compliance processes, and reducing over production. By reducing seven waste, organizations can improve their bottom line, increase efficiency, and create a more sustainable and profitable operation. (Key informant general manager, production manager & technical supervision team).*

#### **4.5.3. Effectiveness of just in time (JIT)**

Just-in-time (JIT) is a manufacturing philosophy that emphasizes the production of goods or services at the exact time they are needed, in the exact quantity required, and with the highest level of quality possible. JIT is closely linked to the Kaizen philosophy of continuous improvement, as it requires a focus on eliminating waste, reducing variability, and improving efficiency throughout the production process. By implementing JIT principles, organizations can reduce inventory levels, minimize lead times, and improve delivery times, while also improving quality and reducing costs. As such, JIT is closely aligned with the Kaizen philosophy of continuous improvement, and can be seen as one of the key tools for achieving a culture of excellence and sustainable growth within an organization (Ohno, T. 1988).

**Table 11 Effectiveness of just in time on organization performance**

<b>Variables</b>	<b>Obs.</b>	<b>Mean</b>	<b>Std. Dev.</b>
<b>Just in Time (JIT)</b>	<b>160</b>	<b>4.260</b>	<b>0.568</b>

Source: Primary data 2023

The table 11 above showed that the mean value of 4.260 indicates that, on average, the observations for the JIT variable are around 4.260. This means value can be used as a reference point to interpret the individual observations. The standard deviation of 0.568 indicates the amount of variation or dispersion of the data points around the mean value. A standard deviation of 0.568 suggests that the data points are somewhat spread out, with some observations that are higher or lower than the mean. However, the standard deviation is not very large, which suggests that the data points are not highly variable and are relatively close to the mean value. In summary, the table shows that the JIT variable has a mean value of 4.260 and a standard deviation of 0.568 based on 160 observations which JIT has been widely adopted in peacock shoe factory and has been credited with helping to drive significant improvements in productivity, quality, and customer satisfaction. However, successful implementation of JIT requires a long-term commitment to continuous improvement and a willingness to invest in the necessary resources and training to support this effort.

*One of the key informants said that “JIT aims to eliminate waste, reduce costs, and improve efficiency by streamlining production processes and reducing inventory carrying costs. They also told that JIT is based on the principle of continuous improvement, where processes are constantly monitored and refined to identify and eliminate waste. By implementing JIT, organizations can improve quality, reduce lead times, and increase customer satisfaction, while also reducing costs and improving profitability.” (Key informant general manager, production manager & technical supervision team).*

#### **4.5.4. Management commitment (MC)**

Management commitment is a crucial factor in the successful implementation of Kaizen within an organization. Kaizen is a continuous improvement philosophy that requires a long-term commitment and sustained effort from all levels of the organization, starting from top-level management. Without the commitment of management, it is difficult to create a culture of continuous improvement and to drive the necessary changes to improve processes, reduce waste, and increase efficiency. Management commitment can be demonstrated in a number of ways, such as by providing resources and support for Kaizen

initiatives, setting clear goals and expectations, and promoting a culture of continuous learning and improvement.

**Table 12 Effectiveness of management commitment on organization performance**

<b>Variables</b>	<b>Obs.</b>	<b>Mean</b>	<b>Std. Dev.</b>
<b>Management commitment (MC)</b>	<b>160</b>	<b>4.262</b>	<b>0.245</b>

Primary data, 2023

The above table 12 showed that management commitment “ was the most greatly implemented as it appeared with a mean score of 4.262, and the standard deviation of 0.245, indicates that the data points are tightly clustered around the mean, and there is relatively little variability in the data set. The size of the standard deviation can also give an indication of the precision of the measurements or the accuracy of the data. The data above indicated that, management can help to create a sense of ownership and accountability among employees, and foster a culture of collaboration and innovation that can lead to sustained improvements in quality, productivity, and customer satisfaction.

In general to achieve the full benefits of Kaizen, peacock shoe factory management team must be ongoing and sustained. This requires a long-term perspective and a willingness to invest in the necessary resources and training to support continuous improvement efforts. Management must also be willing to embrace change and take risks in order to drive innovation and improvement. This can require a shift in mindset from a focus on short-term gains to a focus on long-term value creation and sustainable growth. By making a strong commitment to Kaizen and fostering a culture of continuous improvement, management can help to create a competitive advantage for their organization, and position it for success in an increasingly dynamic and challenging business environment. Ultimately, management commitment is the foundation upon which a successful Kaizen implementation is built, and is essential for achieving sustained improvements in quality, productivity, and customer satisfaction over the long term.

*One of the key informants said that “Management commitment is a crucial factor in the success of any organization. It involves the dedication and active involvement of top-level management in setting goals, making decisions, and providing resources to achieve those*

*goals. When management is committed, they communicate their vision and expectations to employees, motivate them to perform at their best, and ensure that necessary support systems are in place. This commitment creates a positive work environment, fosters employee engagement and loyalty, and ultimately leads to improved organizational performance.” (Key informant general manager, production manager & technical supervision team).*

#### **4.6. Perceived Organizational Performance**

This study measured organizational performance in terms of profitability, productivity, and cost reduction. The respondents were asked to rate the improvement in the performance dimensions. Measurement of the improved organizational performance consisted of the summary of descriptive statistics of all variables that are evaluated based on a 5-point Likert scale (from “1” “strongly disagree” to “5” “strongly agree”).

**Table 13 Perceived Organizational Performance**

<b>Variables</b>	<b>Obs.</b>	<b>Mean</b>	<b>Std. Dev.</b>
<b>Organizational Performance</b>	<b>160</b>	<b>4.338</b>	<b>0.446</b>
Profitability	160	4.255	0.495
Productivity	160	4.465	0.547
Cost Reduction	160	4.296	0.550

Source: primary data, 2023

Table 13 above indicated that the presents results of the analysis of organizational performance the results showed that productivity was highly rated with a mean of 4.465 and a standard deviation of 0.576 while cost reduction closely followed with a mean of 4.296 and a standard deviation of 0.550. The profitability was the list but still highly rated with a mean of 4.255 and standard deviation of 0.495. The overall organizational performance had a mean score of 4.338 indicating a high performance. The result implies that by implementing kaizen, peacock shoe factory has increased productivity, reduced cost, and increased profitability.

Indeed organizational performance can be evaluated based on productivity, cost reduction, and profitability. Productivity measures the efficiency of an organization in converting inputs into outputs. A high level of productivity indicates that the organization is able to produce more output with fewer inputs, which can result in increased efficiency and competitiveness. Cost reduction measures the ability of an organization to reduce costs while maintaining or improving the quality of its products or services. By reducing costs, organizations can increase their profitability, improve cash flow, and invest in growth opportunities. Profitability measures the ability of an organization to generate profits, which is critical for long-term sustainability and growth. By improving productivity and reducing costs, organizations can increase profitability and create value for their stakeholders. Overall, performance based on productivity, cost reduction, and profitability is a critical aspect of organizational success and is essential for achieving sustainable growth and competitiveness in today's dynamic business environment.

*One of the key informants said that “Organizational performance can be measured in various ways, including financial performance, customer satisfaction, employee satisfaction, and product or service quality. High organizational performance is generally associated with increased profitability, market share, and competitiveness. Effective leadership, efficient processes, and a culture of continuous improvement are some of the factors that can contribute to high organizational performance. Organizations can also use performance metrics to track progress and identify areas for improvement. By measuring and improving organizational performance, organizations can achieve their strategic goals, remain competitive, and create value for their stakeholders.” (Key informant general manager, production manager & technical supervision team).*

#### **4.7. Inferential Statistics**

Inferential facts became carried out via correlation analysis which turned into used to set up with statistical importance, the character of the prevailing relationship among the structured variable and the impartial variables. The have a look at additionally employed multivariate regression model to have a look at the determinants of loan policy and its effect the financial performance of private commercial financial institution. The established variable become the financial overall performance of the commercial banks in Ethiopia which



became measured the usage of loan policies and condition policies, loan lending policies, loan tracking policies, loan collection policies and loan default management policy

#### 4.7.1. Correlation Analysis between independent and dependent variable

In this section, the researcher tried to investigate the correlation between the dependent variable, i.e., organizational performance with independent variables, i.e., five Ss'' (5s), seven Muda/west minimization, just in time (JIT), and management commitment (MC). The researcher employed the Pearson correlation coefficient in line with the level of significance to examine the direction and strength of the correlation between the kaizen tool practices and organizational performance. A correlation coefficient is a very useful means to summarize the relationship between two variables with a single number that falls between - 1 and +1 (Field, 2005). As per the guideline suggested by Field (2005), the strength of relationship 0.1 to 0.29 shows weak relationship; 0.3 to 0.49 is moderate; > 0.5 shows the strong relationship between the two variables.

The following section presents the results of the correlation on the relationship between independent variables and dependent variables. Table 14 below indicates that the correlation coefficients for the relationships between independent variables (5s, seven Muda/ waste minimization, JIT, and MC and the dependent variable (organizational performance) are linear and positive ranging from weak to strong correlation coefficients.

**Table 14 Pearson Correlation Coefficient**

Variable	Freq.	Organizational Performance	
		Correlation Coefficient	P-value
Five S (5''s)	160	0.3141	0.0000*
Waste Elimination/Minimization	160	0.5017	0.0000*
Just in Time (JIT)	160	0.1977	0.0160**
Management commitment (MC)	160	0.1671	0.0432**

**Note:** \*, \*\* imply the correlation is significant at 1% and 5% level of significance respectively. Source: survey data 2023

Pearson's correlation coefficient ( $r$ ) was used to conduct the correlation analysis to find the level and direction of the relationships between dependent and independent variables. The above Table 14 shows, that five kaizen tools have a statistically significant positive correlation with an organizational performance at a 5% level of significance since the p-value is less than 5%. Among the five kaizen tools the five Ss" ( $r=0.3141$ ,  $p\text{-value} < 0.05$ ) have moderate positive relationships with organizational performance, Waste Elimination/Minimization ( $r = 0.5017$ ,  $p\text{-value} < 0.05$ ) have strong positive relationship with organizational performance, JIT ( $r = 0.1977$   $p\text{-value} < 0.05$ ) and MC ( $r = 0.1671$ ,  $p\text{-value} < 0.05$ ) have weak positive relationships with organizational performance. The overall result indicated that the kaizen tools had a significant role in improving achievements in the company. Thus, the more kaizen tools are properly implemented, the better the organization's achievements would be.

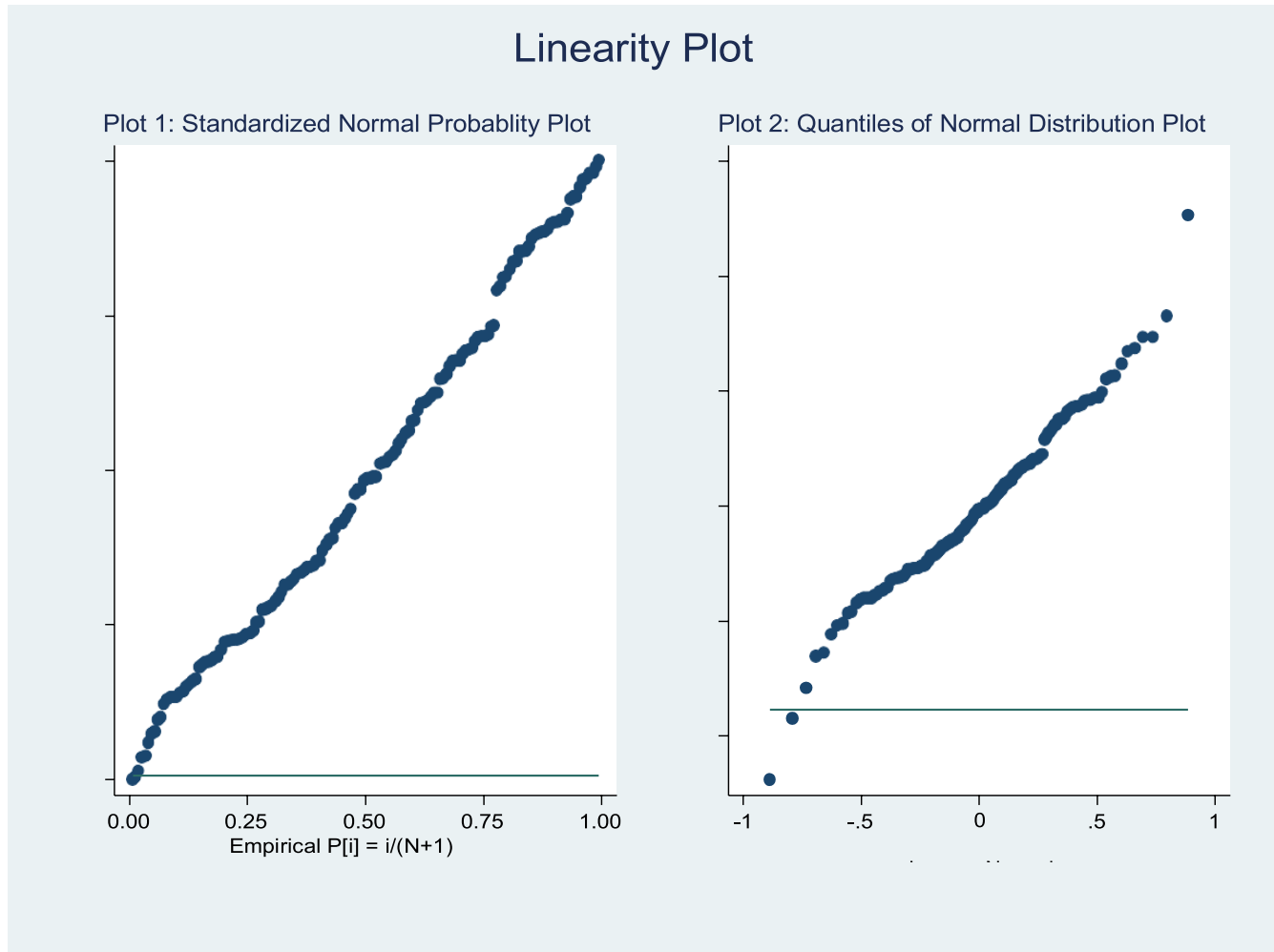
#### **4.7.2. Multiple Regression analysis**

The study employed multivariate regression model to study the effectiveness of kaizen implementation on organizational performance in peacock shoe factory. Multiple regressions require the fulfillment of certain assumptions. Thus, before regression analysis was employed, the following assumptions were tested. Testing the data for compliance with the statistical assumption and underlying multivariate techniques is a big issue because it deals with the foundation upon which the techniques make statistical inferences and results. Some techniques are less affected by violating certain assumptions which are termed robustness but in all case meetings, some of the assumptions are critical to successful analysis. Thus, the researcher must be aware of any assumption violation and implication they have for the estimation process or the interpretation results.

##### **4.7.2.1. Test of linearity assumption**

To test the linearity between the dependent variable and the independent variables used in the multiple linear regression model a distributional plot was made on the standardized residuals to see the linearity of the residuals. The following graph shows the distribution of the standardized residuals. Based on Figure 4 below, the standardized residuals were linearly distributed along the reference line implying organizational performance and the

explanatory variables (5s, seven wastes Elimination/Minimization, Just in Time (JIT), and Management commitment (MC) were linearly distributed. Therefore, the dependent and the independent variables are linearly related satisfying the basic assumption of classical linear regression model.

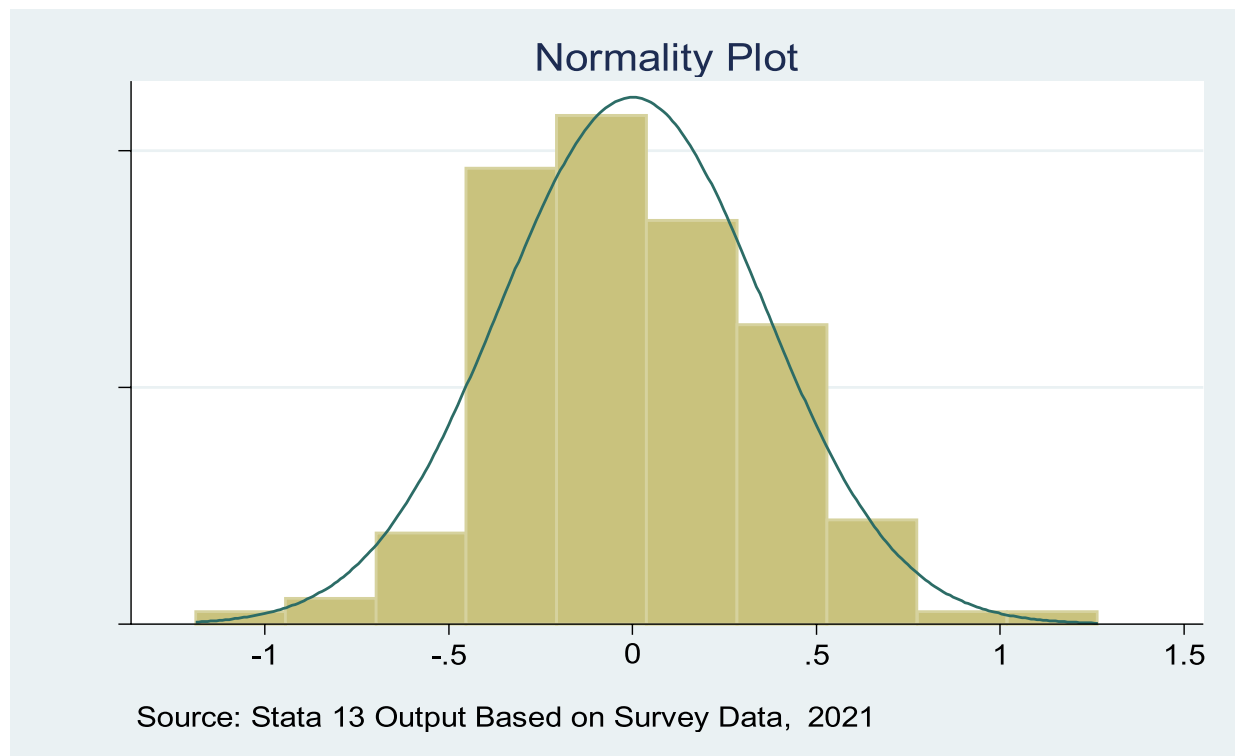


#### 4.7.2.2. Normality Test

One of the basic assumptions of regression analysis is the error terms must be normally distributed with mean zero and constant variance. This can be checked by histogram or pp-plot. To attain this assumption the histogram should be approximately normal or it must be bell-shaped distribution.

The normal distribution is detected based on skewness and kurtosis statistics. Skewness is a measure of the asymmetry of a distribution. Whereas, kurtosis measures the extent to which

observations cluster around a central point. Normally the distribution of the dependent variable that straight relationship with the independent variables, if the relationships are direct and the dependent variable is normally distributed for each value of the independent variable, then the distribution of the residuals (the residual or error is the difference between the real and the predicted values in the model) should be approximation normal. This can be assessed by using a histogram of the standardized residuals. As observed from the histogram is symmetrical along with the center 0. Therefore, this study fulfills the estimate of normality estimate as shown in figure 5 below. Thus, based on the below normality graph, the distribution was confirmed to be normal and the data were exhaustive for the regression analysis.



**Figure 5 Normality Test**

#### **4.7.2.3. Multicollinearity Test**

Multicollinearity is used to describe correlation among independent variables. If there is a high correlation between two or more predictor variables, may cause problems when trying to draw inferences about the relative contribution of each predictor variable to the success of the model (Pallant, 2010). Multicollinearity in this study was tested using Variance

Inflation Factor (VIF) value and tolerance value. If the tolerance value is closed to 1 and the VIF value is around 1 and not more than 10, so that can be concluded that there is no multicollinearity between independent variables in the regression model (Pallant, 2010).

**Table 15 Multicollinearity Test**

<b>Independent Variables</b>	<b>VIF</b>	<b>ToL (1/VIF)</b>
Five S (5"s)	0.45	0.865862
Waste Elimination/Minimization	0.27	0.441361
Just in Time (JIT)	0.76	0.569165
Management (MC)	0.35	0.984957
<b>Mean VIF</b>	<b>1.83</b>	

Source: primary data 2023

The above table 15 indicates the value of VIF 1.83 (i.e., the value is around 1 and not more than 10) and the value of Tolerance between 0.441361 up to 0.984957 i.e., the value is closed to 1. This implies that in the data set there was no multicollinearity problem on the independent variables in the regression model

#### **4.7.2.4.Heteroscedasticity Test**

According to (Gujarati, 2004), if the variance of the error term is not the same, they are said to be Heteroscedasticity. There are a number of tests available for identifying the problem of heteroscedasticity, among them the Breusch-Pagan/Cook-Weisberg test, which was used in this study to check whether the heteroscedasticity problem exists or not.

**Table 16 Heteroscedasticity Test**

<b>Heteroscedasticity Test</b>		<b>Chi2</b>	<b>DF</b>	<b>P-value</b>
<b>White's Test</b>	<b>Heteroscedasticity</b>	<b>22.67</b>	<b>20</b>	<b>0.2214</b>
	Skewness	5.83	5	0.3154
	Kurtosis	2.04	1	0.1533
	Total	30.54	26	0.2016
<b>Breusch-Pagan Test</b>	<b>Heteroscedasticity</b>	<b>2.56</b>	<b>1</b>	<b>0.1257</b>

H<sub>0</sub>: Homoscedasticity i.e. The error term has a constant variance.  
H<sub>A</sub>: Heteroscedasticity i.e. The error term has no a constant variance.  
Variables: Fitted values of organizational performance

Source: primary data 2023

The above Table 16 shows that to test result indicating the absence of heteroscedasticity problem in the regression model since we do not reject the null hypothesis at a 5% level of significance since p-value > 0.05. Therefore, the multiple linear regression models are free from heteroscedasticity problems.

#### **4.7.2.5.Model Summary**

The model summary table R-Square value also called the coefficient of determination measures the proportion of the variation in a dependent variable that can be explained statistically by the independent variables and it takes on any value between 0 and 1.

**Table 17 Model Summary**

<b>Model</b>	<b>R</b>	<b>R Square</b>	<b>Adjusted R Square</b>	<b>Std. error of the Estimate</b>
<b>Model 1</b>	0.8021	0.6433	0.6307	0.0735

**Predictors:** (Constant), Five S's, Waste Minimization, Just in Time (JIT), Management commitment (MC )

**Dependent Variable:** Organizational Performance

Source: primary data 2023

Based on the regression model (Table 17), the R-square value indicates how much variation of the dependent variable is explained by the variation of the independent variables. Therefore, the R square value of 0.6433 indicated that the kaizen tool (Five Ss" (5s), Waste Minimization, Just in Time (JIT) and Management commitment (MC) explained 64.33% of the variation in organizational performance. While the rest 35.67 % of the variation in organizational performance in peacock shoe factory explained by other variables which are not included in the regression model.

#### 4.7.2.6. Analysis of Variance (ANOVA)

The researcher used ANOVA to establish the significance of the regression model. In testing the significance level, the statistical significance was considered significant if the p-value was less or equal to the alpha value of 0.05. The advantage of ANOVA was that we could look at the effects of more than one independent variable (and how these variables interact)

**Table 18 Analysis of Variance**

<b>Model</b>	<b>Sum of Squares</b>	<b>Degrees of Freedom</b>	<b>Mean Square</b>	<b>F<sub>(8, 264)</sub></b>	<b>P-value</b>
Regression	18.8082	4	3.7616		
Residual	10.4310	160	0.0735	<b>51.1782</b>	<b>0.0000*</b>
<b>Total</b>	<b>29.2392</b>	<b>159</b>	<b>0.1989</b>		
<b>Dependent Variable:</b> Organizational Performance					
<b>Predictors:</b> (Constant), Five S"s, Waste Minimization, Just in Time (JIT), Management commitment (MC)					

Note: \* indicates the regression model is significant at 1% level of significance.

Source: primary data, 2023

On the other hand, the ANOVA tells us whether the model, overall, results in a significantly good degree of prediction of the outcome variable (Field, 2005). This provides an F test between the predictors and dependent variables. When F-test is significant, it indicates that

the model as a whole (that is, all predictors combined) predicts significantly more variability in the dependent variable.

To test the significance of the model, the ANOVA (F- test) was performed. In table 18 the ANOVA output assesses the overall significance of the model shows that the ratio of the regression value to the value of residuals is positive, this implies the presence of a significant correlation between predictor variables and dependent variables. Further, p-value 0.0000\*, which is less than the set limit of .05, tells us about whether all the stressors are eligible to be included in the regression model as a significant predictor of the criterion variable. The ANOVA table shows that all the predictor variables (5S, JIT, seven wastes and MC) are a significant predictor of organizational performance hence the model of the study sufficiently and significantly explained the variation in organizational performance.

#### 4.7.2.7. Over all regression analysis model summary results

The previous section of the paper revealed that the correlation result and various techniques approved the non-existence of multicollinearity. This helped the researcher to use multiple regressions to predict the magnitude of each explanatory variable's impact on the dependent variable i.e. the organizational performance.

**Table 19 Model Coefficient summary results**

Independent Variables	Unstandardized Coefficients		t-value	P-value
	Beta	Std. Err.		
Five S (5"s)	0.1158	0.0570	2.03	0.044**
Waste Elimination/Minimization	0.4405	0.0955	4.61	0.000*
Just in Time (JIT)	0.2069	0.0702	2.95	0.004*
Management commitment (MC)	0.2562	0.1236	2.07	0.040**
_Constant	1.0963	0.5899	1.86	0.065

**Note:** \* and \*\* indicates the regression coefficients are statistically significant at 1% and 5% level of significances respectively.

Source: primary data, 2023



Finally, the model fit the regression equation of the organizational performance became

$$OP_i = 1.0963 + 0.1158FS + 0.4405WE + 0.2069JIT + 0.2562CM$$

Where

OP = Organizational Performance

FS = Five S's (5S's)

JIT = Just in time

WE = Seven Wastage/Muda/Elimination

MC= Management commitment

From the above regression equation it was revealed that the regression weight of all the independent variable were significant with Five 5S  $P = 0.044$ , waste elimination  $P = 0.000$ , just in time  $p = 0.004$  and management commitment  $P = 0.037$  are statistical significant at 5% significance level. The estimated coefficients are given a measure of contribution to the model. Higher the coefficient value, greater is the effect of the independent variable on the dependent variable. Waste elimination has the highest coefficient ( $\beta=0.4405$ ) and therefore it has greater effect on organizational performance followed by management commitment ( $\beta=0.2562$ ), just in time ( $\beta=0.2069$ ) and five S ( $\beta=0.1158$ ).

The standardized coefficients indicate the corresponding change in the dependent variable when a change of one unit is affected in the dependent variable. Thus, a unit change in Five S will lead to a 0.1158 unit change in organizational performance. A unit change in just in time would lead to a 0.2069 unit change in organizational performance; a unit change in waste elimination would lead to a 0.4405 unit change in organizational performance; and a unit change in management commitment would results in a 0.2562 unit change in organizational performance of peacock shoe factory. In regression output, Beta Coefficient indicates that the level of influence of each explanatory variable or predictor variable on the dependent variable: as well it indicates the direction of the relationship. Positive beta coefficient indicates the variable has a positive effect on dependent variable whereas negative beta coefficient the variable has a negative effect on the dependent variable and it

tells us on average when mean score value of independent variable increase by one unit mean score value of dependent variable increase or decrease by the beta amount if the variable is statistically significant. The significance value (p-value) implies the statistical significance of the relationship. The constant term of the model indicates the value of organizational performance if all explanatory variables are held constant. The estimated coefficients are given a measure of contribution to the model. Higher the coefficient value, greater is the effect of the independent variable on the dependent variable.

#### **4.7.2.8. Result for comparison to related works**

From the above table 19 regression models taking all factors constant at zero, the organizational performance of peacock shoe factory 1.096. Five S's have a positive and significant effect on organizational performance among the kaizen tool, Five Ss" (5s) is an effective tool for the improvement of the organizational performance of peacock shoe factory. Accordingly, Five Ss" (5s) was positively and statistically significant in affecting the organizational performance of peacock shoe factory at 1% level of significance with ( $\beta=0.1158$ ). The coefficient of Five Ss" (5s) indicates that keeping other things constant, a 1% improvement in Five Ss" (5s) led to an 11.58 % increase in organizational performance of peacock shoe factory.

This finding agrees with the result presented by Dulange (2013) who implemented 5S principles in textile industries in order to improve the organization's performance. The same to the above finding Arash & Norzima (2013) on the effect of 5S implementation on industrial organizations" performance the result shows that 5S is an effective tool for improvement of organizational performance, regardless of organization type, size, production, or its service. Consequently, 5S techniques would strongly support the objectives of an organization to achieve higher performance and continuous improvement.

On the other hand the study by Khedkar, et al. (2012) dealing with the implementation of the 5S methodology in Plastic Industry found that 5S implementation impacts the instructors and workmen of the industry that work within the selected place. The study also asserted that by following the 5S methodology, significant improvements can be brought with regard to safety, productivity, efficiency, morale, and housekeeping. According to

Mohd (2015) on his study on the effects of 5s implementation on the performance of organization confirmed that there is a promising considerable positive effect on the both operational and financial performance of organizations.

From the kaizen tool waste elimination/minimization is an effective tool for the improvement of the organizational performance of Dashen Brewery, Accordingly, waste elimination/ minimization was positively and statistically significant in affecting the organizational performance of Dashen Brewery at 1% level of significance with ( $\beta=0.4405$ ). The coefficient of Waste Elimination/Minimization that keeping other things constant, a 1% improvement in Waste Elimination/Minimization led to a 44.05 % increase the organizational performance of Peacock shoe factory hence the most significant Kaizen practice affecting organizational performance of Peacock shoe factory.

This finding is similar to Tersine (2004) who claims that profit can be increased while costs can be reduced simultaneously with a positive compounding effect on the performance by eliminating unwanted waste. In addition to Khalil, et al. (2013), analyze the current situation of wastes elimination of the manufacturing firms in the Gaza Strip and found that waste elimination/minimization play a positive and significant role in reducing production cost. Rajenthira & Thyla (2011) and Dollen et al. (2008) have also used the Muda elimination tool in manufacturing industries for removing wastages, which consequently led to increased organizational performance and organizational sustainability. Additionally, researchers like Kumar & Jain (2013) have applied the Muda elimination tool in manufacturing organizations and remarked its positive impact on organizational performance, particularly with respect to reduced processing time, working space, and increased workflow.

This study also found that Just in Time (JIT) has a significant and positive effect on Organizational performance having a beta value of ( $\beta=0.2069$ ) which means that the implementation of Just in Time (JIT) increase by one unit organizational performance will increase by 20.69%. In line to the finding of this study a considerable number of studies have provided empirical evidence concerning a positive and significant effect of JIT implementation on organizational performance (Fullerton et al, 2003, Isa & Tay, 2008). Similarly, Belekoukias, Garza-Reyes & Kumar (2014), by using a quantitative SEM

approach; they conclude that JIT has the highest effect in improving organizational performance. The implementation of JIT has a positive effect on the performance of manufacturing companies which is also stated by (Hadioetomo, 2009; Utama & Radhi, 2009).

Accordingly, management commitment with ( $\beta = 0.2562$  p-value = 0.000) indicate that the implementation of as Management commitment (MC) increase by one unit organizational performance will increase by 25.62 %. In conformity to the finding of this study, studies such as (Brah et al, .2002; Brah and Lim, 2006; Demirbag et al, 2006; Feng et al, 2006) found a positive association between MC implementation and organizational performance. Additionally, Salaheldin (2009) surveyed Small and Medium Enterprises (SMEs) in Qatar and investigate the relationship between MC and performance of SMEs. Accordingly he confirmed the existence of a significant relationship between MC and organizational performance among SMEs. In the same way, Hassan, et al. (2012), in their study on the impact of TQM on manufacturing firms in Pakistan reported that successful adoption and implementation of MC practices results improvement in the performance of an organization.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATION**

#### **5.1. Introduction**

Based on result and analysis research data and in finding in literature reviews this chapter gives the summary of the study of finding, and conclusions drawn. Recommendation and limitation that met as well as further area research is offered. The study makes a summary from the research findings that form analysis of primary data that collect on effectiveness of kaizen implementation on organizational performance of peacock shoe factory in Addis Ababa. A discussion of the results is completed and this makes recommendations to several stakeholders. The chapter is consequently based on the conclusions and recommendations summary of research discoveries.

#### **5.2. Summary of Finding**

The objective of the study was to examine the effectiveness of kaizen implementation on organization performance at peacock shoe factory. The researcher used descriptive and explanatory research design, and proportional stratified random sampling technics, 160 sample sizes were taken from a total of 267 employees from the peacock shoe factory. The source of data was a primary source of data through a questionnaire to examine the effect of the independent variable on the dependent variable.

All variables and their measurements were constructed based on theory and adopted from different related literatures. The researcher tested reliability and validity of the constructs and items as per the recommendations made in literatures and the comment from per data gathering time besides scale fitness test conducted and obtained Cronbach's alpha value of 0.9089 which indicates that the model is free from validity and reliability problem.

Starting with general respondents' profiles, 98 (70%) Females and 48 (30%) Males participated in the study. The age of respondents shows 60 (37.5%) of respondents were between age 20 – 30 years, 70 (43.75%) were between ages 31-40 years, 25 (15.63%) were between ages 41-50 years, and 5 (3.12) of respondents were above 50 years. The educational level of respondents shows that 58 (36.25%) and 77 (48.13%) were found to be

diploma and first Degree holders respectively. The remaining 25(15.63%) of the respondents are master's degree holder. The experience of the respondents shows that respondents, 56(35%) have 1-5 years of service while 65(40.63%) of the respondents have served for 6-10 years, 39 (24.37%) of respondents have served for more than 10 years.

Descriptive statistics showed that MC is implemented to the greatest extent with a mean value of (4.262), followed by Just in time (4.260), Waste Elimination/Minimization (4.169), and Five Ss" (3.783) .

The researcher applied, multicollinearity test VIF and tolerance (TOL) the result shows the absence of multicollinearity in the study .similarly the Heteroskedasticity test Breush pagan test. The result indicates the absence of a Heteroskedasticity problem. The R-square value of the model is 0.6433 which means that 64.33 % kaizen tool (Five Ss" (5s), seven Waste Minimization, Just in Time (JIT) Management commitment (MC) explained the variation in organizational performance. Therefore, this further shows that 35.67% of the variation in the dependent variable is to be determined by the variables outside of this model.

ANOVA Table depicts that the model is significant,  $F(8, 264) = 51.1782$ ,  $P = 0.000$  which is  $p < 0.01$ . This, means that the regression analysis proved the presence of a good degree of prediction since the value of F statistics is significant at 5 and 142 degree of freedom at 95% confidence level whereas the residual row indicates information about the variation that is not accounted for the model. Five Ss (5s) Pearson correlation coefficient is ( $r=0.3141$ ,  $p\text{-value} < 0.05$ ) which implies that there is positive relationship with the organizational performance as well as ( $Beta=0.1158$ ) and can say that there is positive effect of contribution on the organizational performance. Waste Elimination/Minimization Pearson correlation coefficient is ( $r=0.5017$ ,  $p\text{-value} < 0.05$ ) which implies that there is positive relationship with the organizational performance as well as ( $Beta=0.4405$ ) and can say that there is positive effect of contribution on the organizational performance. Just in time (JIT) Pearson correlation coefficient is ( $r=0.1977$ ,  $p\text{-value} < 0.05$ ) which implies that there is positive relationship with the organizational performance as well as ( $Beta=0.2069$ ) and can say that there is positive effect of contribution on the organizational performance.

Management commitment (MC) Pearson correlation coefficient is ( $r=0.1671$ ,  $p\text{-value} < 0.05$ ) which implies that there is positive relationship with the organizational performance as well as ( $\text{Beta}=0.2562$ ) and can say that there is positive effect of contribution on the organizational performance.

### **5.3. Conclusions**

The study aimed to examine the effectiveness of Kaizen implementation (Five Ss, waste minimization, just in time, and management commitment) on the organizational performance of peacock shoe factory at Addis Ababa.

Kaizen is a Japanese philosophy of continuous improvement that has been widely adopted by organizations around the world. Its implementation has been shown to have a positive impact on organizational performance, particularly in relation to the factors of 5S, waste elimination, just in time, and management commitment. The 5S approach involves creating and maintaining a clean, organized, and efficient workplace, which can lead to improved productivity, reduced waste, and increased safety. By implementing 5S practices, organizations can create a culture of continuous improvement, where employees are empowered to identify and eliminate inefficiencies in their work processes.

Waste elimination is another key factor in the effectiveness of Kaizen implementation. By identifying and eliminating waste, organizations can reduce costs, improve quality, and increase customer satisfaction. Just in time (JIT), a production strategy which involves producing and delivering products just in time to meet customer demand, can further enhance the benefits of Kaizen implementation. JIT can help organizations reduce inventory costs, shorten lead times, and improve product quality. Finally, management commitment is crucial for the success of Kaizen implementation. When leaders demonstrate a strong commitment to continuous improvement and provide the necessary resources and support, employees are more likely to embrace the philosophy and actively participate in improvement initiatives. Through effective management commitment, organizations can create a culture of continuous improvement that drives sustainable performance improvement over time.

The findings from the study show that there is a positive relationship between kaizen implementation and organizational performance. This implies the factories that implement kaizen are likely to improve their organizational performance. The findings further showed that MC has high level of implementation followed by JIT and waste elimination. Five Ss'' have relatively moderate level of implementation. Overall, most of the kaizen tools were implemented well in the company.

Correlation analysis was applied to evaluate the relationships between kaizen effects on organizational performance. All the correlation coefficients were positive; with a maximum value of 0.5017 and minimum value of 0.1671 this show that kaizen practice has positive effect on organizational performance in the factory. From the regression model summary, the researcher concluded that the explanatory variables (Five Ss'' (5s) '', waste minimization, just in time, and management commitment) significantly and positively affect the dependent variable (organizational performance) of peacock shoe factory at Addis Ababa.

5S is a fundamental aspect of Kaizen implementation, and it involves five principles: sort, set in order, shine, standardize, and sustain. By implementing these principles, organizations can create a workplace that is clean, organized, and efficient, which helps to reduce waste, improve productivity, and enhance safety. For example, sorting involves removing unnecessary items from the workplace, which can help to reduce clutter and improve workflow. Setting items in order involves organizing tools and materials in a logical way, which can reduce the time and effort required to find the items needed for a particular task. The shine principle involves ensuring that the workplace is clean and well-maintained, which can help to improve safety and prevent accidents. Standardizing involves establishing clear guidelines and procedures for work processes, which can help to ensure consistency and efficiency. Finally, sustaining involves maintaining the improvements achieved through the previous four principles, which helps to ensure that the improvements are long-lasting and sustainable.

Waste elimination is another important aspect of Kaizen implementation, and it involves identifying and eliminating waste in all its forms, including defects, overproduction, waiting, excess inventory, unnecessary motion, unnecessary processing, and unused talent.



By reducing or eliminating waste, organizations can improve efficiency, reduce costs, and enhance quality. For example, by reducing defects, organizations can improve customer satisfaction and reduce rework costs. By reducing excess inventory, organizations can free up capital and reduce the risk of obsolescence. By reducing waiting times, organizations can improve lead times and increase customer satisfaction.

Just in time (JIT) is a production strategy that involves producing and delivering products just in time to meet customer demand. JIT is closely aligned with Kaizen, as it involves reducing waste and improving efficiency through the elimination of unnecessary inventory and the optimization of production processes. By implementing JIT, organizations can improve quality, reduce lead times, and increase flexibility. For example, by producing only what is needed, when it is needed, organizations can reduce the risk of overproduction and excess inventory. By optimizing production processes, organizations can reduce setup times, increase throughput, and improve quality.

Finally, management commitment is a critical factor in the success of Kaizen implementation. When leaders demonstrate a strong commitment to continuous improvement and provide the necessary resources and support, employees are more likely to embrace the philosophy and actively participate in improvement initiatives. Management commitment involves providing clear direction, setting goals and objectives, providing training and development opportunities, and recognizing and rewarding employees for their contributions to continuous improvement efforts. Through effective management commitment, organizations can create a culture of continuous improvement that drives sustainable performance improvement over time.

#### **5.4. Recommendations**

Based on the aims and conclusions, the study presents the following recommendations for effective implementation of kaizen in peacock shoe factory based on the experiences of other manufacturing companies in ' Ethiopia.

- **Five Ss:** Implementing the 5S approach can be a powerful tool for improving organizational performance. It's often best to start with a small pilot project to demonstrate the benefits of 5S implementation. This will help to build momentum

and support for the initiative, and provide a platform for expanding the approach to other areas of the organization. A 5S audit can help to identify areas for improvement and track progress over time. Conducting regular audits will help to ensure that the 5S approach is being implemented consistently and effectively.

- **Waste elimination:** it involves identifying and eliminating waste in all its forms, including defects, overproduction, waiting, excess inventory, unnecessary motion, unnecessary processing, and unused talent. Implementing waste elimination practices can help organizations to reduce costs, improve quality, and increase customer satisfaction. To successfully implement waste elimination practices, it is important to establish a culture of continuous improvement. This involves encouraging employees to identify and eliminate waste in their work processes, and providing them with the necessary training and resources to do so. Organizations should regularly conduct waste audits to identify areas of waste and inefficiency, and prioritize areas for improvement.
- **Just in time (JIT):** Just in time is a production strategy that involves producing and delivering products just in time to meet customer demand. Implementing JIT can help organizations to reduce waste, improve quality, and increase efficiency. To successfully implement JIT, it is important to optimize inventory management practices. This involves minimizing inventory levels by producing only what is needed, when it is needed, and in the right quantity.
- **Management commitment:** Management commitment is crucial for the success of kaizen implementation. Leaders need to actively support and promote the kaizen approach to create a culture of continuous improvement. They should provide the necessary resources, including time, training, and funding, to ensure the success of the initiative. Encourage employees to identify areas for improvement and provide

## **5.5. Suggestions for Further Research**

This study was limited to peacock shoe factory in Addis Ababa. Different manufacturing firms in Addis Ababa city have different orientation in the industry and differ in various other aspects which could contribute to the difference in effectiveness of Kaizen implementations for their organization. The researcher recommends that further research should be done on the relationship between kaizen implementation and organizational performance in Addis Ababa city; in other manufacturing firms so as to allow for generalization and benchmarking. According to the results, future researches can be done on a comparative study of kaizen practice on performance in similar organizations, review requirements of the implementation and development of kaizen practices.

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**Appendix**  
**SAINT MARY UNIVERSITY**  
**SCHOOL OF GRADUATE STUDIES**  
**DEPARTMENT OF MANAGEMENT**

**Dear respected respondents**

My name is **Abebe Degu Belay**. I'm a postgraduate student at Saint Mary University College of Business and Economics. I intend to conduct a study titled "**Effectiveness of kaizen implementation on organizational performance**". I humbly request for information on your opinion on the subject. I would appreciate your assistance on the responses to the questions contained in the questionnaire in order to achieve the objectives of this research. The information opinion you provide is purely for academic purposes and will be treated with strict confidentiality and for your comfort any information given would not be disclosed to the 3<sup>rd</sup> party.

Thank you in advance for your kind cooperation and dedicating your time.

Sincerely yours,

Abebe Degu Belay

**Instructions**

No need of writing your name

For Likert scale type statements and multiple choice questions indicate your answers with a tick mark (√) in the appropriate block.

For blank spaces please write the correct Information

**I. GENERAL INFORMATION**

1. **Educational back ground** Diploma ☐ Degree ☐ Master and above ☐  
PHD

2. **Current position**

- ❖ General Manager ☐
- ❖ Quality control manager ☐
- ❖ Inventory manager ☐
- ❖ Finance manager ☐
- ❖ Marketing and business development manager ☐
- ❖ Human resource development manager ☐
- ❖ Supervisor ☐
- ❖ Purchase manager ☐

3. **Related experience in years**

1-5 years ☐ 5-10 years ☐ above 10 year ☐



## II. Questions Related to effect of kaizen implementation on organizational performance

The following questions are pertaining to the extent your company currently practices kaizen tools. Please read the following statements carefully and indicate your perception about the application of each kaizen tool in your organization. The rating scales are;

Where 5=strongly agree, 4= Agree, 3= Neutral, 2=disagree, 1=strongly disagree. And then put tick mark (✓) under the choices below.

Items		Agreement level				
<b>I. Five S</b>		5	4	3	2	1
<b>1. Sorting</b>						
1.1.	The factory properly differentiates between necessary and unnecessary item					
1.2.	Un wanted items are minimized from work place					
1.3.	The Rules of red tag for disposal items					
1.4.	Storage area is defined to store broken, unusable or occasionally used items					
<b>2. Set in Order</b>		5	4	3	2	1
2.1.	All products, equipment, tools properly set and ready for production					
2.2.	location of all the objects necessary have been defined and marked					
2.3.	putting items in such a way that they are easy to find, pick up, use and return is applied					
2.4.	Color coding is effectively used for easy identification wherever necessary.					
2.5.	The necessary items are kept in the shelf according to frequency of use					
<b>3. Shine</b>		5	4	3	2	1
3.1.	Cleaning schedules are existing and visibly shown					
3.2.	Use of adequate cleaning tools is evident					
3.3.	All products, equipment, tools and work environment are properly cleaned					
3.4.	clean and comfortable work place was created					
<b>4. Standardize</b>		5	4	3	2	1
4.1.	The above three S'S (Sorting, set in order & Shine) are continuously practiced					
4.2.	Standardized checklist used to regularly scrutinize 5s activity					
4.3.	Standardly procedures, visual management, warning signs, labeling for correct identification, color coding were followed.					
<b>5. Sustain</b>		5	4	3	2	1
5.1.	Factory made efforts for sustaining 5S within the factory					
5.2.	5s audit tool has been properly implemented					
5.3.	Result of 5s have been sustained					
5.4.	Success stories are being displayed (i.e., Before and after					

	pictures)					
5.5.	Evidence of sustaining 5-S kaizen- board, slogan & poster competitions among employees was practiced					
II.	<b>Seven Waste Elimination/Minimization Practice</b>					
<b>2.1.</b>	<b>Motion</b>	5	4	3	2	1
2.1.1	The factory kaizen activity minimizes un necessary movement of workers/people					
2.1.2	The factory kaizen activity minimizes un necessary movement of machine and equipment					
2.1.3	The factory kaizen activity minimizes un necessary movement of raw materials					
2.1.4	The installation of machine based on operating procedure to minimize motion has been implemented					
<b>2.2</b>	<b>Waiting</b>	5	4	3	2	1
2.2.1	The factory kaizen activity minimizes waiting due to delivery products/service					
2.2.2	The factory kaizen activity minimizes waiting due to machine down time					
2.2.3	The factory kaizen activity minimizes workers waiting without Work					
<b>2.3</b>	<b>Defects</b>	5	4	3	2	1
2.3.1	The factory kaizen activity minimizes defects west caused by rework, correction/errors					
2.3.2	The factory kaizen activity minimizes defects west caused by quality problem					
2.3.3	The factory kaizen activity minimizes Reduce scrap defect					
<b>2.4</b>	<b>Inventory</b>	5	4	3	2	1
2.4.1	Factory kaizen activity handle excess raw material inventory					
2.4.2	Factory kaizen activity minimizes over production inventory					
2.4.3	Factory kaizen activity handle maintains and repairer inventory					
2.4.4	Factory kaizen activity handle office supply inventory					
<b>2.5</b>	<b>Transportation</b>	5	4	3	2	1
2.5.1	Factory kaizen activity minimizes un necessary movement of products from production to sale					
2.5.2	Factory kaizen activity minimizes un necessary movement of material or products in the production process					
2.5.3	Factory kaizen activity minimizes un necessary movement of tools or equipment's in the production process					
<b>2.6</b>	<b>Over Production</b>	5	4	3	2	1
2.6.1	Factory kaizen activity minimizes producing more than needed					
2.6.2	Factory kaizen activity minimizes producing at faster rather than it					
2.6.3	Factory kaizen activity minimizes line imbalance or poor schedule					

<b>2.7</b>	<b>Over Processing</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
2.7.1	Factory kaizen activity minimizes non-value adding processing by labor					
2.7.2	Factory kaizen activity minimizes non-value adding processing by machine					
2.7.3	Factory kaizen activity minimizes unnecessary documentation					
<b>3</b>	<b>Just – in – Time (JIT)</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
3.1	All the required materials and goods needed are placed in just in time. (No more No less)					
3.2	The company schedules production according to market demand priorities					
3.3	The factory delivers the right quantity product on the time					
3.4	The factory deliver the right quality product on the time					
3.5	The factory receives the right quality materials at the right time					
3.4	The factory receive right quantity materials at the right time					
<b>4</b>	<b>Management commitment to quality</b>	<b>5</b>	<b>4</b>	<b>3</b>	<b>2</b>	<b>1</b>
4.1	The management body is committed for success in kaizen implementation					
4.2	Our manufacturing firm undergoes a comprehensive program to apply for ISO certified					
4.3	Quality policies and procedures are documented and communicated to all employees					
4.5	The employees are continuously trained to enhance internal quality performance					
4.6	The organization always meets customer need and expectations					
4.7	here is continuous monitoring and implementation of quality system and procedures to enhance performance					

### III. Organizational performance

Kindly rate the extent to which you agree how the following organizational performance dimensions have been improved by Kaizen tool practice in your organization. To what extent have the following organizational performance dimensions been improved by kaizen?

<b>1.</b>	<b>1Profitability</b>	5	4	3	2	1
1.1.	The 5s implementation increased the company profitability					
1.2	The implementation of waste elimination increased the company profitability					
1.3	The implementation of just in time increased the company profitability					
1.4	The implementation of total productive maintenance increased the company profitability					
1.5	The company has continuous improvement of quality system leading to increased profitability					
<b>2.</b>	<b>Productivity</b>	5	4	3	2	1
2.1	The 5s implementation increased the company productivity					
2.2	The implementation of waste elimination increased the company productivity					
2.3	The implementation of just in time increased the company productivity					
2.4	The implementation of total productive maintenance increased the company productivity					
2.5	There is high productivity after TQM practice					
<b>3.</b>	<b>Cost Reduction</b>	5	4	3	2	1
3.1	The 5s implementation helped the company to cost reduction					
3.2	The implementation of waste elimination helped the company to reduce cost					
3.3	The implementation of just in time helped the company to reduce cost					
3.4	The implementation of total productive maintenance helped the company to reduce cost					
3.5	There is high cost reduction after quality management practice					

#### **IV. Interview questions**

1. When did peacock shoe factory implementing the kaizen?
2. Why peacock shoe factory decide to implement kaizen to waste minimization?
3. Is there any positive performance change notice with the staff in your department after introduction of kaizen strategy give reasons for your answer?
4. Have kaizen system been improved since implementation?
5. After the introduction of kaizen strategy is there reduction of waste in area such as inventory, over production waiting and defect. ?
6. What would you suggest to make Kaizen Principles and practices remain sustainable in your factory?