



ADAMA SCIENCE AND TECHNOLOGY UNIVERSITY

SCHOOL OF GRADUATE STUDIES

DEPARTMENT OF PSYCHOLOGY

EMPLOYEES' ATTITUDE TOWARD THE APPLICATION

OF KAIZEN PRACTICES: WONJI SHOA

SUGAR FACTORY IN FOCUS

BY

NEGASH MEKONNEN

MAY, 2016.

ADAMA

**EMPLOYEES' ATTITUDE TOWARD THE APPLICATION
OF KAIZEN PRACTICE: WONJI SHOA
SUGAR FACTORY IN FOCUS**

**A THESIS SUBMITTED TO THE SCHOOL OF GRADUATE
STUDIES OF ADAMA SCIENCE AND TECHNOLOGY
UNIVERSITY IN PARTIAL FULFILMENT OF THE
REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS IN
INDUSTRIAL AND /OR ORGANIZATIONAL PSYCHOLOGY**

BY:

NEGASH MEKONNEN

ADVISOR:

DR.KASSIM KIMO (MA, MBA, PhD), ASSOCIATE PROFESSOR

MAY, 2016

ADAMA

DECLARATION

I declare that this thesis entitled **“EMPLOYEES’ ATTITUDE TOWARD THE APPLICATION OF KAIZEN PRACTICES: WONJI SHOA SUGAR FACTORY IN FOCUS ”** is my own work and that all source of materials used for this thesis have been duly acknowledged. I solemnly declare that this thesis is not submitted to any other institution anywhere for the award of any academic degree, diploma or certificate

Name and Signature of author: _____

This thesis has been submitted for examination with my approval as university advisor

Name: _____

Signature: _____

Date: _____

ACKNOWLEDGMENTS

Foremost, I would like to express my sincere gratitude to my advisor Dr. Kassim Kimo for his continuous support in developing this thesis, endless patience, enthusiasm and immense knowledge. His guidance has helped me a lot in writing this Thesis.

Besides my advisor, my sincere thanks also go to Wonji Sugar Factory Kaizen Team Leader, Ato Surafel Lakew and Muluken Tamirat and volunteer workers participated in the study.

Finally, I would like to acknowledge Tigist Lema for helping me in typing this Thesis work.

TABLE OF CONTENTS

S.N	ITEMS	PAGE
	Declarations.....	
	Acknowledgements	I
	Lists of Tables	II
	Lists of Figures	III
	Acronyms	IV
	Abstracts.....	V

CHAPTER ONE: INTRODUCTION

1.1. Background of the Study	1
1.2. Statement of the Problem	4
1.3. Research Questions	7
1.4. Objectives of the Study	7
1.5. Significance of the Study	8
1.6. Limitations of the Study	8
1.7. Delimitation	9
1.8. Definitions of Operational Terms	9

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

2.1. Theory of Reasoned Action	11
2.2. Attitude towards Behaviour	12
2.3. Kaizen Concept.....	13
2.3.1. The Concept of 5s's	15
2.3.1.1. Seiri (Sort/ Sort Out)	15
2.3.1.2. Seiton (Set in Order/Straighten)	16
2.3.1.3. Seiso (Shine the Workplace / Clean and Check)	16
2.3.1.4. Seiketsu (Standardize/ Systematize /Conform)	16
2.3.1.5. Shitsuke (/Sustain /Custom and Practice/ Self Discipline.....	16
2.3.2. The Concept of Gemba Kaizen.....	17
2.3.3. The Concept of Waste (Muda) Elimination	18
2.3.3.1. Muda of Overproduction.....	18
2.3.3.2. Muda of Inventory.....	18
2.3.3.3. Muda of Repair or Rejects (Defects).	19
2.3.3.4. Muda of Motion.....	19

2.5.3.5. Muda of Processing.	19
2.4.3.6. Muda of Waiting.....	19
2.4.3.7. Muda of Transportation.....	19
2.3.4. The Concept of Suggestion System.....	20
2.3.5. The Concept of Kaizen Event.....	20
2.3.6. The Concept of 5-Why's Technique.....	22
2.3.7. The Concept of JIT.....	22
2.3.8 The Concept of Cross Functional Team.....	22
2.4. Principles/Features of Kaizen.....	22
2.4.1. Processes Must Evolve by Gradual Improvement Rather than Radical Changes.....	23
2.4.2. Human Resources are the Most Important Company Asset.....	23
2.4.3. Team Work	23
2.4.4. Discipline	23
2.4.5. Continuous Improvement	24
2.5. Kaizen Needs in Ethiopia	24
2.6. Kaizen in Ethiopia	25
2.7. Training	26
2.8. Attitude Theory.....	27
2.9. Motivation Theory.....	28
2.10. Training Transfer.....	29
2.11. Readiness for change	29
2.12. Resistance to Change.....	30
2.13. Team Work and Communication.....	32
2.13.1. Team Work.....	32
2.13.2. Communication.....	33
2.14. Perceived Organizational Support.....	34
2.14.1.Effects of Perceived Organizational Support on Employees' Attitudes.....	35
2.14.2. Management Support.....	36
2.14.3. Supervisory Support.....	37

CHAPTER THREE

3. Research Methodology	38
3.1. Research Design	38
3.2. Background of the Study Site	38
3.3. Target Population	39
3.4. Sampling and Sampling Procedures.....	40
3.4.1. Sampling	40
3.4.2. Sampling Procedure.....	40
3.5. Instrument Development for Data Collection	41
3.6. Data Gathering Procedures	41
3.7. Pilot Study.....	42
3.8. Methods of Data Analysis	43
3.9. Ethical Consideration.....	43

CHAPTER FOUR: RESULT ANALYSIS AND DISCUSSION

4.1. Over View of the Chapter	44
4.2. Demographic Characteristics	44
4.3 Result Analysis of Employees Demographic Variables	46
4.4. Simple Linear Regression of Training Influence Employees Attitudes toward the Application of Kaizen Practices.....	52
4.5. Simple Linear Regression of Readiness Influence Employees Attitudes toward the Application of Kaizen Practices.....	54
4.6. Simple Linear Regression of Resistance Influence Employees Attitudes toward the Application of Kaizen Practices.....	56
4.7. Simple Linear Regression of Team Work Influence Employees Attitudes toward the Application of Kaizen Practices.....	58
4.8. Simple Linear Regression of Perceived Organizational Support Influence Employees Attitudes toward the Application of Kaizen Practices.....	60

CHAPTER FIVE: SUMMARY, CONCLUSION, RECOMMENDATIONS AND SUGGESTION FOR FURTHER RESEARCH

5.1. Summary.....	66
5.2. Conclusion	67
5.3. Recommendations	68
5.4. Suggestions for Further Research.....	69
5.5. References.....	
5.7. Annex A. Research Questionnaires.....	

5.8. Annex B. Sample Size Determination

LISTS OF TABLES

Table No	Page
Table1: Distribution of Population and Sample Size of Representatives from Agricultural Operation, Factory Operation and Supply and Facility Management Departments.....	41
Table2: Separate and Combined Cronbach Alpha Results.....	42
Table3: Percentage Distribution of Respondents Demographic Characteristics.....	45
Table4: Sex Differences on Employees' Attitude in the Application of Kaizen Practices	46
Table 5: Age Differences on Employees' Attitude in the Application of Kaizen Practices.....	47
Table6: Multiple Pair Wise T-test Comparison of Mean Test for Employees' Attitude Towards the Application of Kaizen Practice Based on Age.....	47
Table7: Effects of Level of Education on Employees' Attitude in the Application of Kaizen Practices.....	48
Table8: Multiple Pair Wise T-test Comparison of Mean Test for Employees' Attitude for the Application of Kaizen Practice Based on Educational Level.....	49
Table9: Pearson Correlation among the Variables, Attitude, Training, Readiness, Resistance, Team Work, and Perceived Organizational Support.....	50
Table10: Frequency and Percentage Distribution of Respondents' Response Based on Training.....	51
Table11: Simple Linear Regression of Training	52
Table12: Frequency and Percentage Distribution of Respondents' Response Based on Readiness.....	53
Table13: Simple Linear Regression of Readiness	54
Table14: Frequency and Percentage Distribution of Respondents' Response Based On Resistance	55
Table15: Simple Linear Regression of Resistance	56
Table16: Frequency and Percentage Distribution of respondents' Response Based On Team work.....	57
Table 17: Simple Linear Regression of Team Work	58
Table 18: Frequency and Percentage Distribution of Respondents' Response Based on Perceived Organizational Support.....	59
Table19: Simple Linear Regression of Perceived Organizational Support	60
Table 20: Effects of Training on Employees Attitude towards the Application of Kaizen Practice Based on Departments.....	61

Table 21: Multiple Pair Wise Comparison of Mean Test for Employees Attitude on Training Differences Based on Department in the Application of Kaizen Practice.....	62
Table22: Effects of Resistance on Employees Attitude towards the Application of Kaizen Practice based on Departments	62
Table 23: Multiple Pair Wise Comparison of Mean Test for Employees Attitude on Resistance based on departments in the application of Kaizen Practice.....	63
Table 24: Effects of Team work on Employees Attitude towards the Application of Kaizen Practice based on Departments	63
Table 25: Multiple Pair Wise Comparison of Mean Test for Employees Attitude on Team Work Based on Departments in the Application of Kaizen Practice.....	64
Table 26: Employees Attitude toward the Negatively Stated Statements of Resistance.....	65
Table 27: Mean Difference on Readiness of Workers Based on Sex.....	65

Lists of Figures

Figure1: Conceptual Frame Work	10
Figure 2: Theory of Reasoned Action.....	12
Figure3: Kaizen Umbrella	14

ACYRONOMY

TQM: Total Quality Management

JIT: Just In Time Delivery

POS: perceived organizational support

QCC: Quality control circle

CSA: Central Statistical Agency

EKI: Ethiopian Kaizen Institute

TPM: Total Productive Management

TQC: Total Quality Circle

GDP: Growth and Development Plan

GTP: Growth and Transformational Plan

MOI: Ministry of Industry

Abstract

The purpose of this study was to determine the relationship between attitude training, readiness, resistance, team work and perceived organizational support towards the application of kaizen practice in Wonji Shoa Sugar Factory . The study participants were selected from three departments which are found in the factory, namely: Supply and Facility Management, Agricultural operation and Factory Operation. The sample size was 150 (male 123, female 27) respondents between age of 18 to 46 years old selected by stratified simple random sampling from Wonji Shoa Sugar Factory. The data for this study were collected by survey questionnaires developed by the researcher and analyzed by descriptive statistics, Regression analysis, Correlation, F-tests and t-test comparison (independent Samples t-test). The result of this study showed that training, team work and perceived organizational Support were positively and significantly correlated with the employees' attitude towards the application of kaizen practice. Whereas readiness and resistance were positively correlated and had no significant impact on employees' attitude towards the application of kaizen practice. Based on the findings, training, team work and perceived organizational support needed due attention by the organization for better application of kaizen practice whereas, employees in the factory didn't have a problem of readiness and resistance for the application of kaizen.

CHAPTER ONE: INTRODUCTION

1.1.BACKGROUND OF THE STUDY

The challenge of rebuilding Japanese businesses from scratch after World War II, the oil crises of the 1970s and the resultant economic challenges that ensued in the '80s and '90s (for example, increases in the cost of raw materials and labour, increased international competition, changing consumer values and shorter product lifecycles) collectively provided the impetus for the rise of process-oriented management (and manufacturing) strategy of Kaizen (Imai,1986). Kaizen is now an umbrella term encompassing many management practices such as total quality control/circles, productivity improvement, zero defects, just-in-time, teamwork, every workers commitment, interpersonal interaction and so on.

Kaizen is a Japanese word composed of two concepts: Kai (change) and Zen (for the better) to mean continuous improvement involving employees in all levels of an organization. Imai (1986). Kaizen systems encompasses: Continuous nature that is a never-ending journey for quality and efficiency; usually incremental in nature, always improving instead of reorganizing or reinstalling; participative, requiring workforce involvement and intelligence. (Brunet & New, 2003).

Furthermore, kaizen in business includes quality control, automation, workers suggestion systems, just-in-time delivery systems and the 5S process: (i.e.,seiri (sorting); seiton (setting in order); seiso (shinning/cleanliness); seiketsu (standardization in the workplace); and shitsuke (sustaining self-discipline and promoting a sense of pride in workers in their work and being owners of their responsibility) (Genobz , 2010). Based on workers self-criticism and adherence to the constructive critique of the process, kaizen involves bottom-up decision-making and practices an employee-driven management style that heavily emphasizes teamwork. (Ohno, Hhno, & Uesu, 2009). The other characteristics such as the bottom-up decision making system and family-oriented management are the results of lifetime employment (Ihara, 2004). The Japanese

management system as practiced in a number of countries has been seen positively by many managers and practitioners because the system has helped a number of enterprises to become productive, competitive, and has largely increased customer satisfaction. In fact, Yokozama, et.al., (2010) argue that "...two national characteristics are critical for successful kaizen transfer. One is the disciplined people who follow what they are asked to do i.e. keeping the deadline, quality control, and following standard operating procedure. The other is "a hungry mentality, eager to do work which is above and beyond their responsibility." Based on his theoretical contributions and experience, (Recht, 1998) reviewed, he has come to the conclusion that kaizen-oriented suggestion systems are transferable to non-Japanese cultural environments.

But Rechet asserts that to increase the chances of a successful transfer, six organization-culture conditions are necessary: a) a clear employee orientation, supported by a (contractually or verbally assured) non-lay-off policy b) employees who are committed to the company's long-term viability c) a free flow of information, both along the vertical axis and between units that belong to the same hierarchical level d) empowered employees, i.e., employees that have the information and skills needed to take decisions on a wide range of issues concerning their own working environment e) a so-called pragmatic orientation; and finally employees who are both process- and results-oriented.

On the other hand, some authors have concluded that kaizen has been dysfunctional in a number of foreign companies because it is insensitive to domestic cultures, urges foreign-owned companies to emulate the Japanese way of management, and is based on the assumption that what works in Japan has to be uniformly implemented in other countries (Shaari, 2010). In line with (Beer's, 1966) observation, a number of researchers argue since Japanese management practices are embedded in the Japanese culture it is difficult to transfer kaizen systems abroad. Many Japanese management systems are not easily adopted by an overseas counterpart due to environmental factors such as differences in national culture and work ethics. Transferred management systems are more likely to be hybridized with locally practiced systems (Yokozama, 2010). Moreover, (Hayashi, 1988) argues that a kaizen management system works effectively in Japan because the Japanese

organizations tend to have organic structures with decentralized decision-making, low degree of specialization and formalization, and above all the culture of horizontal communication.

Despite the above mentioned challenges with kaizen management systems, and because (Sonobe, 2009) advice that under kaizen workers feel that they are really essential, integral parts of the enterprise, and can feel ownership. Ethiopia has decided to implement the Japanese management philosophy. However; Ethiopian manufacturers have been at a disadvantage, not only because of the lack of highly skilled human resources and a large technological gap but also because of a lack of differentiated managerial (i.e. 5S, Waste Elimination, suggestion system, JIT) tools especially on kaizen. The government of Ethiopia believes that, quality and productivity improvement is one of the means to attain and increase the two digits consecutive economic growth for the last five years from 13.3% in 2010 to 19.1% in 2015 (Daniel, 2010). To this effect, the Japanese kaizen management concept has been chosen with the sense to speed up the implementation process of the GTP. Ethiopia has recorded fast economic growth, but the ratio of its manufacturing sector is less than 6.0 % of its Gross Domestic Product (Hhno, and Uesu, 2009). A different management strategy would significantly improve this future as demonstrated by (Berihu, 2010), for the last five years.

After the transferability, adaptability and organizational thinking test in the Ethiopian context with the support of Japan international cooperation agency (JICA), the Ethiopian government has established Ethiopian kaizen institute (EKI) in October 2011 under the Ministry of Industry (MOI) with the objective of transferring, customizing, disseminating, accumulating local best practices and crafting Ethiopian kaizen management philosophy. Kaizen has been implemented in two phases; the first phase was from October 2009-June 2011 as a pilot to confirm transferability, adaptability and a way of thinking of companies and results in the formation of EKI in October 2011. Phase II was launched in November 2011, with the aim of establishing system to disseminate quality and productivity to private enterprises in sustainable manner.

The main objective of Ethiopian kaizen is, changing of attitudes as a driving force for competitiveness (Ethiopian Kaizen Institute, 2012). The concept of continuous improvement of quality and productivity is ideal in the absence of proper social condition of employees, organization wide group activity based on Kaizen mindset and self disciplined employees (Juran, 1994). In spite of these and other challenges, many organizations are becoming beneficiary by implementing Kaizen management technique. There are scientific studies and theories about kaizen thinking, which carried out on implementation and challenges in developed countries particularly in the manufacturing industry.

To the researchers' best understanding, there are few studies focused on employees' attitude towards the application of kaizen practice and kaizen thinking across Ethiopia in the concept of industry. This study seeks to analyze the case of a remarkable employee's attitude on kaizen practice performer manufacturing company found in Ethiopia: Wonji/Shoa Sugar Factory. Therefore, the purpose of this research is to evaluate and assess the impact of training, readiness, resistance, team work and perceived organizational support on employees' attitude towards the application of kaizen practice.

1.2. STATEMENT OF THE PROBLEM

People's attitudes towards objects in their environment are shaped by perceptual and cognitive processes. These attitudes then affect the person's behavior towards the object. Such attitudes often lean in a definite direction, such as in favor of or against the object (Vliet & Hellgren, 2002). Kaizen is "an attitude of the mind"; it is distinct from many other management tools, It is participatory; frontline workers are expected to contribute and benefit by using their brain power as well as their hands. Mindset-set is key factor for the application of kaizen principles. It is in part an answer to improve employees' motivation. However, challenges will lie ahead in more basic parts of the mind-set that is deeply rooted in the societal norms and culture since kaizen is a new management style. They may include team work spirit that promotes collaboration in creating rules, respecting and observing the rules and improving the rules. These issues related to

mindset and attitude may be pursued in the context of kaizen promotion framework in collaboration with relevant organizations and kaizen national movement (Juran, 1994).

According to GRIPS Development Forum 2011, kaizen is incremental, continuous improvement, innovation of the entire work force, 5S suggestion system and Quality control circle (QCC). Moreover, (Imai, 1986) suggested that, it is a continuous improvement in personal life, home life, social life, and working life. Kaizen promotes small improvements that have been made in the status quo as a result of ongoing effort. It is one of the strategies for excellence in production and considered necessary in today's competitive environment. Kaizen places the foremost importance in improvements at the front-line workplaces as the foundation of all the improvements efforts.

The Kaizen management strategy has been implemented in around the world as a way to improve productivity and quality after the Second World War around late 1980's, as a result of the competitive success of Japanese manufacturing industries. *www.basicoofmanagement.com accessed date 11/21/2013*. The economic growths of Ethiopia for the last couple of years are largely driven by public investment. On the other hand, low level industrialization process galvanized with the problem of productivity, quality, capacity and capability raise the question of how we do and manage things, in a changing environment for growth and sustainability.

GTP first two years performance report shows that, the performance of the industrial sector in general and manufacturing sector in particular were not as per the target set in the GTP. In addition, the contribution of the industry sector for the Gross Domestic Product (GDP) is only about 5% (MOFED, 2013). Despite the fact that, Imai discussed his thought in the context of manufacturing industries. The application of Kaizen management philosophy has immediate tangible outcome and long term competitiveness in the social and technical aspects of manufacturing and service organizations. The Ethiopian government considering Kaizen short and long term advantages particularly in the manufacturing sector established at Federal level, Kaizen Institute to carry out broad

based activities of ongoing quality and productivity improvement and expansion of competitive industries and supporting the implementation of GTP.

Kaizen has been implemented across different industries and manufacturing sectors successfully in Ethiopia, as a result significant achievements have been attained through the implementation of the Kaizen concept (Ethiopian Kaizen Institute, 2012).

On the other hand, there are also a number of serious challenges and problems facing the urgent implementation of the Kaizen program for instance, lack of highly skilled human resources, differentiated kaizen managerial tools, a technological and capacity (institutional, system, capability) gaps, organizational culture, employee motivation and commitment, inability of managers to change their attitude and trust the workers in gamba and so forth (Desta, undated). (MOFED, 2013) report also narrated that, despite the challenges, it is essential to encourage and support the large and medium scale, as well as small and micro enterprises of the manufacturing industries in order to improve and sustain the countries growth momentum.

But in Ethiopian, it is not widely disseminated to private enterprises including both large and medium enterprises and micro and small enterprises as long as kaizen contributes to Quality and productivity improvement. The contribution of the manufacturing sector to GDP is even smaller in Ethiopia. In 2006/07 it was just 5.1%, in comparison to 46.3% from the agricultural sector and 40.3% from the service sector (CSA, 2007). There are many factories in Adama town, but to the researcher's best understanding, there is no known model factory which is applying kaizen practices. As a result of this, the researcher chosen kaizen practice performer manufacturing company found in Ethiopia: Wonji/Shoa sugar factory due to its geographical nearness and its wide exercising of the application of kaizen best practices.

Though, a number of ongoing reviews have been conducted, comprehensive and systematic study was not conducted regarding Kaizen program implementation particularly, on employees attitude towards the application of kaizen practice has not been systematically documented in a way to benchmark best practices, knowledge

sharing, promote learning curve and obtain operational knowledge about Kaizen program implementation. Thus, the study about employees' attitude on kaizen practice is essential to see employees' perception about the application of kaizen practices and then put base line information which enables to tackle the challenges and disseminate the remarkable results from kaizen management system. Therefore; this research aims to asses employees' attitude toward the application of Kaizen practice.

1.3 .RESEARCH QUESTIONS

1. Does training influence employees' attitude towards the application of kaizen practice?
2. Does readiness influence employees' attitude towards the application of kaizen practice?
3. Does resistance influence employees' attitude toward the application of kaizen practice?
4. Does team work affect employees' attitude towards the application of kaizen practice?
5. Does perceived organizational support play a significant role in changing employees' attitude toward the application of kaizen practice?

1.4. OBJECTIVES OF THE STUDY

The main objectives of this study were to examine attitudes of the employees towards the application of kaizen practices in Wonji Showa Sugar Factory.

The specific objectives of this study are :

- To identify whether training given to employees had an effect on employees attitude toward the application of kaizen practice or not.
- To assess the impact of readiness on employees attitude in the application of kaizen practices
- To identify whether resistance had an impact on employee attitude toward the application of kaizen practice or not.
- To identify whether team work affect employees attitude toward the application of kaizen practice or not.

- To identify whether perceived organizational support has significant impact on employees' attitude toward the application of kaizen practice.

1.5. SIGNIFICANCE OF THE STUDY

The philosophy of Japanese management technique, Kaizen is new to Africa and Ethiopia. The study topic as well is new study area these days particularly in Ethiopia. As the researcher's best understanding, kaizen concept is not yet studied and documented properly. Given that, the current research will generate awareness and groundwork study regarding the concept of Kaizen, its implementation process and applicability.

The finding contributes to improve organizational capacity, empower and continuously improve the quality of workers, and add value to their products so that they would become productive and produce internationally competitive products that could meet the needs of a global market. The study finding will also assist policy makers, planners, program implementers in obtaining existing knowledge about the program and to take advantage of the process as well as to make further investigation. Moreover, the study result will bring certain outcomes that would be an input for the future researches in this area and it could also be an addition to the existing literature.

1.6. LIMITATIONS OF THE STUDY

This study had some limitations. First, the target respondents were three departments namely: Factory Operation, Agricultural Operation and Supply and Facility Management Departments in which kaizen practices were widely applying and these cadres of respondents took time to respond to questionnaires due to their busy work schedules and also getting key officials was the problem faced during data collection for the study. The second limitation of the study was that it was purely depended on the questionnaire responses for data collection. It was thus not possible to get in-depth information about employees' attitude towards the application of kaizen practice in this organization, but it would have been possible if other methods were used such as interviews and longitudinal research methods. To this effect, the results were only true to the extent of information provided by the respondents.

Finally, the researcher has encountered lack of review literature on the aspect of employees' attitude towards the application of kaizen practice. However, despite the limitations the researcher has tried to identify sound claims on the subject under study.

1.7. DELIMITATION

Although the application of Kaizen practice is a widely accepted principle in increasing the productivity in manufacturing industries, in Ethiopian context, there are finger count manufacturing industries which were applying these practices . To mention some: Wonji shoawa Sugar factory, Almeda Textile Factory PLC, Sheba leather industry, Mesfin Industrial Engineering PLC, and Finchawa sugar factory.

Due to this and the far distance of manufacturing industries from each other which are applying kaizen practices, the researcher's scope of study was only be confined to Wonji Shoa Sugar Factory. There are numerous factors that affect employees' attitude towards the application of kaizen practice, for example, motivation, KSA and commitment are some of the issues to be assessed. However, currently, the scope of this study was targeted to examine employees' attitude towards the application of kaizen practice considering variables like training, readiness, resistance, teamwork and perceived organizational support. Finally, as this study was delimited to small sample size, it was difficult to generalize the result of this study for the entire population in the country wise. Therefore; the future researchers had better take large sample size employing longitudinal research methods and qualitative study design in order to obtain a more generalizable results.

1.8. DEFINITIONS OF OPERATIONAL TERMS AND ABRIVATIONS

1.8.1. DEFINITIONS

Kaizen: (Kai: change Zen: good (to better) - continuous improvement.

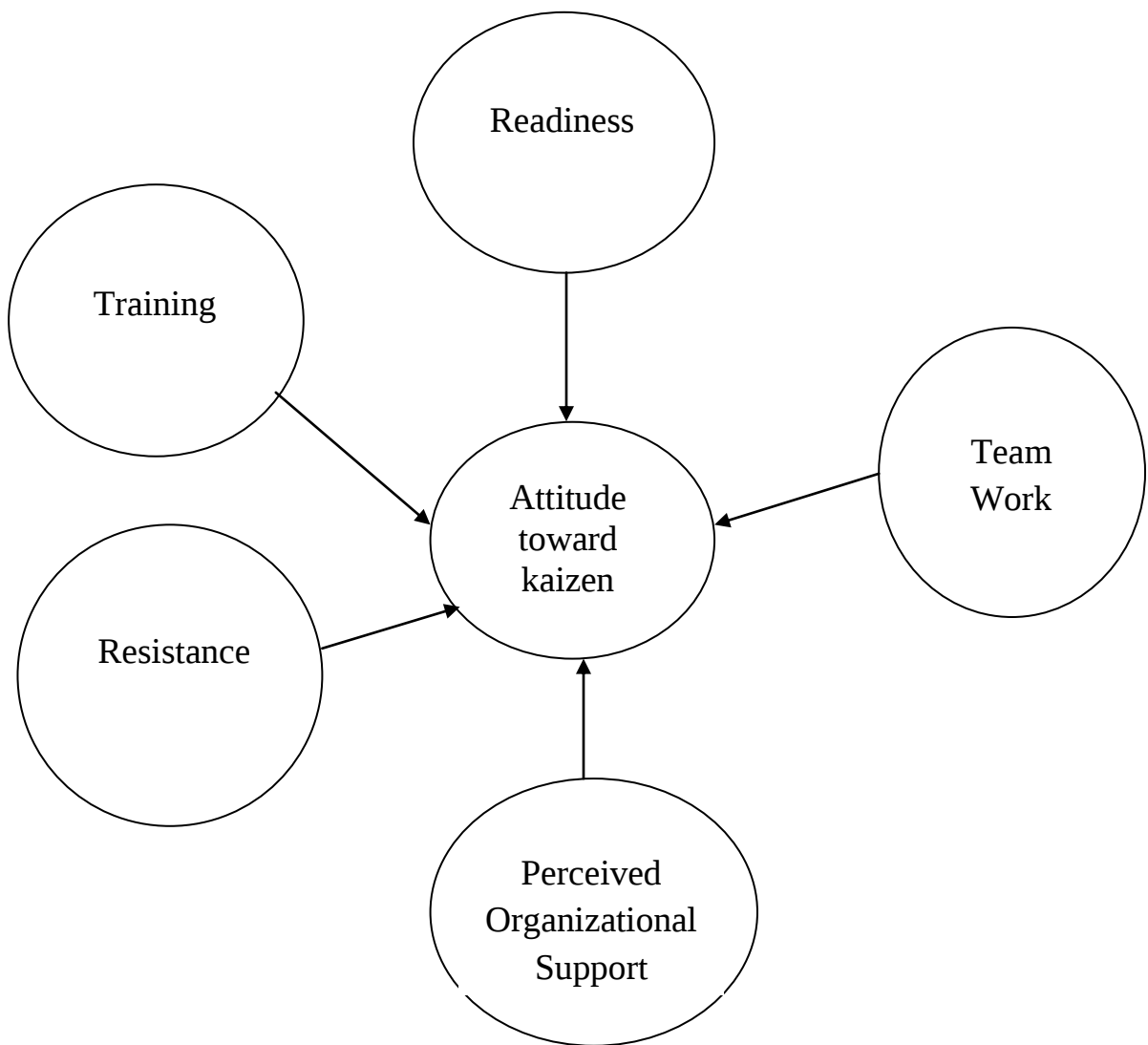
Attitude: mindset or a tendency to act in a particular way due to both an individual's experience and temperament.

Gemba: improvement of the workplace.

Lean: A production practices that targets and eliminates waste. Any expenditure of resources that does not create value for the customer is considered waste.

The purpose of the current study is to explore factors affecting employees' attitude toward the application of kaizen practice. The following conceptual frame work (figure. 1) illustrated training, readiness, resistance, team work and perceived organizational support which eventually may impact on employees attitude towards the application of kaizen practice.

Figure1. Conceptual Frame Work of the study



Source: Developed by researcher

CHAPTER TWO

2. REVIEW OF RELATED LITERATURE

People's attitudes towards objects in their environment are shaped by perceptual and cognitive processes. These attitudes then affect the person's behavior towards the object. Such attitudes often lean in a definite direction, such as in favor of or against the object (Vliet & Hellgren, 2002). An attitude is composed of three parts: an affective, a cognitive, and a behavioral component. The affective component includes feelings, values, and emotional states; the cognitive component is made up of beliefs concerning whether something is true or false; and, lastly, the behavioral component is comprised of intentions and the decision to act. From this perspective, attitudes fall between stimuli (e.g. object, people, and process) and the responses to these stimuli.

The theory of reasoned action and the theory of planned behavior were chosen for this study as they are better predictors of attitude and behavior than other models (Fishbein, 1993; Terry, Gallois & McCamish, 1993; Warwick et al., 1993). In addition to this, the researcher was used concepts like training, readiness, resistance, team work (e.g. communication, attitude and understanding), perceived organizational support (e.g. management support and supervisory support) which has direct relation with the application of kaizen practice.

2.1. Theory of Reasoned Action

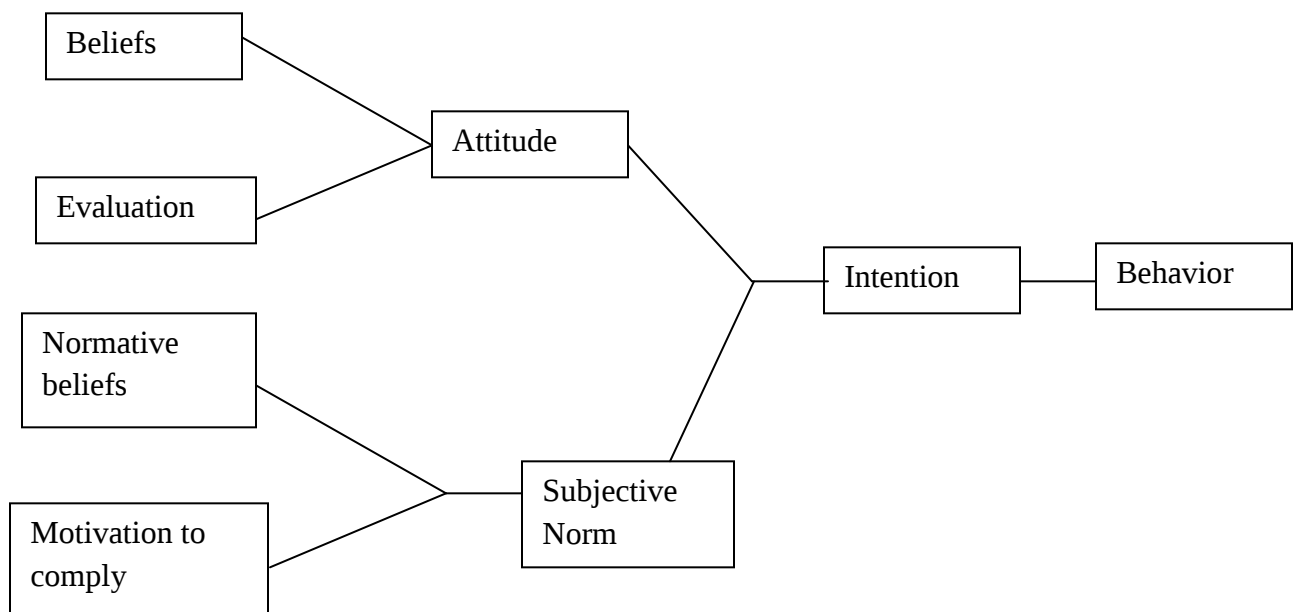
The theory of reasoned action (Ajzen & Fishbein, 1980) was first introduced in 1967 by Fishbein in an effort to understand the relationship between attitude and behavior. It attempts to explain the relationship between beliefs, attitudes, intentions and behavior. According to the theory of reasoned action, the most accurate determinant of behavior is behavioural intention. The direct determinants of people's behavioural intentions are their attitudes towards performing the behaviour and the subjective norms associated with the behaviour. Attitude is determined by a person's beliefs about the outcomes or attributes of performing a specific behaviour (that is, behavioural beliefs), weighted by evaluations of those outcomes or attributes. The subjective norm of a person is determined by whether important referents (that is, people who are important to the person) approve or

disapprove of the performance of a behaviour (that is, normative beliefs), weighted by the person's motivation to comply with those referents. People are likely to perform behavior when they evaluate it positively and believe that significant others think they should perform it (Ajzen & Fishbein, (1980).

2.2. Attitude Towards Behaviour

The attitudinal component refers to a person's attitude towards performing the behaviour under consideration (Ajzen & Fishbein, 1980). People's likelihood of performing a given behaviour will be strong if they hold a favourable attitude towards the performance of that behaviour. Fishbein (1993) made a distinction between attitude towards an object (for example, attitude towards kaizen) and attitude towards a behaviour (for example, attitude towards the application of kaizen practices).

Figure:2 Theory of Reasoned action



Source: Ajzen& Fishbein, (1993)

2.3. Kaizen concept

Imai (1997) explained the concept of Kaizen as it is not just a management technique but a philosophy which instructs how a human should conduct his or her own life. Kaizen focuses on the way people approach work. It shows how management and workers can change their mindset together to improve their productivity. The Kaizen philosophy according to the author, assumes that our way of life be it our working life, social life, or our home life should focus on constant improvement efforts.

Imai (1997) argue that, usually Japanese managers spent 50 percent of their time in improving and developing activities, and it is believed that people are the “engine” of continuous improvement and are base of whole improvement, consists of managers or engineers and common workers all together. Dysko, (2011) further explained the concept of Kaizen as a compound word involving two concepts: Kai (change) and Zen (Good, go to better), loosely translated as “change to the better “or continuous improvement”. Kaizen is a way of thinking and it extend also in to personal life as a “life philosophy” tomorrow must be better than today. Various Scholars and practitioners believed that, Kaizen concept shared some universal ideas from industrial management theories of Elton Mayo, Maslow, McGregor and Herzberg. However, (Brunet & New, 2003) listed three core feature of Kaizen.

1. Kaizen is continues, it signifies a never ending journey for quality and efficiency.
2. Usually incremental in nature, always improving instead of reorganizing or reinstalling.
3. Participative, requiring employee participation and intelligence.

According to Imai (1986), Kaizen is an umbrella concept covering most of those “uniquely Japanese “ practices “ like customer orientation ,TQC (total quality control) robotics, QC circles, suggestion system, automation, discipline in the workplace , TPM (total productive maintenance), Kamban, quality improvement, zero defects, small-group activities, cooperative labor management relations, productivity improvement and new-product development” these principles and tools significantly helped Japanese companies to develop process oriented way of thinking that assures continues improvement involving people at all levels. Imai reduced the principle and tools to one word under the umbrella: Kaizen

Figure 3: Kaizen Umbrella



Source : Imai (1986, P.4)

In Japanese management, Kaizen means continuous improvement of productivity and quality, based on a participatory process involving the entire workforce from the top management to middle managers and workers workforce with no requirement for huge investment. It is a low-cost approach to productivity and quality improvement. Kaizen is applicable not only to the manufacturing sector but also to the service sector, public organizations, and non-profit organizations (Schroeder & Robinson,1991).

Generally, a key characteristic of kaizen is that improvements come with minimum investment, since the emphasis is on minimizing waste. Kaizen is a low-cost approach to productivity improvement because it does not require huge capital investment, expensive technology, or costly research and development since it seeks to use existing equipment and human resources in a more efficient and less wasteful, and the key goal of kaizen is to generate the internal capability of the targeted firm (Imai,1997).

Thus, kaizen is particularly suited for enterprises in low-income countries which face financial access problems (Ohno et al., 2009).

Thus, there are a large number of related and often overlapping techniques or Concepts that belong to the kaizen methodology. These concepts include 5S, 7 west elimination, Gemba Kaizen, ,kaizen events, 5why's, Just-In Time (JIT) System, Suggestion System and The Concept of Cross Functional Teams.

2.3.1. The Concept of 5S's

5S is one of the kaizen practices and is described as a philosophy and checklist for good housekeeping to achieve greater order, efficiency and discipline in the workplace. Osada (1991) argues that, it is a system that aims at reducing waste and optimizing productivity and quality through maintaining an orderly workplace and using visual cues to achieve more consistent operational results. It further aims at embedding the values of organizational neatness, cleaning, standardization and discipline in the workplace in its existing configuration. Chapman,(2005) indicates that 5S is systematic and organic for lean production, a business system for managing and organizing manufacturing operations that requires less human effort, space, capital and time to make products with fewer defects. Imai,(1997) described the 5S's concepts as a way of life, habits or steps for housekeeping to achieve greater order, efficiency and discipline in the workplace. It is systematic approach to workplace organization and cleaning that will transform a disorganized workplace into an efficient running machine.

Imai ,(1997) further explained, any organization whether manufacturing or service industry should start Kaizen activities through implementing the basic three pillars which include the five steps of housekeeping (5S's), standardization and muda elimination.

According to Imai, the five steps of housekeeping with their Japanese names are:

2.3.1.1. Seiri (Sort/ Sort Out)

Distinguished between necessary and unnecessary items in gemba and discard the latter. It requires classifying items in gemba in two categories, necessary and unnecessary and discard or removing the latter from gemba or workplace.

2.3.1.2. Seition (set in order/Straighten)

Arrange all items remaining after *seiri* in an orderly manner. Once *seiri* has been carried out, all unnecessary items have been removed from the workplace, leaving only the minimum number needed. Seition here means, classifying items by use and arranging them according to minimize search time and effort. Each item must have a designated address, name, volume, location and number of items must be specified (Imai, 1997).

2.3.1.3. Seiso (Shine the Workplace / Clean and Check)

Seiso means cleaning the working environment, including machines, tools, floors, walls and other areas of the work place. There is also an axiom ‘Seiso is checking, monitor and restore the condition of working areas during cleaning.’ A person cleaning a machine can find many problems.

2.3.1.4. Seiketsu (Standardize/ Systematize /Conform)

Extend the concept of cleanliness to oneself and continuously practice the above three steps. Keeping one’s person clean , by such means as wearing proper clothes , safety glasses , gloves, shoes, and as well as maintaining a clean , healthy working environment. (Imai, 1997).

2.3.1.5. Shitsuke (/sustain /Custom and Practice/ Self Discipline)

Build self discipline and make a habit of engaging in 5S’s by establishing standards. Employee must follow established and agreed upon rules in their daily work. (Imai, 1997) further explained the importance of logical implementation of the 5S’s addresses people resistance to change and prepare employee mentality for change. He listed the following benefit of 5S’s in the work place.

- Help employees acquire self discipline
- Highlighting the many kind of muda in gemba
- Recognizing problems in the first step in eliminating muda
- Pinpointing abnormalities,
- Reduce waste full motion
- Allowing problems to visually identified and hence to solved
- Making quality problem visible.

2.3.2. The concept of Gemba Kaizen

In Japanese gemba means real place, where the products or services are formed. Gemba provides the product or services that satisfy the customer and management by setting strategy and deploying policy to achieve that goal in gemba. Gemba improvement uses bottom up and top down approach and it becomes the source for achieving commonsense, low cost improvements (Imai, 1997). Dysko (2011) also defines gemba as the real place in business where things are developed or where services are provided and abnormalities happen.

Imai (1997) also introduced the concept of the house of gemba where major activities are taking place on a daily basis for resource management namely maintenance (maintaining the standard and the status quo) and Kaizen (relates to improving standards). The house of gemba shows, a bird's-eye view of activities taking place in gemba. Imai also asserted that, daily management of resources requires standards, and the standards are the basis for daily gemba kaizen improvement. According to him, standardization in gemba means the translation of technological and engineering requirements specified by engineers in to workers day to day operational standards “translating process does not require technology or sophistication”.

Kaizen application can improve quality, reduce cost and meet customer's delivery requirements without any significant investment or introduction of new technology. The three major Kaizen activities such as muda (waste) elimination, 5S (good housekeeping) and standardization are crucial in building efficient organization. He also recommended these three Kaizen activities are the three pillars of Kaizen and they are the basic activities for Kaizen implementation in manufacturing or service industries. They are easy to understand and implement and do not require sophisticated knowledge or technology. “Anybody—any manager, supervisor, or any employee-can readily introduce these commonsense” (Imai, 1997). Dysko (2011) also argues, one of the competitive “weapons” for Japanese companies is the involvement of their human potential in the maintenance of implemented changes in gemba Kaizen.

2.3.3. The Concept of Waste (muda) Elimination

Muda in Japanese means waste. Any non value adding activities in the process of people and machines are classified as muda in Japan. Hence, according to (Imai, 1997), Muda is any non-value-added task. Muda elimination can be the most cost effective way of improving productivity and reducing operating costs. Imai classified seven muda (waste) in gemba and categories as:

1. Muda of overproduction
2. Muda of inventory
3. Muda of repair/rejects
4. Muda of motion
5. Muda of processing
6. Muda of waiting
7. Muda of transport.

2.3.3.1. Muda of Overproduction.

Muda of overproduction is a function of the mentality of the line supervisor to be on a safe side, due to uncertainties of machine filer, rejects and absentees. It results in raw material conception before they are needed, wasteful input of utilities and manpower, additions of machinery, increase in interest burdens, additional space to store, excess inventory, added transportation and administrative costs. perceived overproduction as a crime(Imai,1997).

2.3.3.2. Muda of Inventory

Products kept in the inventory do not add any value to the organization rather they occupy warehouse space, and demanding additional facilities such as warehouses and forklift. When market test or need changes product quality get worse and may even become obsolete over night. Items in the inventory gather dust (no value added), and their quality depreciate. When an inventory level is high, nobody gets series enough to deal with problems like quality, absenteeism and machine downtime and provides little room for Kaizen. Lower inventory level however, helps to identify areas of problems and forces to deal with problems as they arise (Imai, 1997).

2.3.3.3. Muda of Repair or Rejects (defects).

Rejects interrupt production and require expensive rework. In today's mass production environment a malfunctioning, high speed automated machine can spew out a large number of defective products before the problem is detected. *Imai*, further discussed, too much paperwork and many design changes will also results in a muda of reworks.

2.3.3.4. Muda of Motion

Motion of persons not directly related to adding value is unproductive. Hence, workers should avoid walking and carrying non-value added activities, for the reason that it is not only difficult but also it represents muda. The Ethiopian Kaizen manual also refers Muda of motion as any transport or transference of materials, parts, finished goods, from one place to another for any case.

2.3.3.5. Muda of Processing.

At every step in which a work piece or a piece of information is worked on, value is added and sent to the next process (Imai, 1997). Imai refers here is muda of processing is modifying such a work piece or piece of information. He also mentioned inadequate technology or design and failure to synchronize process leads to muda in processing.

2.3.3.6. Muda of Waiting.

Muda of waiting occurs when the hands of the operator are ideal due to line imbalances, lack of parts or machine down time, monitoring the machine when the machine is performing value added job. The Ethiopian Kaizen manual refers muda of waiting occurs due to both ideal human and machine factors.

2.3.3.7. Muda of Transportation

Though, transportation in the work place is an essential part of operations, moving materials or products adds no value (Imai, 1997) stressed elimination of this muda will improve workplace operation.

2.3.4. The Concept of Suggestion System

It is the method by which the ideas and suggestions of employees are communicated upwards through the management hierarchy to achieve cost savings or improve product quality, workplace efficiency, customer service, and working conditions. Examples range from simply placing suggestion boxes in common areas, to implementing formal programs with committees reviewing ideas and rewards given for successful adoption of those ideas. Nemoto (1992) argues that the self initiative of workers to participate in kaizen activities through voicing matters concerning their work processes plays an important role in kaizen activities. Ohno (1988) emphasized the importance of communication between different functions while using the 5 why's analysis for root cause analysis

Imai, (1986) listed the following purpose of suggestion systems in the Japanese context:

- Improves one's own work,
- Saving in energy, material and other resources
- Improvements in the working environment
- Improvements in machine and process
- Improvements in tool
- Improvements in office work
- Improvements in product quality
- Ideas for new products
- Customer service and customer relations and others.

2.3.5. The Concept of Kaizen Event

Kaizen event is another kaizen practice and it refers to a focused and structured continuous improvement project, using a dedicated cross functional team to address a targeted work area to achieve specific goals in an accelerated time frame (usually one week or shorter). kaizen events are low capital interventions whose focus is on improving existing processes rather than implementing solutions that require investment in new technology (Sheridan, 1997), they are team based, comprising of employees from targeted work area and support functions such as engineering, purchasing and production. kaizen events are action oriented with the teams given authority to implement solutions as they are developed, without additional direct approval from management (Minton, 1998; Sheridan, 1997), most kaizen event goals are measurable with common metrics

including productivity lead times, set-up times, floor space defect rate, percent on-time delivery Farris, (2006) and finally kaizen events are designed to create a cycle of continuous improvement.

The concept of Kaizen and Kaizen event is new idea for Africa and Ethiopia as well, hence finding related literatures on the stated concepts were very challenging. However, the researcher will try to define the concept using some practitioner's definition and form Ethiopia Kaizen Manual. Kirby & Greene (cited by Farris, 2006) defined and describes a Kaizen event as "a focused improvement event during which a cross-functional team of operators, engineers, etc. spends several days analyzing and implementing improvements to a specific work area."

(Martin and Osterling, 2007) also defined Kaizen event as "... an effective way to train organizations to break unproductive habits and adopt the kaizen philosophy while, at the same time, achieve breakthrough performance and unprecedented results...." (Khot, 2010) also explained the event as a focused approach to process improvement through muda (waste) elimination. He further discussed Kaizen event require three phases for implementation , phase one as planning and preparation, involves formation of a team , observation of the existing process, identifying the problem areas, brainstorming the possible improvements, and selecting the feasible solutions. Phase two as implementation phase, entails to implement the improvements or solutions, assess the improved process, and compare the existing and improved process to evaluate changes. The final phase is the reporting phase in this stage the event participants are reporting their results to responsible authority. The Ethiopian Kaizen Institute Manual defines Kaizen event as a "very concentrated team- oriented effort to rapidly improve the performance of a process". The manual uses three phases (phase one: Planning and preparation, phase two: Implementation of the event itself, phase three: presentation, celebration, and follow-up) of Kaizen event. The Ethiopian Kaizen Manual approach is similar to Khot's description above.

2.3.6. The Concept of 5-WHY'S Technique

It is a fact-based and structured approach to problem identification and correction that focuses not only on reduction of defects but also in eliminating them. It is captivated in the motto “when you find a problem ask why five times”, so as to find the deepest root cause of the problem (Alukal, 2007).

2.3.7. The Concept of JIT

It is a production system aimed at eliminating non-value adding activities of all kinds and achieving a lean production system flexible enough to accommodate fluctuations in customer orders. JIT includes practices aimed at reducing or eliminating waste along the value streams such as lot size reduction, cycle time reduction, quick changeover and production process reengineering (Shah and Ward, (2003).

2.3.8. The Concept of Cross Functional Teams

Cross-functional teams are formed to conduct Kaizen events. “A Kaizen event is a project in which a specific area or manufacturing process has been identified as the target for improvement, and a team has been assembled to undertake the project”. A cross-functional team assembled for a Kaizen continuous improvement event is responsible for attaining the results targeted by the team itself (Thessaloniki, 2006). Martin and Osterling, (2007) also described that, cross functional teams are created through Kaizen event, they defined Kaizen event as “... an effective way to train organizations to break unproductive habits and adopt the kaizen philosophy while, at the same time, achieve breakthrough performance and unprecedented results...” and the cross functional team provides an opportunity for the team members how to work and learn with one another to solve problems quickly and sustain their results.

2.4. Principles/Features of Kaizen

Kaizen as a methodology promotes process-oriented thinking because processes must be improved before improved results are obtained. Moreover kaizen is people-oriented, being directed at people's efforts and assumes that improvement in people's attitudes and efforts are more likely to produce improved results in the long run than mere result-oriented thinking (Imai, 1986). There for; kaizen uses 5 main principles.

2.4.1. 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.

2.4.2. Human resources are the most important company asset

Kaizen must be practiced in tandem with "Respect for People" not resulting in outcomes such as layoffs. Kaizen has become successful with many manufacturing companies because the employees are involved. They feel that their opinion is important and this boosts the employee morale. Keeping the employees happy will cause them to be more productive and satisfied with their jobs.

2.4.3. 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.

2.4.4. 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.

2.4.5. Continuous improvement

Improvement must be based on statistical or quantitative evaluation of process performance. The small improvements will lead to bigger improvements throughout the entire company. This is why kaizen is called a "continuous process improvement" system or a "continual improvement method." Even with the changes, there are still small things employees can do to change the way they work. There are simple things you can do to help your employees work faster and become more efficient. All employees should have firm belief that the work place must nurture a desire for continuous improvement Kaizen demands product or service quality is improved and is monitored on a continuous basis.

Effective measurement of kaizen performance is important for successful implementation of kaizen. Doolen, & Worley, (2009) describes the variables that are used to measure the impact of kaizen activities on human resource. These variables include attitude toward kaizen events, skills gained from event participation, understanding the need for kaizen, impact of these events on employee, impact of these events on the work area, and the overall impression of the relative success of these events.

2.5. Kaizen Needs in Ethiopia

In Sub-Saharan Africa, the manufacturing sector is generally underprivileged compared to the agriculture and service sectors. For instance, Ethiopian manufacturing industries are deprived of technological gap and lack of basic managerial techniques like Kaizen. To speed up the industrialization process, Ethiopia needs more engineers and requires capacity building in the field which is time consuming. On the other hand, managerial capacity may be improved more quickly, through managerial tools like Kaizen (Ohno et al., 2009). Ethiopian manufacturing sector contribution to the GDP (Gross Domestic Product) was very small, according to (Ishiwata, 2009) in 2006/7 the GDP contribution was 5.1percent, in comparison to 46.3 percent of the agricultural sector and 40.3percent from the service sector. (Assefa, 2010) also stated that, the contribution of the manufacturing sector has been less than 6 percent between 1998 and 2007, and the contribution of the industry sector in general accounts 13.12 percent of the GDP.

2.6. Kaizen in Ethiopia

Japan International Cooperation Agency (JICA's) first Kaizen project in sub-Saharan Africa began in Ethiopia at the request of the late Prime Minister Meles Zenawi. He is the one who took the initiative to bring Kaizen to Ethiopia (*JICA, 2013*). With the promise of the Japanese government to cooperate in the reinvigoration of Africa's economic growth. At the Fourth Tokyo International Conference for African Development (TICAD IV) also known as the Yokohama Action Plan, on May 2008. Considering the Country's GDP, Ethiopia "showed no hesitation and jumped to take advantage of the Japanese offer help to Ethiopia across its industries". The offer could accelerate and improve the quality and productivity of Ethiopian manufacturing enterprises Desta, A (2013). On November 4, 2009 seminar was given for about 300 attendants in collaboration with Japan government and with the Ethiopian Ministry of Trade. Consequently, both Governments agreed to conduct a development study on quality and productivity improvement (Kaizen) in Ethiopia.

The Japan International Cooperation Agency (JICA) and Ministry of Trade and Industry (MoTI) in Ethiopia were responsible for setting up Kaizen Institute and conduct, the implementation of Kaizen pilot Project, and then the selection and training of pilot project companies (*JICA, 2009; Ethiopian Kaizen Institute, 2013*).

The Kaizen project in Ethiopia has been implemented in two phases: The first phase was responsible for Kaizen pilot study around Addis Ababa and establishment of Kaizen unit. The first phase was from October 2009 –June 2011. After reviewing the qualities and productivities of 63 companies, 30 companies were selected based on the following criteria: 1) proximity to Addis Ababa, within 100 km distance, 2) contributions to exports and /or imports, 3) scale of capital, and 4) number of employees. Furthermore; employees of the 30 pilot companies were sent to Japan to have practical training and learning from the experience of the Japanese. By the end of the first phase of the project, from the thirty pilot companies, only three companies were finally chosen by Ethiopian Kaizen Institute for having high possibility, good possibility, and some possibility to become kaizen model companies (*Desta, 2009; Ethiopian Kaizen Institute brochure, undated*;

JICA,2013) .As part of these effort 10 staff member from the Kaizen unit and 30 members from the 30 enterprises engaged in the pilot project were sent to Japan for two week training to learn how to implement 3S (Seiri(sort), Seiton(set in order) and Seiso(shine)) and Quality Control(QC) activities through lecture, observation and interaction with factory workers(JICA, 2013).

Purpose of the project (Ethiopian Kaizen Institute brochure, undated).

- Implementation of Kaizen to selected 30 manufacturing enterprises.
- Preparation of teaching materials associated with quality and productivity improvement(Kaizen)
- Transferring technologies pertinent to kaizen skills and method alongside the establishment of Kaizen unit under the umbrella of Ministry of Industry.
- Formulation of the National plan to disseminate Kaizen in Ethiopia.

The second phase was from November 2011 –October 201 and responsible to spread Kaizen to more enterprises all over Ethiopia, including small companies and micro enterprises, and to build capacity at EKI (JICA, 2013).

The Ethiopian Kaizen Institute (EKI) was established in 2011 by the council of Ministries Regulation No.256/2011 has been responsible for strategic planning, dissemination, capacity building...etc and Kaizen implementation all over the country. Purpose of the second phase as narrated by (Ethiopian Kaizen Institute brochure, undated, p. 8):

- Establishing a system to disseminate Kaizen to private enterprises in a sustainable manner.
- Establishing a system to disseminate Kaizen to large and medium enterprises (LMEs).
- Establishing a system (Model) to disseminate Kaizen for micro and small enterprises (MSEs).

2.7. Training

Based on Sonobe's (2009) suggestion that for kaizen to work well for workers, they needed to have good skills and basic experiential training. Effective regular training is necessary for effective implementation of kaizen in any organization. In a kaizen practice implementation, various authors have stressed the contribution of training towards

performance improvement (Ahmed et al., 2005). In order to enable employee participation, training and education should be provided sufficiently through proper and well-structured programs. The elements of training are very important in any organization and thus training plays an important role in minimizing the negative effect of system complexity on manufacturing system performance (Guimaraes et al., 1999). Training, “the acquisition of skills, concepts, or attitudes that result in improved performance in an on-the-job environment,” (Goldstein, 1980) comprises a massive enterprise and a powerful instrument for change. American companies alone spend an estimated \$200 billion annually on employee training (Wiley, 1993), generally believing that it (1) improves employee attitude, job satisfaction, productivity, and work quality, (2) improves overall perception of an organization by the customer, and (3) increases profit levels by reducing labor turnover and associated costs.

2.8. Attitude Theory

If training content involves attitudes, beliefs, or opinions, and/or the evaluation of training is based upon attitudinal criteria, then theories of attitude and attitude change are relevant. Based in social psychology, “a relatively enduring organization of beliefs around an object or situation predisposing one to respond in some preferential manner” Rokeach, (1972) defines an attitude. Attitudes are widely accepted as determinants of overt actions; therefore, changes in attitudes effect subsequent behavior (Bandura, 1969). Empirical investigations of the correlation between attitudes and behavior change, however, have produced mixed results (Festinger, 1964). Several of the more prominent attitude/attitude change theories include: Reinforcement Theory, Congruity Theory, and Belief Congruence Theory (Insko, 1967). Hovland, Janis, and Kelly’s Reinforcement Theory says “attitude change results from learning produced through reinforcement” Insko, (1967). Congruity Theory, as posed by Osgood and Tannenbaum, suggests that attitudes tend toward maximum simplicity. For example, extreme polarized responses are easier than more discriminating judgments; therefore, respondents select all bad or all good responses because they are easier to make.

According to congruity theory, “when two attitude objects of differing evaluation are linked with an assertion, there is a tendency for the evaluations of each object to shift toward a point of equilibrium or congruity” Insko, (1967). Based upon his Belief Congruence Theory of attitude change, Rokeach, (1972) proposed that behavior is a function of two interacting attitudes: attitude-toward-object and attitude toward-situation. Behavioral outcomes therefore result from a comparison of the relative importance of the two attitudes. The two attitudes affect behavior in direct proportion to their perceived importance to each other.

Another approach to behavior change/modification combines Skinnerian and Pavlovian principles of conditioning. This theory “seeks to change individual responses by changing the individual’s environment, primarily by altering reinforcement contingencies or stimulus pairings” Campbell, (1971). The two contingencies of modeling and positive reinforcement apply to training situations in organizations. For example, instead of sending managers to a human relations seminar on subordinate interaction, Bandura, (1969) suggested that they should be provided with correct behavior models and desired behavior should be reinforced with valued rewards. In response to the on-going controversy regarding the relationship between attitudes and behavior, Kraus (1995) conducted a meta-analysis of empirical literature to show that attitudes significantly and substantially predict future behavior.

2.9. Motivation Theory

Several motivational theories have been associated with the area of training, but the expectancy-theory model dominates theories of work motivation. Originally formulated by Tolman and Lewis in the 1930s, the expectancy model has successfully been applied to understanding behavior within an organizational context. The theory states that “the motivational force to engage in a behavior is a multiplicative function of (1) the expectancies the person holds about the outcomes that are likely to result from that behavior and (2) the valence of these outcomes” (Porter, Lawler, and Hackman, 1975, p. 56). That is, employees are likely to utilize training when they return to the job to the degree that they believe the behavior will lead to outcomes (e.g. raises, recognition, and/or improved work).

2.10. Training Transfer

Transfer of training is more than just applying knowledge, skills, and attitudes learned in training when back on-the-job; it requires generalization of learned behavior and maintenance over a period of time (Wexley & Latham, 1981). Baldwin and Ford conducted a review of transfer literature in 1981, producing a widely-accepted model of the transfer process that included training inputs, training outputs, and conditions of transfer. The major training inputs are trainee characteristics, training design, and work environment. The training outputs are defined in terms of original learning that occurs during the training program and retention of material beyond the training program. Conditions of transfer include generalization of the material learned in a training session to the work environment, and maintenance of the learned material over a period of time on the job (Baldwin & Ford, 1988). The study of transfer is a prolific topic for researchers seeking to more fully understand the training process.

2.11. Readiness for change

Employees' perception toward change efforts that take place within the company is an important aspect of change readiness. Employees as the target of change are central to the success of the change efforts because their attitudes, skills, motivations and basic knowledge form a significant component of the organizational environment in which change is to be attempted (Smith, 2005). Change is concerned with shifting from one stage to another or breaks down existing structures and create new one (Chonko 2004). Thus, it is imperative to know the employees perception regarding the changes before initiating process. Many researchers like Eby *et al.*, (2000) focused on employee's attitudes and behaviors to effective change programs. Desplaces (2005) advocated that extent of certain individual and workplace characteristics may lead to develop positive attitudes and behaviors for change readiness. These factors are associated with personal, social, environmental, cultural, and organizational services.

It is believed that, awareness among employees regarding different strategies that are involved in Kaizen philosophy, various principles behind these strategies and the use of these strategies in different circumstances plays an important role. It is known that the

application of kaizen principle is a new Japanese management style which is a change in management style when applying it to our situation. Due to this reason getting employees mind ready is key factor. Unless they perceive it positively, it is difficult to expect of them continuous improvement, the application of 5s, elimination of waste and the like. Change is concerned to solve the problems and challenges of the organization. It might be small or large but affects employee attitudes and behaviors because of shifting from one stage to another. Individual's attitudes and behaviors towards organizational change are influenced by employee readiness factors (Miller 2006). According to the literature employee readiness factors have a significant impact in preparing them mentally and physically for immediate action (Madsen, 2003)

Readiness for change is the cognitive precursor to behavior of either resistance or support for a change effort (Elving et al., 2009). If there is readiness to change in an organization the change effort will have a higher chance to succeed. Cochran et al. (2002) stated that employee readiness for change is significant when associated with receptivity to change. The perception of readiness for change may predict the employee's level of receptivity to change (kaizen) Readiness for change is reflected in the employee's beliefs, attitudes and intentions regarding the extent to which changes are needed and the organization's ability to successfully complete the intended change. If employees are not ready for organizational change, conflicts between organizational leaders and members may be encountered. For the desired outcome to occur, conflicts have to be resolved so that the employee's beliefs and cognitions align with those of the organization's management (Holt, Armenakis, Field & Harris, 2007). Positive attitudes changes were found to be vital in achieving organizational goals and in succeeding change programmes (Eby et al., 2000).

2.12. Resistance to change

The most important factor behind failure of change initiatives is employees' resistance to change, which is closely linked with the development of negative attitudes to towards change. Employees attitudes toward change can impact their morale, productivity and turnover intentions (Eby et al., 2000). Resistance is a problem in the implementation of

Kaizen, as in most change processes. People do not like change, due to the fact that they are removed from their comfort zone. Unfortunately, change is an inevitable part of organizational structure. Management should recognize that many employees are resistant to change, because of social relationships (Lawrence, 1969). Thus, a quality change manager can communicate with groups of individuals to relieve social pressure for change. Thus, success rate of change is higher when employees are informed (Cawsey, Deszca & Ingols, 2012).

Various studies have identified participation in decision making, motivation, communication, information exchange and knowledge and trust as some of the factors that influence resistance to change in organizations. One of the earlier works that noted the significance of participation of employees in the change process is the landmark study of Coch and French (1948) on 'Overcoming resistance to change'. Participation in organizational context is defined as the active involvement of employees and management in the decision-making process of an organization (Chirico & Salvato, 2008). Additionally, in the communication stage, management should get employees involved in the change (Lawrence, 1969).

Motivation generally, is defined as a driving force that initiates and directs behaviour. Dawson (2003) suggested that "Motivation depended on the manager, the type of work involved, the resources available, the degree of independence, the compensation, the growth opportunity, and the company culture". He further suggested that ,when workers are motivated, it might lead to less resistance towards the implementation of organizational change. According to Lewin (1958) there is an empirical evidence that communication process and organizational change implementation are highly linked processes. If organizational change is aimed at changing the tasks of individual employees, then, communication about the change and information to the employees is vital Wiggins (2009). Communication is a critical tool in enabling change because it helps to overcome ambiguity and uncertainty and provides information and power to those who are the subject of the change.

Communication is also regarded as highly important in the successful implementation of the change processes, because it is used as a tool for announcing, explaining and preparing the change Kitchen and Daly (2002). The “information exchanged and knowledge” concept actually addresses the quality of information available to the employee during the change process. Issues such as “fear of the unknown” and “the inability to see the need for change” are common in resistance to change research. Hickins (1998). From this it can be inferred that, for organization to be effective, it needs to own an atmosphere of reliable and valid communication, which provides for integration and employee commitment to the organizational goals.

According to Rousseau, Sitkin, Burt, & Camerer (1998) trust is “a psychological state comprising the intention to accept vulnerability based on positive expectations of the intentions or behaviour of another”. Trust in management involved individuals’ perceived confidence levels in the ability of management to do what is best for the organization and its members. According to Dirks and Ferrin (2001), trust between management and employees, is a dominant factor that could influence sense of belongingness in the organization. Preparing in advance and knowing the issues of resistance and the cause can help lower employee resistance (Heathfield, 2014). Today’s most interesting research findings focuses on reducing resistance to change by creating a culture of change via continuous improvement as described by Cawsey, Deszca, & Ingols ,(2012).

2.13. Team Work and Communication.

2.13.1. Team work

Modern organizations often employ teamwork to achieve goals. Individuals working together receive monikers such as group, team, circle, or pod. Although variance occurs among organizations in the specific definitions of the terms, generally a group is enclosed in a larger system. A group is composed of interdependent individuals whose decisions affect others. The group members perceive themselves as a social entity, and they are perceived as a social entity by others outside the group (Guzzo & Dickson, 1996). In order for a group to perform effectively, group members must participate in group activities. Wickens (1990) describes the contribution of teamwork to make the concept of

Kaizen. The key role and authority of each supervisor as a leader of his team has been described by taking an example of Nissan Motor Plant in the UK. Emphasis is placed on teamwork, flexibility and quality. Teamwork and commitment do not come from involving the representatives of employees, but from direct contact and communication between the individual and his boss.

Teamwork means workers working as a group to achieve a common goal. Teamwork, if carried out effectively, results in motivated workers, improved job satisfaction, reduced overall work time, and can improve the quality of work (Griffin 2001). Other advantages of teamwork involve effective communication, effective problem solving, trusting and supportive environment within the group, creativity enhancement, and mutual problem resolution (Chow; et.al, 2005), all of which can improve organizational communication.

According to Ami (1986) kaizen is a continuous improvement and innovation through team work, smooth communication among top management, middle and front line workers, respecting of every employees suggestion about the work, giving recognitions for their contribution such as rewards verbally or non-verbally. Therefore; the employees feel sense of ownership and strive towards the application of kaizen practices intrinsically. Park's (2008) study on job satisfaction of workers working in a team setting resulted in the conclusion that teamwork enhances job satisfaction.

2.13.2. Communication

Effective internal communication builds productivity and satisfaction. Employee attitudes are most positive when based on open communication and understanding of management goals and other employees. Communication refers to the exchange of information between workers during the period of work (Wickens 1990). In an organization, communication is carried out in several ways including verbal communication and information flow through documents, symbols, and signs. Authority, control, and motivation are expressed through communication which has a significant role in the functioning of an organization (Roberts et.al, 1974). Workers communication needs to be effective to coordinate efforts, leading to improvement in quality of the work.

Communication quality which has the characteristics of being timely, accurate, useful, and complete enhances productivity and the quality of work (Byrne; et.al, 2006). Burton (1977) concluded that effective communication provides the better role clarity for organization's success. Thus, factors like job satisfaction, teamwork, job stress, commitment, and communication plays a critical role in organization's effectiveness and success. Kaizen has proven to be effective as an organizational improvement mechanism which supports employee development and improves the work environment (Farris, 2009). Thus, Kaizen events can be a good strategy to improve organizational communication if employees' perception is positive towards its application.

2.14. Perceived organizational Support

Although the various studies try to identify the key factors of organizational success (Magd, et al. 2007), but employee attitudes and the inclusion of their opinions are most important in today's global and competitive work environment. How the individual experiences the work situation is what affects his/her attitudes and behavior: not the actual work situation. This is the reason why it is so very important to study the psychological climate— to better understand the employees' experiences and reactions (James & Jones, 1974). So, managers should find the factors which affect on employees' attitude toward kaizen practice. One of the most important one is perceived organizational support. Many studies conform to adaptation perceived organizational support among individuals as a successful factor.

Exchange relationship between employee and organization is the basis of “organizational support theory” (Eisenberger 1986). Organizational support theory (OST: Eisenberger, 1986) holds that in order to meet socio-emotional needs and to assess the benefits of increased work effort, employees form a general perception concerning the extent to which the organization values their contributions and cares about their well-being (Krishhan & Mary, 2012).

The amount of organizational support employees perceive has been proved to influence employees' job attitudes. In addition, perceived organizational support reflects to a large extent the quality of the relationship between the organization and the employee (Konijnenburg, 2010). The study of employee attitude and behavior is, therefore, has gained much importance to determine employee's possible behaviors at work place. Employees' perception about organizational attitude regarding their support is based on organizational employee caring activities e.g. rewarding employees' contribution, employee well-being programs and opportunities for employees to have participation in key organizational decisions. Such perceived organizational support would ultimate shape employee attitude in organizations (Ali et.al, 2010).

If individual perception about organizational support is not positives, the organization is not supportive, it would cause of developing negative attitude and behavior at workplace, e.g. work stress, low job performance, lower satisfaction (Rhoades & Eisenberger, 2002). Erdogan and Enders (2007) says "Perceived organizational support refers to the degree to which an individual believes that the organization cares about him/her, values his/her input and provides his/her with help and support". Perceived organizational support is directly linked with three categories of favorable treatment received by employees, such as, organizational rewards and favorable job conditions, fairness and supervisor support. in return favorable outcomes are achieved such as job satisfaction and organizational commitment. All these relations support organizational support theory (Rhoades and Eisenberger, 2002).

2.14.1. Effects of perceived organizational support on employees' attitudes

How employees interpret the organizational environment has an effect on their attitude, motivation, performance, and well-being (Brown & Leigh, 1996). Eisenberger, (1986) suggested that a worker's perception of how an organization values him/her may be vital for determining his/her attitudes benefiting the organization. Eisenberger, (1986) suggested that perceived organizational support would be influenced by various aspects of treatment by the organization and its managers, including praise and approval, pay, rank, job enrichment and organizational policies (Nasurdin,et al., 2008). If employee's

perceives organizational supportive attitude, it would enhance his positive feelings and behavior towards organization e.g. job satisfaction, job performance, organizational commitment (Aselage & Eisenberger, 2003). It seems employees' attitudes toward organizations lead to such outcomes.

2.14.2. Management Support

The successful implementation of kaizen requires management support emphasizing the need for leadership and top management support in kaizen activities. Imai (1986) asserts that kaizen is a continuous improvement process involving everyone, managers and workers alike. Broadly defined, kaizen is a strategy to include concepts, systems and tools within the bigger picture of leadership involving people culture, all driven by the customer. Aoki (2008) found out that the actions of managers on the shop floor are always watched by workers and that these actions are able to give workers the legitimacy to engage in kaizen activities. He asserts that managers must show a lot of self-discipline if they want the workers to show the same self-discipline.

Chen and Wu (2004) explain that continuous improvement can be generated and sustained through the promotion of good improvement model and management support. In fact, it is not easy in reality. The improvement case may fail without carefully examining the problem in the activity. 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 of kaizen (Imai, 1986; Kaplinsky, 1995). 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. Managers' misconceptions about continuous improvement are common sources of difficulty in kaizen implementation, since they often expect instant results, whereas in reality it takes time before the benefits of kaizen become visible (Karsten and Pennink, 2007).

In such circumstances, even if managers know the concept and tools, translating these ideas into practices and internalizing kaizen as a company-wide movement remains a very complex task.

2.14.3. Supervisory Support

In organizations, supervisor and peer relationships have been applied to understand Employees 'attitudes and behaviors. Thus the level of behavior of the top managers, supervisor, middle managers and peers found important for improvement, innovation and job satisfaction (Deal & Celloti, 1980). With the help of supervisor and peer relations, it is assumed that employees who are working together have affect on each others behavior. Organizational success in obtaining its goals and objectives depends on managers and their leadership style. Leadership style can be viewed as a series of managerial attitudes, behaviors, characteristics and skills based on individual and organizational values, leadership interests and reliability of employees in different situations ((Montgomery & Seefeldt, 1986). It is the ability of a leader to influence subordinates to perform at their highest capability. This factor captures the extent to which management respects workers, operates with honesty and integrity, promotes efficiency, and has open lines of communication with employees (Aronson et al., 2003). In this light, we can conclude that leadership style has a consistent influence to change employees' attitude towards the organizations' productivity and profitability especially when changes are required.

CHAPTER THREE

3. RESEARCH METHODOLOGY

3.1. Research Design

The purpose of this study was to assess factors influencing employees' attitude towards the application of kaizen practices. In this regard, the research design employed for this study was the descriptive survey (quantitative research design). This approach was chosen because the study sought to explain people's perception and behaviour on the basis of data gathered at a point in time. Furthermore, it has the advantage of producing good responses from a wide range of people. Also it involves accurate and objective collection of data to describe an existing phenomenon. Furthermore; it helped to quantify, the training given to employees, employees readiness for kaizen practice, resistance of employees in the kaizen practice, employees team work and the support given by the organization to them so as to shape employees behaviors towards the application of kaizen practice. Moving on to the description and analysis of data, it is important to have a bird's eye view on the background information concerning the study site: Wonji Shoa Sugar Factory.

3.2. Background of the Study Site

In 1951 the Ethiopia Government granted a concession of 5,000 hectares in Wonji in the upper reaches of Awash Ethiopia which is 100 km South East of Addis Ababa, to a Dutch company called HVA (Handlers –Vereeniging Amsterdam). As a demand for sugar increases in Ethiopia, the Wonji Estate expanded to include an additional 1,600 hectares of land from Shoa, about seven km away from Wonji. In 1962 the Wonji /Shoa sugar company then started sugar production. The project started as a joint venture between the Dutch (HVA) firm and the Ethiopian government, the HVA owned 90 percent of the sugar plantation and sugar factory while Ethiopia owned 10 percent. In addition, in its operation of the sugar factory, HVA remitted 10 percent of the invested capital and 15 percent of the annual profit.

With the change of Government in 1974, under proclamation No.31 of 1975, all sugar factories in Ethiopia became nationalized and administered under the centralized bureaucratic military government. With the end of civil war in 1991, the current government dissolved the sugar corporation by law and all existing factories were reestablished as public enterprises to be run by the Ethiopian Sugar Development Agency starting in 1992. The Agency was formed as a share company of the Development Bank of Ethiopia, Ethiopian Insurance Company and the existing sugar companies (Wonji /Shoa and Methara) in 1998. Furthermore, in 2010 under the council of Ministries regulation No.192/2010, the current Ethiopian sugar corporation was formed and replacing the former Sugar Development Agency. Currently, the corporation carrying out expansion and modernization projects at Wonji /Shoa sugar factory aiming to replace the old two factories with the new and modern plant.

The factory currently has 2317 permanent employees out of which 2023(87.65percent) are male and 294 (12.4 percent) are female. In addition to permanent employees the organization has also peace rate and seasonal (monthly) workers. The factory has one general manager and five Deputy General Managers (DGM's) i.e. (agricultural operation, factory operation, human recourses, finance and supplies and facility management). The kaizen team within the change management and human resource development department found under the deputy general manager human resources annexed. The Kaizen unit is responsible to disseminate and follow-up Kaizen activities in the factory, jointly with the human resources. Besides, the Kaizen/change management section organize teams or in Amharic (KELIBU) members and follow performance of team members activities. From the above mentioned departments, the researchers focus was on three departments. Namely: Agricultural Operation, Factory Operation and Supply and Facility Management Department in which the application of kaizen practices were highly applicable.

3.3. Target Population

Wonji Sugar Factory has six departments. Among these departments, the researcher's target populations are Factory Operation, Supply and Facility Management and Agricultural Operation workers in which the application of Kaizen practice is widely

applicable. The total numbers of population of the employees in these departments are: 245(Male 123(82%) and Female 17(18%). The distribution of the population in Factory Operation (Total=101, Male=83 and Female=18) Supply and Facility Management (Total=86, Male=70 and Female 16) Agricultural Operation (Total=58, Male=48 and Female 10). Relatively large number of employees are found in Factory Operation (Total=101, Male=83 and Female=18). Compared to Supply and Facility Management, Agricultural Operation and Factory Operation Of the 245 employees in which Kaizen practice was applied, the representative samples included in this study were n= 150 employees. This sample size was determined on the basis of the table developed by Krejcie and Morgan's (Koul & Bahtt, 2001). Accordingly, sample for the current study constituted 150 employees (60% of employees in the three departments).

3.4. SAMPLING AND SAMPLING PROCEDURES

3.4.1. Sampling

Proportionate stratified simple random sampling was utilized to reduce sampling error and gender bias to obtain representative sample. In this regard, random number table was used to conduct systematic random sampling. To do this, complete list of the population of the factory employees was obtained in advance.

3.4.2. Sampling procedure

First the complete list of employees in the factory was obtained. Then total sample size of the study was determined. Next, the number of individuals (sample) to be drawn from the population was determined according to the proportion of population each department has in the whole population. Then the number of individuals taken from each group was determined based on the proportion of each gender group in the whole population. Finally, the number of respondents which was included in the sample was drawn from each department using proportionate stratified simple random sampling techniques with the help of random number tables.

3.5. INSTRUMENT DEVELOPMENT FOR DATA COLLECTION

Since questionnaires allow individuals ample time, privacy in which to complete their responses and to gather information from a large group, the instrument which was used to gather data in this study was questionnaire developed by the researcher. The questionnaires were intended to examine whether enough training was given, to assess employees mental readiness for the application of kaizen practice, to identify smooth communication among team members, the role of perceived organizational support which embraces the role of management and supervisory support in making perceive the application of kaizen practices, and over all, to identify employees attitude toward the application of kaizen practices.

Table1: Distribution of Population and Sample size of representatives from Agricultural operation, Factory Operation and Supply and Facility Management Departments.

No	Departments	Total number		Total number by population	Sample size by gender		Sample size (n)
		M	F		M	F	
1	Agricultural operation	48	10	58	29	6	35
2	Factory Operation	83	18	101	51	11	62
3	Supply and Facility Management	70	16	86	43	10	53
Total		201	44	245	123	27	150

The above table shows total population and sample size by department.

The Sample size is decided based on the sample table developed by Krejcie & Morgan's, (Koul & Bahtt, 2001).

3.6. DATA GATHERING PROCEDURES

Data for this research was collected in February of 2015. The questionnaires were administered to the selected samples participants by taking appointments from the Factory's Manager during the time convenient for the employees. Questionnaires were administered by the researcher and two factory employees and the filled questionnaire

papers were collected immediately. To avoid discrepancy, verbal orientation was given to the selected respondents. The questionnaires were distributed for 150(one hundred fifty) selected participants and the response rate was 150(100%).

3.7. PILOT STUDY

Selected instrument (questionnaire) and their reliability and validity have been established. Accordingly, to check the reliability of the questionnaire, Agricultural Operation department was selected for the pilot test by using lottery system, out of the 3 departments in which kaizen practice was highly practiced. The pilot study was conducted according to time scheduled provided. According to the result of pilot study, Cronbach's alpha coefficient of the combined variables: training, readiness, resistance, team work, attitude and perceived organizational support was found to be 0.743 which is generally accepted to be satisfactory. Sample questionnaire was administered to at three professionals in advance to assess the level of clarity and simplicity to avoid confusion which may be created during the main research data gathering process. The questionnaires were translated from English Language to Amharic Language for the ease of understanding by the respondents. The following Table3 displayed results of Cronbach alpha for training, readiness, resistance, team work, attitude and perceived organizational support as well as their Combined Cronbach alpha results.

Table2. Separate and Combined Cronbach alpha results

No	Variables	Separate Cronbach alpha results	Combined cronbach alpha results
1	Training	.641	.743
2	Readiness	.745	
3	Resistance	.810	
4	Team work	.670	
5	Perceived organizational support	.719	
6	Attitude	.781	

3.8. METHODS OF DATA ANALYSIS

The comparison of employees' attitudes toward the application of kaizen practice were analyzed through quantitative analysis. The employees' attitudes toward the application of kaizen practices questionnaire data were analyzed using SPSS (Statistical Package for Social Science) software Version 20. The descriptive statistics (mean and standard deviation) of the sample and the workers' responses of each variable defined in the attitudes of employees toward the application of kaizen practices questionnaire were calculated using Pearson correlation and Regression to see whether two measurement variables co vary, and to quantify the strength of the relationship between the variables, T-Test (Independent-Samples T- Test) to test differences between two means and The one-way analysis of variance (ANOVA) to determine whether there are any significant differences between the means of three or more independent (unrelated) groups.

3.9. ETHICAL CONSIDERATION

Keeping the respondents response secretly only for the purpose of the intended study is an essential parts of any research.

In this regard getting the selected employees attitudes toward the application of kaizen practices was the burning issues in this study, because employees may fear to disclose their feelings due to many reasons. To assure this, the researcher told the employees how confidentiality is valued in this study. Therefore; employees' surveys was kept confidentially. Not only this, but also the participant told that as they had the right to refuse participating in the survey from the beginning and at any time or the middle of the process. To make sure this, the consensus form was signed by the participants in advance before they were involved in the process.

CHAPTER FOUR

RESULT ANALYSIS AND DISCUSSION

4.1. Over View of the Chapter

This chapter covers frequency and percentage distribution of respondents demographic Characteristics of the factory, t-test comparison of demographic variables, Simple Linear Regression among the main variables: training, readiness, resistance, team work, perceived Organizational Support of employees attitudes toward the application of kaizen practices and their respective frequency and Percentage distribution and Pearson correlation among the variables: Attitude, Training, Readiness, Resistance, Team Work, and Perceived Organizational Support of employees attitude towards the application of kaizen practice.

4.2. Demographic Characteristics

A total of 150 representative respondents were included in this study, the characteristics of each background variables (for example, Sex ,age ,marital Status ,department, level of Education ,Salary , Factory Working experience) were assessed in relation to employees attitude towards the application of kaizen practice. In this regard female representative constituted 18% and male 82%. Male representative were greater than the number of female in 64%; this difference inherited from sex proportion differences which have already existed among aggregates of employees in each three departments (i.e. Factory operation, Supply and Facility Management departments and Agricultural Operation) in the factory.

Table3. Percentage Distribution of Respondents Demographic Characteristics

Respondent demographic characteristics		Total	%
		Frequency	
Sex	Male	123	82
	Female	27	18
	Total	150	100
Age	18-25 years	20	13.3
	20-35 years	62	41.3
	36-45 years	64	42.7
	Above 45 years	4	2.7
	Total	150	100
Marital Status	Single	39	26
	Married	111	74
	Total	150	100
Departments	Factory operation	62	41.3
	Supply and Facility Management	53	35.3
	Agri. Operation	35	23.3
	Total	150	100
Factory Working Experience	<2 years	19	12.7
	2-5 years	12	8
	6-10 years	20	13.3
	11-15 years	39	26
	>15 years	60	40
	Total	150	100
Salary	<2,000	32	21.3
	2,100-4,000	82	54.7
	4,100-6,000	22	14.7
	6,100-8,000	11	7.3
	>8,000	3	2
	Total	150	100
Level of Education	High school	25	16.7
	Preparatory	31	20.7
	Diploma	65	43.3
	First degree	26	17.3
	Others	3	2
	Total	150	100

In this study, 20 respondents were aged between 18-25(13.3%), 62 respondents were between 20-35 years(41.3%), 64 respondents were between age of 36-45(42.7%) and only 4 respondents were above 45 years which accounts for 2.7%. Regarding marital status, 39 respondents were single and 111 were married; these accounts in percent 26%

and 74% respectively. As the researcher took representative respondents from three departments namely: Factory operation 62 respondents (41.3%), Supply and Facility Management 53 respondents (35.3%) and Agricultural Operation 35 respondents (23.3%). Employees who had working experiences of above 2 years were 19 (12.7%), 6-10 year's experience 12 respondents (8%), 11-15 year's experience 39 respondents (26%) and above 15 years experience 60 respondents (40%). Majority of the employee's salary (54.7 %) lies between 2,100-4,000 and only 2 % of the employees earned greater than birr 8,000 monthly. Based on level of education, 25 respondents were high school (16.7%), 31 respondents preparatory (20.7%), 65 were diploma (43.3%), 26 were first degree holder (17.3%) and others 3 respondents which accounts for 2%. The above Table 3 illustrated these.

4.3. Result Analysis of Employees Demographic Variables

To identify whether the demographic variables (i.e. sex, age and Level of Education) had significant differences on the employees attitude in the application of kaizen practice, ANOVA and Multiple pair wise t-taste was computed. The following table 4, 5, 6,7 and 8 displayed these results.

Table4. Sex Differences on Employees' Attitude in the Application of Kaizen Practices

Sex	N	Mean	SD	t	P-value
Male	123	7.60	1.796	-.072	.943
Female	27	7.63	2.003		

Level of Significance (≤ 0.05)

The data above showed that there was no statistical significant difference in attitude between male and female respondents towards the application of kaizen practices as their p- value were .943 which was greater than 0.05. This is to mean that there was no difference between male and female in their attitude in the application of kaizen practices.

Table 5. Age Differences on Employees' Attitude in the Application of Kaizen Practice

No	Age	N	SD	ANOVA(F-Value)	P-value
	18-25	20	1.663	2.607	.043
	26-35	62	2.006		
	36-45	64	1.619		
	>45	4	2.217		
	Total	150	2.739		

Level of Significance (≤ 0.05)

The above Table-5 displayed employees' attitude based on their age categories and its impacts on the application of kaizen practice. According to this finding, age of the employees showed variance in the employees' attitude in the application of kaizen practice. The F-value 2.607 and the p- value .043 indicated that there is a statistically significant difference in age wise among employees in kaizen practice.

Table 6. Multiple Pair Wise T-test Comparison of Mean Test for Employees' Attitude towards the Application of Kaizen Practices Based on Age.

No	Age	N	Mean	t	P –value(sig.)
1	18-25	20	8.15	1.122	.229
	26-35	62	7.55		
2	18-25	20	8.15	1.295	.199
	36-45	64	7.61		
3	18-25	20	8.15	2.505	.020
	>46	4	5.75		
4	26-35	62	7.55	1.729	.089
	>46	4	5.75		
5	26-35	62	7.55	-.188	.851
	36-45	64	7.61		
6	36-45	64	7.61	2.185	.035
	>46	4	5.76		

Level of Significance (≤ 0.05)

Table 6 showed that there was statistically significant difference between employees age of 18-25 and greater than 46 and between employees age of 36-45 and 46 in attitude towards the application of kaizen practices as their p- values were .020 and .035 respectively. On the contrary, there were no statistical difference between employee of age: 18-25 and 26-35; 18-25 and 36-45; 26-35 and greater than 45; 26-35 and 36-45 in attitudes toward the application of kaizen practices as their p-values were .229, .199, .089 and .851 respectively.

Table 7. Effects of Level of Education on Employees' Attitudes in the Application of Kaizen Practices

No	Variables	N	SD	ANOVA(F-Value)	P-value
1	Preparatory	31	1.649	2.707	.033
	Diploma	65	1.702		
	First degree	26	2.168		
	High school	25	1.780		
	Others	3	1.155		
	Total	150	2.908		

Level of Significance (≤ 0.05)

Table-7 displayed employees' attitudes based on their educational level in the application of kaizen practice. According to this finding, education level that the employees hold can show variance in understanding of kaizen practice. Accordingly, the F-value is 2.707 which in turn limited the p-value which was statistically significant different. The following Table 9 displayed the employees' educational background which included high school, diploma and degree and the descriptive statistics indicated which employees had better understanding of kaizen practices.

Table 8. Multiple Pair Wise T-test Comparison of Mean Test for Employees' Attitude in the Application of Kaizen Practices Based on Educational level.

Education	N	Mean	SD	t	P –value(sig.)
High school	25	8.20	1.780	2.780	.003
Degree	26	6.69	2.168		
Diploma	65	7.17	1.702	2.372	.016
Degree	26	6.69	2.168		

Level of Significance (≤ 0.05)

Table 8 showed that there was statically significant difference in attitude between employees of high school and degree graduates towards the application of kaizen practices as their p- value was .003; similarly, employees with diploma and degree holders had significant differences in attitudes toward the application of kaizen practices as their p- value was 0.016 according to this study. Moreover, employees with lower level of education, according to this pairing, had better understanding of kaizen practices than others. This seems that the application of Kaizen practices relies on spontaneous participation of frontline employees.

Table 9: Pearson Correlation among the Variables, Attitude, Training, Readiness, Resistance, Team Work, and Perceived Organizational Support

variables	r values	Training	Readiness	Resistance	Team work	Attitude	Perceived Org. Support
Training	r-value	1					
Readiness	r-value	** .297	1				
Resistance	r-value	** -.434	-.066	1			
Team Work	r-value	** .518	** .210	* -.167	1		
Attitude	r-value	** .320	.087	.004	** .486	1	
Perceived Organizational Support	r-value	.151	.138	.148	** .410	** .405	1

**** Correlation is significant at the 0.01 level (2-tailed)**

***correlation is significant at the 0.05 level (2-tailed)**

The above Table 9 showed that training, team work and perceived organizational support were positively correlated and statistically had significant impacts on employees' attitude towards the application of kaizen practice. On the contrary, according to this study, readiness and resistance had no significant impact on employees' attitude toward the application of kaizen practice. The strongest domain was training and team work followed by perceived organizational support.

Table10. Frequency and Percentage Distribution of Respondents' Responses Based on Training

No	Items	Strongly agree & agree		Unsure		Disagree Strongly Agree	
		Freq.	%	Freq.	%	Freq.	%
9	I am given a real training opportunity to improve my skills on 5s kaizen practices	77	51.3	28	18.7	45	30
10	I am given a real training opportunity to improve my skills on 5s kaizen practices	100	66.7	20	13.3	24	20
11	Training was provided before the start of kaizen practice for my current job	106	70.7	18	12	26	17.4
12	Training given on seven waste elimination improved my understanding of waste.	113	74.1	19	12.7	18	12
13	This work area measurably improved as a result of training given on 5s	77	51.3	35	23.3	18	20.4
Total	Training given on kaizen continuous practice eases my work.	473	65.33	120	16.58	131	18.09

The composite variable for training included 5 survey questions addressing whether training affected employees' attitudes toward the application of kaizen practices or not. Table 10 illustrated each questions frequency distribution with their respective percentages. The measuring scales for training were SA=5, A=4, Unsure=3, DA= 2 and SD= 1. Almost two third (65.33%) of the respondents elicited positive responses which showed they were favorable to the training given on the application of kaizen practices. Whereas,18.09% of the respondents were unfavorable to the training given on the application of kaizen practices. Almost half (51.3%) of the respondents admitted that they were given real training opportunity to improve their skills on 5s kaizen practice and

training taken on continuous kaizen practices ease their work. More than two third of the respondents (66.7%) were provided training necessary to start kaizen practices on their current job. Majority of the respondents(>70%) had taken training necessary for improving seven west elimination and they improved their work area major ably as a result of training taken on 5s.

Table11. Simple Linear Regression of Training

Training	Mean	Standard Deviation	R	R ²	P	t	F
	18.00	4.055	.320	.103	.000	4.113	16.797

Before running Simple Linear Regression of the variables: Training, Readiness, resistance, Team work and Perceived Organizational Support, assumption to check their normality of distribution were done. A scatter diagram of the data provides an initial check of the assumptions for regression.

4.4. Simple Linear Regression of Training Influence Employees' Attitudes toward the Application of Kaizen Practices

A simple linear regression was run to asses training affect employees attitudes toward the application of kaizen practices. The data showed the two variables (training and attitude) reflected a correlation of 0.320 thereby indicating moderate relationship according to this study. The mean was 18.00 with a standard deviation of 4.055, the r^2 Value was 0.103 then by accounting for 10.3% of the variance in attitude of the employees toward the application of kaizen practices. Training was statistically significant as its p-value was .000. According to this study, training was the stronger predictors of the two variables. (Training and attitude) Table10 illustrated the data analysis from the linear regression including mean, standard deviation, r value, r square value and significance level. Therefore; these results were consistent with findings by Kaplisky (1995) on the importance of training and skills development in implementation of continuous improvement methodologies such as kaizen and Mathenge (2012), who examined the

factors influencing implementation of Kaizen practices in Kenyan flower industry. His study indicated that the following factors influenced employees' attitudes toward the application of Kaizen practices; training was a leading in influence, followed by team work, followed by management support and last was educational level of workers. The researcher concluded that training was very important in the implementation of kaizen practices.

Table12. Frequency and Percentage Distribution of Respondents' Response Based on Readiness

No	Item	Strongly agree & agree		Unsure		Disagree& Strongly Agree	
		F	%	F	%	F	%
14	The rationale for changing former working style in to kaizen practice is clearly communicated to employees in a timely and effective manner	87	58	24	16	39	26
15	I feel positive toward work change made in to kaizen practice	82	54.7	16	10.7	52	34.6
16	I accepted the change made to kaizen practice to happen without any objection.	89	59.3	14	9.3	47	41.3
Total		258	57.33	54	12	138	30.67

The composite variables for readiness included 3-survey questions addressing whether readiness affecting employees' attitudes toward the application of kaizen practices or not. The above Table 12 illustrated the frequency distribution and the respective percentages of each question. The measuring scales for readiness composite items were: Strongly Agree=5, Agree=4, Unsure=3, Disagree= 2 and Strongly Disagree= 1 .With regard to the first question, respondents were asked to give their opinion regarding the rational for

changing the former working style to get the employees' ready for the application of kaizen practice. The sum of strongly agree and agree out of the total respondents were 87(58 %) and strongly disagree and disagree 39(26 %) respectively. On the other hand 24(16%) of respondents responded neither agree nor disagree. Therefore, from the above statement it can be concluded that, the majority (58%) of employees have positive interest in the rational for changing former working style in to kaizen practices. The other issue raised here is, work change made into kaizen related issues. The sum of strongly agree and agree out of the total respondents 82(54.7%) and strongly disagree and disagree were 52(34.7%. While 16 (10.7%) respondents were unsure about the issues. From this it can be concluded that, the majority (54%) of the respondents feel positive about work change in to kaizen related issues. On the other hand, the sum of strongly agree and agree and strongly disagree and disagree were 89(59.3%), 47(41.3%) respectively on the acceptance of work change in to kaizen without any objection. On the contrary, 14(9.3%) respondents were neither agree nor disagree with the acceptance of work change in to kaizen. From the statement above, it can be concluded that, the majority (59%) of workers were optimist toward work change made in to kaizen practices to happen without any objection.

Table13. Simple Linear Regression of Readiness

Readiness	Mean	Standard Deviation	R	R ²	P	t	F
	10.08	2.770	0.087	0.008	0.289	1.046	1.149

4.5. Simple Linear Regression of Readiness Influence Employees' Attitude toward the Application of Kaizen Practice.

A simple linear regression was calculated to assess whether readiness affect employees attitude towards the application of kaizen practice. The data showed the mean score of these composite variables were 10.08 with a standard deviation of 2.770. The r-value was 0.087 there by indicating very weak relationship between the two variables. According to this study readiness was the weakest predictor of employee attitude towards the

application of kaizen practice among the variables domains. The r^2 value was the weakest value 0.008 which accounts for 0.8% of the variance in employees' attitude as a result of readiness the significant level. The significance level of 0.289 was not statistically significant. Table 13 above illustrated the statistical analysis of linear regression of readiness. Current research study conducted by Holt *et al.*, (2007), examined employees' beliefs of self efficacy, appropriateness, management support, and personal valence. All these variables have been positive impacts for employees' readiness. Change management literature shows that employee beliefs, perceptions and attitudes are critical in successful organizational change (Weber and Weber, 2001). Change is further complicated as it does not always produce a direct adjustment. Each employee's attitude produces a different response that is conditioned by feelings towards the change.

Table14. Frequency and Percentage Distribution of Respondents' Response Based Resistance

No	Item	Strongly Agree & Agree		Unsure		Disagree & Strongly Disagree	
		F	%	F	%	F	%
17	I think it is a mistake to hold this kaizen practice here.	55	19.3	10	6.7	85	56.7
18	I feel a sense of resistance to kaizen practice.	61	40.7	8	5.3	81	54
19	I think that things would be better without this application of Kaizen practice.	68	45.4	18	12	64	42.7
Total		184	40.89	36	8	230	51.11

The composite variable for resistance included 3 survey questions to assess whether resistance affected employees attitude towards the application of kaizen practice or not. These survey questions were recorded. Table 14 illustrated the frequency and the respective percentage distribution for each questions. The measuring scales were: Strongly Agree=5, Agree=4, Unsure=3, Disagree= 2 and Strongly Disagree= 1. More than

half of the respondents (>54%) admitted that they thought it was a mistake to hold kaizen practice to their work and they felt a sense of resistance. Nearly equal respondents (45.4 & 42.7%) thought that things were better without application of kaizen practice.

Table15. Simple Linear Regression of Resistance

Resistance	Mean	Standard Deviation	R	R ²	P	t	F
	8.63	4.25	0.004	0.000	0.963	0.046	.008

4.6. Simple Linear Regression of Resistance Influence Employees' Attitude toward the Application of Kaizen Practice.

A simple linear regression was run to assess resistance affect employees' attitude toward the application of kaizen practice.3 questions were included in this survey. The r-value was 0.004 thereby indicating positive relationship or very weak between attitude and resistance. The r^2 was 0.000, which accounts for 0% of the variance in employees' attitude as a result of resistance. The significance level of 0.963 was statistically not significant. Table15 illustrated the statistical analysis of the linear regression of resistance displaying r, r^2 , p, t, mean and standard deviation. According to this study, resistance was the weakest predictors of the two variables.

Even though change is implemented for positive reasons (to adapt to changing environmental conditions and remain competitive), employees often respond negatively toward change and resist change efforts. This negative reaction is largely because change brings with it increased pressure, stress and uncertainty for employees (Armenakis & Bedeian, 1999). According to (Martin, Jones & Callan, 2006), the reasons for the failure range from a lack of understanding surrounding an organization's capacity for change to other human factors, such as employee resistance toward organizational change In addition, (Bovey& Hede , 2001) cited numerous studies including one of 500 Australian organizations indicating resistance to change as the most common problem faced by management in implementing change. But the findings of this study were inconsistence with these study findings.

Table16. Frequency and Percentage Distribution of Respondents' Response Based on Team Work

No	Item	Strongly agree & Agree		Unsure		Disagree & Strongly Agree	
		F	%	F	%	F	%
20	kaizen practice team fosters open communication and recognizes individual contributions	80	53.3	31	20.7	39	26
21	I feel that my suggestions are welcomed and valued by our leadership during kaizen practice	110	73.4	22	14.7	18	12
22	In the application of kaizen practice, there are both top-down and bottom-up communication.	69	46	36	24	45	30
23	Most of our team members can communicate new ideas about improvements as a result of participation the kaizen practice	79	52.7	33	22	38	25.4
24	During the application kaizen of practice, employees opinion/ suggestion are respected	109	72.7	32	21.3	9	6
25	Over all this kaizen event increased our team members knowledge of the need for continuous improvement	98	65.4	20	13.3	32	21.3
26	In general the kaizen event increased our team members knowledge of what continuous improvement is and its application	89	59.3	21	14	40	26.7
Total		634	60.38	195	18.57	221	21.05

The composite variable for team work included 7 survey questions to assess whether team work affected employees' attitude towards the application of kaizen practice or not. Table 16 illustrated the frequency and the respective percentages of negative and positive responses for each question on team work. The measuring scales were: Strongly Agree=5, Agree=4, Unsure=3, Disagree= 2 and Strongly Disagree= 1. The majority of the respondents' (>72%) opinions and suggestions were respected and valued by their leaders in order to strengthen their team spirit during the application of kaizen practice. More than(52.7%) of the respondents were admitted that kaizen practice team fosters open communication and recognizes individual contributions as well as the team members communication were improved as a result of participation in the application of kaizen practice. Almost two third (65.4%) of the respondents were convinced that the kaizen event increased their team knowledge for the need of continuous improvement and more than half (59.3%) of the respondents understood what continuous improvement is and its application. Majority of the respondents believed that there were top down and bottom up communication in team members towards the application of kaizen.

Table17. Simple Linear Regression of Team Work

Team work	Mean	Standard Deviation	R	R ²	P	t	F
	24.95	4.833	0.486	0.236	0.000	6.759	45.678

4.7. Simple Linear Regression of Team Work Influence Employees' Attitude toward the Application of Kaizen Practice..

A simple linear regression was calculated to assess team work which was independent variable to affect employees' attitude towards the application of kaizen practice. The data showed the mean score was 24.95 with the standard deviation of 4.833. The r-value was 0.486 which indicated moderate relationship between the two variables. The r²-value was 0.236 which accounts for 23.6% of the variance in employees' attitude as a result of team work. The significant level of 0.000 was statistically significant. According to this study team work was strongest predictor of attitude towards kaizen practice.

These results are consistent with findings by (Karsten & Pennik, (2007) on the difficulties of kaizen team work i.e. ineffective communication systems, insufficient participation by workers in their kaizen team in its implementation. The study by Mathenge (2012), who examined the factors influencing implementation of Kaizen in Kenyan flower industry indicated that; team work was one factor which influence employee attitude towards the application of Kaizen practice. The researcher concluded that team work was very important in the application of Kaizen practice.

Table18. Frequency and Percentage Distribution of Respondents’ Response Based Perceived Organizational Support.

No	Item	Strongly Agree & Agree		Unsure		Disagree & Strongly Agree	
		F	%	F	%	F	%
29	I feel my supervisor/team leader is supportive of my work	81	54	29	19.3	40	26.7
30	My immediate supervisor/team leader has commitment toward the application of kaizen practice	75	50	37	24.7	38	25.4
31	I receive credit from my immediate supervisor for a job well done	75	50	42	28	33	22
32	I feel my job performance in the kaizen practice is fairly evaluated.	73	48.6	36	24	41	27.4
33	In the application of kaizen practice, supervisor treats me fairly.	64	42.6	32	21.3	54	36
34	Managers and other leaders are easily accessible for employees to answer any difficulties made during kaizen practice.	48	32	48	32	54	36
35	Top Management support us with enough materials and supplies which aid us for kaizen practice	33	22	60	40	57	38
36	The organization values my contribution that I made on the application of kaizen practice.	53	35.4	47	31.3	50	33.3
Total		502	41.83	331	27.58	367	30.58

The composite variable for perceived organizational support included 8 survey questions to assess Perceived Organizational Support affect employees' attitude towards the application of kaizen practice. Table 18 above illustrated the frequency and the respective percentage distribution for each question. The measuring scales were: The measuring scale was: Strongly Agree=5, Agree=4, Unsure=3, Disagree= 2 and strongly. Half of the respondents' felt that their supervisor or team leader support their work, received credit from them for a job well done and they also had committed supervisors or team leaders towards the application of kaizen practice. Majority of the respondents (48.6%) believed that their performance in the kaizen practice were fairly evaluated and 42.6% of the them treated fairly by their supervisors. Equal (32%) of the respondents were favorable and unsure about managers and other leaders are easily accessible for the employees to answer any difficulties made during kaizen practice. A few (22%) of the participants were believed that they had got management support with enough materials and supplies for kaizen practice. Almost equal respondents (35.4%) agreed that the organization valued their contribution they made on the application of kaizen practice, conversely, 33.3% disagrees and 31.3% were unsure about this item.

Table19. Simple Linear Regression of Perceived Organizational Support

Perceived organizational support	Mean	Standard Deviation	R	R ²	P	t	F
	8.61	2.624	.405	0.072	0.001	3.551	29.049

4.8. Simple Linear Regression of Perceived Organizational Support Influence Employees' Attitude towards the Application of Kaizen Practice.

A simple linear regression was calculated to assess Perceived Organizational Support which was independent variable to affect employees' attitude towards the application of kaizen practice. The data showed the mean score was 8.61 with the standard deviation of 2.624. The r-value was 0.405 which indicated moderate relationship between the two variables. The r²-value was 0.072 which accounts for 72% of the variance in employees' attitude as a result of perceived organizational support. The significant level of 0.001 was

also statistically significant. According to this study, perceived organizational support was stronger predictor of attitude towards the application of kaizen practice. Lack of management support, is identified as a primary factor impeding the implementation of Kaizen practice.

As stated by Balle and Balle (2005), management personnel must be visibly supportive. Kaizen practice high extent of implementation may be attributed to its ability to impact both business performance as asserted by Cuscela, (1998) as well as human resource outcomes Sheridan, (1997). These results are also consistent with findings by Aoki (2008) on organizational capabilities that facilitate kaizen implementation. The finding by Mathenge (2012), on factors influencing implementation of Kaizen in Kenyan flower industry was also consistent that management support influenced employees' attitude towards the application of Kaizen practice.

Table20. Effects of Training on Employees' Attitude Towards the Application of Kaizen Practice Based on Department.

No	Variable	N	SD	ANOVA(F-value)	P-value
	Supply and facility management	53	4.220	19.615	.000
	Agricultural operation	35	2.370		
	Factory operation	62	3.450		

The above table 20 illustrated that training showed difference among departments in the application of kaizen practice. The F-value is 19.615 and the P-value was .000 which indicated that there is a difference between departments in the application of kaizen practice during training. The following Table 21 on multiple pair wise comparison of mean test also witnessed this.

Table21. Multiple Pair Wise Comparison of Mean Test for Employees' Attitude on Training Differences Based on Department in the Application of Kaizen Practice.

Departments	N	Mean	SD	t	P -value(sig.)
Factory operation	53	19.23	3.262	-1.825	.071
Agricultural operation	35	20.69	4.220		
Supply and facility management	53	10.11	4.220	-5.594	.000
Agricultural operation	35	10.17	2.370		
Factory operation	62	16.26	3.450	-4.716	.000
Supply and facility management	53	19.23	3.262		

Level of Significance (≤ 0.05)

The above Table 21 showed that, there was no statistical difference between Factory Operation and Agricultural Operation departments in attitude towards training given in the application of kaizen practice as their p- value was .071. Conversely, there were statistical difference between Supply and Facility Management and Agricultural operation as well as between Factory Operation and Supply and Facility Management in attitude toward training given in the application of kaizen practice as their p-value were .000 and .000 respectively according to this study.

Table22. Effects of Resistance on Employees' Attitude Toward the Application of Kaizen Practice Based on Departments.

No	Variable	N	SD	ANOVA (F-value)	P-value
	Factory Operation	62	2.871	90.159	.000
	Agri. Operation	35	2.390		
	Supply and Facility Management	53	3.122		

The above Table 22 showed employees in three departments indicated attitudinal difference in resistance towards the application of kaizen practice.

**Table23. Multiple Pair Wise Comparison of Mean Test for Employees' Attitude
On Resistance Based on Department in the Application of Kaizen Practice.**

Departments	N	Mean	SD	t	P-value(sig.)
Factory Operation	62	12.39	2.871	11.803	.000
Agricultural operation	35	5.63	2.390		
Supply and Facility Mgt	53	6.28	3.122	1.052	.296
Agricultural operation	35	5.53	2.390		
Factory Operation	62	12.39	2.871	10.917	.000
Supply and Facility Mgt.	53	6.28	3.122		

Level of Significance (≤ 0.05)

Table 23 showed that there was no statistical difference between Factory Operation and Agricultural Operation departments in attitude towards resistance in the application of kaizen practice as their p- value was .000. Likewise there was also statistical significance in resistance between Factory Operation and Supply and Facility Management as their p- value was .000. Conversely, there were no statistical difference in attitude towards resistance between Supply and Facility and Agricultural operation in resistance towards the application of kaizen as their p-value was .296 according to this study.

**Table24. Effects of Team Work on Employees' Attitude Towards the Application of
Kaizen Practice Based on Department.**

No	Variable	N	SD	ANOVA(F-value)	P-value
	Factory Operation	62	4.196	3.711	.027
	Agri. Operation	35	4.654		
	Supply and Facility Management	53	5.377		

The above Table 24 displayed that employees in three departments reflected attitudinal difference in Team work toward the application of kaizen practice.

Table25. Multiple Pair Wise Comparison of Mean Test for Employees' Attitude on Team Work Based on Department in the Application of Kaizen Practice.

Departments	N	Mean	SD	t	P -value(sig.)
Factory Operation	62	24.26	4.196	-2.816	.006
Agri. Operation	35	26.86	4.654		
Supply and Facility Management	53	24.51	5.377	-2.112	.038
Agri. Operation	35	26.86	4.654		
Factory Operation	62	24.26	4.196	-.281	.779
Supply and Facility Management	53	24.51	5.377		

Level of Significance (≤ 0.05)

Table 25 showed that there was statistical difference between Factory Operation and Agricultural Operation and Supply and Facility Management and Agricultural Operation departments in attitude towards team work in the application of kaizen practice as their p-value were .006 and .038 respectively. However, there was no statistical difference in attitude between Factory Operation and Supply and Facility Management in attitude towards resistance in the application of kaizen practice as their p-value was .779 according to this study.

Table26 .Employees Attitude Toward the Negatively Stated Statements of Resistance

Items	Level of Agreement					
	unfavorable		unsure		Favorable	
	Frequency	%	Freq.%	%	Freq.	%
18.I think it is a mistake to hold this kaizen practice here.	55	36.6	10	6.7	85	56.7
19.I feel a sense of resistance to kaizen practice.	61	40.7	8	5.3	78	52
20.I think that things would be better without this application of Kaizen practice.	68	43.4	18	12.0	64	42.7
Total	184	41.16	36	8.05	227	50.78

Table 26 revealed that almost more than half (50.78%) of the respondents were disagree with the negatively stated items showing that more than half of the respondents had negative attitude towards the application of kaizen practice while 41.16% of the respondent were unfavorable to the negatively stated item showing that they had positive attitude towards the application of kaizen practice. Whereas 8.05% respondents were unsure of the items.

Table 27 Mean Difference of Readiness of Workers Based on Sex

Sex	N	Mean	SD	t	P-value
Male	123	10.30	2.551	2.108	0.037
Female	27	9.07	3.485		

As it can be shown from the above Table 27, the Mean achievement score for male and female respondents were 10.30, and 9.07 respectively, while their SD were 2.551 and 3.485. The Mean difference between the two groups was 1.227. The P-value (0.037) was also less than 0.05. From the obtained results we can concluded that there is statistically significant difference in readiness to accept the Kaizen practice between the two departments. Male workers had better acceptance of the Kaizen practice than the female workers.

CHAPTER FIVE:

SUMMARY, CONCLUSION, RECOMMENDATIONS AND SUGGESTION FOR FURTHER STUDY

In this chapter summary of the study findings, conclusions of the study, recommendations of the study and as well as suggestions for further research were covered.

5.1. Summary

The objectives of this study was to determine the relationship between attitude training, readiness, resistance, team work and perceived organizational support towards the application of kaizen practice in Wonji Shoa Sugar Factory in the application of kaizen practice. The data for this study were collected by survey questions developed by the researcher. Using data collected from Wonji Sugar Factory, particularly, from three departments (i.e. Factory Operation, Supply and Facility Management and Agricultural Operation) in which kaizen practices are implemented; this study examined the impact of employees' attitude towards the application of kaizen practice. The data for this study was analyzed by descriptive statistics (mean and SD), regression and correlation analysis ANOVA (Analysis of Variance) and t-test comparison to evaluate employees' attitude towards the application of kaizen practice.

Individual employees attitude towards the application of kaizen practice were regressed to identify employees' attitude against training, readiness, resistance, team work and perceived organizational support of kaizen practices to evaluate the influence of the latter on the former. The greatest challenge to implementation of kaizen practice according to this study was ineffective training and team work followed by Lack of organizational support which posed great extent of challenge on employees' attitude towards the application of kaizen practice in its implementation in the respondents firms. On the contrary, readiness and resistance of employees' attitude toward the application of kaizen practices were contributed to the least extent or they were not statistically significant.

Correlation analysis further shows that training; team work and perceived organizational support were positively correlated and statistically had significant impacts on employees' attitude towards the application of kaizen practice. Similarly as the regression result displayed, readiness and resistance had no significant impact on employees' attitude toward the application of kaizen practice.

5.2. Conclusion

This study sought to identify the impact of employees' attitude towards the application of kaizen practices only in Wonji Shoa Sugar Factory. According to this study, training, team work and perceived organizational support were positively and significantly correlated with attitude towards the application of kaizen practice. Whereas, readiness and resistance were positively correlated but had no significant impact on employees' attitude toward the application of kaizen practice. Majority of the respondents' opinion and suggestions were respected and valued by their leaders in their team, favorable to training given to the application of kaizen practice, taken things necessary for improving seven waste elimination methods and provided training to start kaizen practice on their current job. In addition, more than half of the respondents' accepted the rationale for changing former working style into kaizen practice and admitted that it was a mistake to hold kaizen practice and felt a sense of resistance. Half of the participants felt that their supervisors support their work and received credit for a job well done and also half had committed team leaders towards the application of kaizen practice.

This study has provided insights into the extent of adoption of kaizen practices in Wonji Shoa Sugar Factory manufacturing firm, and provides further evidence that employees' attitude is significant in enhancing kaizen practice and positively impacts human resource outcomes. The findings from the study showed that there were statistically significant relations among the variables: training, team work and perceived organizational support of employees' attitude towards the application of kaizen practice. However, this implies that companies that implement kaizen are likely to improve their employees' attitude towards the application of kaizen practice on the regards of training given, teamwork and organizational support

5.3. Recommendations

The improvements of Kaizen achieved so far should be protected and sustained. Equally, however, the practical challenges on employees' attitude demonstrated by the study should get attention and be resolved. Indeed, based on the findings witnessed by the respondents as well as researcher personal observation, the following recommendations are suggested.

- ❖ To begin with training, for kaizen to work well, the workers and the management bodies needed to have good skills and basic experiential training as well as consistence influence to change employees attitude toward the organizations' productivity and profitability especially when change are needed.
- ❖ Since training and education plays an important role in minimizing the negative effect of system complexity on manufacturing system performance, effective regular training on 5s and elimination of seven wastes has to be provided in the form of on job or off job training.
- ❖ The other challenge manifested with the factory was team work. To get continuous improvement and innovation through team work, there should be smooth communication among top-down and bottom up management to achieve effective problem solving, trusting and supportive environment with the group, creativity enhancement and mutual problem solving.
- ❖ Furthermore, Managers should find the factors which affect employees' attitude toward kaizen practice.
- ❖ Making employees to form a general positive perception of the extent to which the organization values their contributions and cares about their well-being.
- ❖ To influence employees' attitude towards Kaizen practice, the organization has to value employees' contributions and cares about their well-being by: rewarding employees' their contributions.

- ❖ Giving opportunities for employees to have participation in key organizational decisions.
- ❖ Finally, the factory should get involved through well designed programs in promotion of kaizen practices as they lead to increased productivity and better utilization of resource. Moreover; the factory needed to give due consideration on employees attitude for the application of kaizen practices to improve quality and productivity performance to be competent in the global market.

5.4. Suggestions for Further Study

This study focused on employees' attitude towards the application of kaizen practice in Wonji Shoa Sugar Factory only. However, kaizen is applicable in all sectors of a country including the service sector, government organizations and non- governmental organizations. The researcher proposes that a more detailed study be carried out on the manufacturing sector in Ethiopia which are applying kaizen using more in-depth data collection methods involving collection of both primary and secondary data, and evaluate the impact of employees' attitude towards the application of kaizen practice in Wonji Shoa Sugar Factory. The researcher further proposes that a study be carried out to establish the impact of employees' attitude and kaizen practice implementation in Wonji Shoa Sugar Factory firms or other none manufacturing organizations so that it can be established whether there are benefits of implementing kaizen practice in these organizations.

Reference

- Ahmed, S., Masjuki, H.H. and Taha, Z. (2005).TPM can go beyond maintenance: excerpt from a case implementation, *Journal of Quality in Maintenance Engineering*, 11(1), 19-4.
- Ajzen, I &Fishbein, M. (1980). Understanding Attitudes and predict social behavior. Prentice-Hall:Englewood cliffs,NJ.
- Alukal, G. (2007), “Lean kaizen in the 21st century”, *Quality Progress*, 40 (8): 69-70.
- Aoki, K. (2008), “Transferring Japanese Kaizen activities to overseas plants in China”, *International Journal of Operations & Production Management*, 28 (6), 518-539.
- Armenakis, A. & Bedeian, A. (1999). Organisational Change: A Review of Theory and Research in the 1990s. *Journal of Management*, 2(3), 293-315.
- Aronson, K.R, (2003). Jon satisfaction of Psychiatric hospital employees: A new measure of old concern, *Adm. Policymnt. Health*, 30 (No May), 437-52.
- Aselage, J., & Eisenberger, R.(2003). Perceived organizational support and psychological contracts: A theoretical integration. *Journal of Organizational Behavior*, 24, 491-509.
- Assefa. B (2010).” Examination of some Western versus Japanese management technique in the Context of Ethiopia.”
- Baldwin, T. & Ford, K. (1988). Transfer of training: A review and directions for future research. *Personnel Psychology* 41, 63-105.
- Balle, F. & Balle, M. (2005).The Gold Mine: A Novel of Lean Turnaround. Brookline, MA: Lean Enterprise Institute.

- Bandura, A. (1969). *Principles of Behavior Modification*. New York: Holt, Rinehart & Winston.
- Beer, S. (1966). *Decision and Control*. Chichester: Wiley.
- Berihu Assefa (2010). Examination of Some Western versus Japanese Management Techniques in the Context of Ethiopia.
- Bovey, W., & Hede, A. (2001). Resistance to Organizational Change: The Role of Cognitive and Affective Processes. *Leadership & Development Journal*, 22(8), 372-382.
- Brown, SP. & Leigh, TW. (1996). A new look at psychological climate and its relationship to job involvement, effort, and performance. *Journal of Applied Psychology*, 81, 358-368.
- Brunet, A.P & New, S. (2003). Kaizen in Japan: An Empirical Study, *International Journal of Operation & Production Management*, 3(12): 1426-1446.
- Burton, G. E., Pathak, D.S., & Zigli, R. M. (1977). The effects of organizational communication on job satisfaction and motivation factors for management. *Journal of Management*, 2(2), 17-25.
- Byrne, Z. S., & Lemay, E. (2006). Different media for organizational communication: perceptions of quality and satisfaction. *Journal of Business and Psychology*, 21(2), 149-175.
- Campbell, J. P. (1971). Personnel training and development. *Annual Review of Psychology*, 22, 265-602.
- Cawsey, T.F., Deszca, G., and Ingols, C. (2012). *Organizational change an action-oriented toolkit*. Los Angeles: Sage Publications.

- Chapman, C.D. (2005), "Clean house with lean 5S", *Quality Progress*, (Vol.38, (6), 27-32).
- Chen,L.& Wu. (2004). Examining the effect of organization culture and leadership behaviors on organizational commitment, job Satisfaction, and job Performance at small and middle-sized firms of Taiwan. *The Journal of American Academy of Business*, Cambridge, 432-440.
- Chirico, F. & Salvato, C. (2008). Knowledge Integration and Dynamic Organizational Adaptation in Family Firms. *Family Business Review*, 21(2), 169-181.
- Coch, L., & French, J.R.P., Jr. (1948). Overcoming Resistance to Change. *Human Relations*, 1(4), 512 – 532.
- Chonko, L.B., 2004, "Organizational readiness for change, individual fear of change, and sales manager performance: an empirical investigation", *Journal of Personal Selling and Sales Management*, 24(1), 7-17.
- Chow, L. J., Then, D., & Skitmore, M. (2005). Characteristics of teamwork in singapore construction projects. *Journal of Construction Research*, 6(1), 15-4.
- Cochran, J.K., Bromley, M.L., & Swando, M.J. (2002). Sheriff's deputies' receptivity to organizational change. *Policing*, 25,507-529.
- Cuscela, K.N. (1998), "Kaizen blitz attacks work processes at Dana Corp",*IIE Solutions*, Vol. 30 No. 4, pp. 29-31.
- Deal, J.E., and Celloti, L.D. (1980). How much influence do and can educational administrators have on class rooms. *Phi Delta Kappan*, 61(7), 471-473.

- Deniels R C (2010), “Performance Measurement at Sharp and Driving Continuous Improvement on the Shop Floor”, *Engineering Management Journal*, Vol. 5, No. 5, pp. 211-214.
- Desplaces, D. 2005, "A Multilevel Approach to Individual Readiness to Change", *Journal of Behavioral and Applied Management*, 7(1), 25-39.
- Desta, A (undated).The globalization of the Japanese management process: Reinvigorating Ethiopian’s industries through “Kaizen”.
admin@tigraionline.com, Accessed April 1, 1014.
- Desta, A. (2013) —Why Self-proclaimed Kaizen Management is becoming very fashionable in Ethiopia? An Observation.
- Dirks, K.T. & Ferrin, D.L. (2001). The Role of Trust in Organisational Setting. *Organisational Science*, 12(4), 450-467.
- Dysko,D (2011). Gemba kaizen: Utilization of the human potential to achieve continuous improvement of company. *The International Journal of Transport and Logistics*, ISSN 1451-107X.
- Eby, L., Adams, D., Russell, J. and Gaby, S. (2000).Perceptions of organizational readiness for change: factors related to employee’s reactions to the implementation of team-based selling, *Human Relations*, 53 (3), 419-28.
- Eisenberger, R., (1986). Perceived organizational support and employee diligence, commitment, and innovation. *Journal of Applied Psychology*, 75, 51–59.
- EKI (June 2013): Kaizen understanding and implementation, Personal Pocket Guideline, 1 Technology Transfer and Industry Extension Services: Quality and productivity capacity Building/Kaizen Implementation Manual.

- Ethiopian Kaizen institute (EKI) (2012), “quality and productivity change movement”, 1.
- Elving, W. and Bennebroek Gravenhorst, K. (2009). Information, Communication, and Uncertainty During Organizational Change; the Role of Commitment and Trust. Paper presented at the annual meeting of the International Communication Association, 81 Sheraton New York, New York City, NY.
- Erdogan, B. and Enders, J. (2007). Support from the top: Supervisors’ perceived organizational Support as a moderator of leader–member exchange to satisfaction and performance relationships. *Journal of Applied Psychology*, 92(2), 321-330.
- Ethiopian Kaizen institute (EKI) (2012), “quality and productivity change movement”, I.
- Farris.(2009).Critical Success factors for human resource outcomes in kaizen events: and empirical study. *Int.J. Production economics*, 117-42-65.
- Festinger, L. (1964). Behavioral support for opinion change. *Public Opinion Quarterly* (Vol. 28, Pp. 404-417).
- Fishbein, M. (1993). Introduction by Martin Fishbein. In D.J. Terry, C. Gallois & M. Mc Camish (Eds.), *The theory of reasoned action: Its application to aids preventive behavior* (pp. xv –xxv). Oxford: Pergamon Press.
- Griffin, M.A.(2001). Job satisfaction& team work: The role of supervisor support. *Journal of organizational behavior*. 22, 537-550
- Genobz,(2010). Understanding kaizen and 5S: Japan’s widely acclaimed key to competitive success. <http://genobz.wordpress.com> /2010/07/15 Retrieved, March 30, 2011.
- Goldstein, I.L. (1980). Training in work organizations. *Annual Reviews in Psychology*, (Vol. 31, Pp.229-72).

- GRIPS, ((December 2011). Kaizen National Movement: A study of Quality and Productivity Improvement in Asia and Africa. *Japan International Cooperation Agency(JICA)*. GRIPS Development Forum.
- Guimaraes, T., Martensson, N., Stahre, J. and Igbaria, M. (1999), “Empirically testing the impact of manufacturing system complexity on performance”, *International Journal of Operations & Production Management*, 19 (2): 1254-69.
- Guzzo, R. & Dickson, M. (1996).Teams in organizations: Recent research on performance and effectiveness. *Annual Review of Psychology*,47, 307-38.
- Heathfield, S. M.(2014).How to Reduce Resistance to Change. Retrieved from About.Com: <http://humanresources.about.com/od/resistancetochange/a/how-to-reduce-resistance-to-change.htm>
- Hickins, M. (1998). Running the change Gauntlet. *Management Review*, 87(11), 7.
- Holt, D.T., Armenakis, A.A., Feild, H.S. and Harris, S.G. (2007).Readiness for organizational change: the systematic development of a scale, *Journal of Applied Behavioral Science*, Vol. 43 No. 2, pp. 232-55.
- Ihara, H.(2004).Reexamination of Japanese Management System. *Management Japan*, Vol. 36.
- Imai.M.(1986). Kaizen: the key to Japanese competitiveness success: New York: Random House Business Division.
- Imai, M. (1997), *Gemba Kaizen: a common sense, low-cost approach to management*, McGraw- Hill,New York, NY.
- Imai, M. (1986), kaizen: The Key to Japanese Competitive Success, McGraw-Hill, New York, NY.

- Insko, C. A.(1967).Theories of Attitude Change. New Jersey: Prentice-Hall, Inc.
- Ishiwata, A. (October 2009). “Needs for kaizen Activities by African Manufactures.”
Introduction Kaizen in Africa. GRIPS Development Forum.
- James, L. R., & Jones, A. P. (1974).Organizational climate: A review of theory and research. *Psychological Bulletin*, 81, 1096-1112.
- Juran J, (1994). Continuous improvement: Quality control circles in Japanese industries.
Ann Arbor MI: University of Michigan.
- Kaplinsky, R. (1995). “Technique and system: The spread of Japanese management techniques to developing countries.”*World Development*, 23(1):57-71.
- Karsten, L., & Pennink B. (2007), “Total quality management in the African business community of Burkina Faso: A change in perspective on knowledge development.” CDS Research Report No.25. July 2007.
- Khot, D (2010) .The effects of lean on employees’ affective attitude in a modular homebuilding manufacturer. MSc Thesis (2010).Louisiana State University and Agriculture and Mechanical College.
- Kitchen, P.J. & Daly, F. (2002). Internal Communication During Change Management. *Corporate Communications: An International Journal*, 7(1).
- Konijnenburg, L. (2010).The effect of Perceived Supervisor Support and Perceived Organizational Support on Employees’ Resistance to Change, *School of Business and Economics*, 9.
- Kraus, S. J. (1995). Attitudes and the prediction of behavior: A meta-analysis of the empirical literature. *Personality and Social Psychology Bulletin*, 21(1), 58-75.

- Krishnan, J. & Mary, S. (2012). Perceived organizational support – an overview on its antecedents and consequences, *International Journal of Multidisciplinary Research*, 2(4), 2- 3.
- Lawrence, P.(1969).How to deal with resistance to change. *Harvard Business Review*. Retrieved from: <http://hbr.org/1969/01/how-to-deal-with-resistance-to-change/ar/>
- Lewin, K. (1958). Group Decision and Social Change. In E.E. Maccoby, T.M. Newcomb, and E.L. Hartley (eds), *Reading in Social Psychology* (197-211). New York: Holt, Rinehart and Winston.
- Madsen, S.R.(2003). Wellness in the workplace: Preparing employees for changes, *Organizational development Journal*, and 21(1), 46-55.
- Magd, A. E., Ahmed, A.M. & Hamza, S.A. (2007). Organization Excellence Journey: Critical Success Factors of Engineering firms in Saudi Arabia and United Arab Emirates. *Going for Gold Kaizen & Org. Development*, Paper #: 05-08, 1
- Martin, A., Jones, E., & Callan, V. (2006). Status Differences in Employee Adjustment during Organizational Change. *Journal of Managerial Psychology*, 21(2), 145-162.
- Martin and Osterling, M (2007).Kaizen event planner: Achieving rapid improvement in office, service, and technical environment. Productivity Press, New York, NY.
- Mathenge, S. (2012). Factors influencing implementation of quality standards (Kaizen) in flower industry: A case of Kariki Ltd Kiambu County.
- Minton, E. (1998), “Baron of Blitz has boundless vision of continuous improvement”, *Industrial Management*, 40(1), 14-21.

MOFED (2013): Annual progress report for 2011/12 Growth and Transformation Plan,
March 2013.

Montgomery, L., and Seefeldt, C., (1986). 'The Relationship between Perceived Supervisory Behavior and Caregivers' Behavior in Child Care' *Child Care Quarterly*, 15(4), 251-259.

Nasurdin, AM., Hemdi, MA. & Guat, LP. (2008). Does Perceived Organizational Support Mediate the Relationship between Human Resource Management Practices and Organizational Commitment?, *Asian Academy of Management Journal*, 13(1), 19.

Nemoto, M. (1992), *TQC Seiko No Hiketu 30 Kajo*, Nikagiren, Tokyo.

Oakeson, M. (1997), "Makes dollars & sense for the Mercedes-Benz in Brazil", *IIE Solutions*, 29 (4), 32-35.

Ohno, I. Hhno, K and Uesu, S. (October 2009). **Introducing Kaizen in Africa**. GRIPS Development Forum Tokyo: Roppongi, Minato-ku.

Ohno, T. (1988), *Toyota Production System*, Productivity Press, Portland, OR.

Osada, T. (1991), **The 5S's: Five Keys to a Total Quality Environment**, Asian Productivity Organization, Tokyo.

Park, H. S., (2008). Need for cognition, task complexity, and job satisfaction. *Journal of Management in Engineering*, 24(2), 111-119.

Porter, L. W., Lawler, E. E., & Hickman, J. R. (1975). **Behavior in Organizations**. New York: Mc Grawy-Hill Book Company.

- Recht, R. (December 1, 1998). Kaizen and Culture: On the transferability of Japanese suggestion systems. <http://www.science direct.com/science?> Retrieved, March 30, 2011.
- Rhoades, L., & Eisenberger, R.(2002). Perceived Organizational Support: A Review of the Literature. *Journal of Applied Psychology*, 87 (4), 698–714).
- Rokeach, M.(1972). **Beliefs, Attitudes, and Values**. San Francisco: Jossey-Bass, Inc.
- Rousseau, D.M., Sitkin, S.B., Burt, R.S., Camerer, C. (1998). Not so Different after All: A Cross-Discipline View of Trust. *Academy of Management Review*, 23(3), 393-404.
- Schroeder, D.M. & Robinson, A.G. (1991), “America’s Most Successful Export to Japan: Continuous Improvement Programs,” *Sloan Management Review*, 32 (3),67-81.
- Shaari, J. A.N, (2010). Barriers to Implement TQM in Japanese Way: A study of Companies in Malaysian. *International Review of Business Papers*. 6(5), 400-410
- Shah, R. and Ward, P.T. (2003), “Lean manufacturing: context, practice bundles, and Performance”, *Journal of Operations Management*, 21(2), 129-49.
- Sheridan, J.H. (1997), “Kaizen blitz”, *Industry Week/IW*, 246 (16), 18-27.
- Smith, Ian. (2005). Achieving readiness for organizational change, *Library Management*, 26(June), 406-412.
- Sonobe, T.(2009). **Kaizen, Skill Development, and Industrial Clusters**.
- Thessaloniki,(2006). Kaizen definition and principles in brief: A concept and tool for employees’ involvement. www.michailolidis.gr.,Accessed date April 20, 2014.
- www.basicoofmanagement.com accessed date 11/21/2013.

- Watson, M (1986). **The Deming Management Method**, Perigee Books.
- Weber, P.S. and Weber, J.E. (2001), "Changes in employee perceptions during organizational change", *Leadership & Organization Development Journal*, 22 (5/6), 291-300.
- Wexley, K. N., & Latham, G. P. (1981). **Developing and Training Human Resources in Organizations**. Glenview: Scott Foresman.
- Wickens P D (1990).Production Management: Japanese and British Approaches, IEE Proceedings Science, Measurement and Technology, 137(1), 52-54.
- Wiggins, L. (2009). Managing the Ups and Downs of Change Communication. *Strategic Communication Management*, 13(1), 20-23.
- Wiley, C.(1993).Training for the '90s. How leading companies focus on quality improvement, technological change, and customer service. *Employment Relations Today*, 20(1), 79-96.
- Yokozama, K. et al (2010). **The influence of national culture on Kaizen transfer**: An exploratory study of Japanese subsidiaries in the Netherlands.
- Vliet, C. & Hellgren, J.(2002). **The Modern Working Life**: Its Impact on Employee Attitudes, Performance and Health, Department of Psychology, Stockholm University, 7.

ANNEX-A
Adama Science and Technology University
School of Graduate Studies
Department of Psychology
Post Graduate Program in Industrial and/or Organizational
Psychology

Dear respondents, I am a postgraduate student of the above mentioned institution and currently undertaking a research on “EMPLOYEES ATTITUDES TOWARD THE APPLICATION OF KAIZEN PRACTICE ” taking Wonji/Shoa sugar factory in focus. Your factory is one of the few companies chosen for the research. Your participation in the study is completely voluntary.

The purpose of the questionnaires is to obtain your opinions and attitude toward the application of Kaizen practice in Wonji Shoa Sugar Factory. In order for your responses to be useful, all responses to the items contained in this questionnaire must accurately reflect your true opinions.

I would very appreciate your participation in this survey. This information will help government, private sectors and nongovernmental organization to improve employees’ perception about kaizen practice. Any information obtained in connection with this study will remain strictly confidential. Nothing will be tied back to any individual names. By participating, you will greatly contribute in the researcher’s process of understanding the employees’ attitude toward the application of kaizen practice.

However; I hope you will participate in the survey since your views are very important. Your honest opinion is very valuable to the success of this study.

Please do not write your name; just put your sign on the space provided if you are agree to participate in this survey.

Thank You For Your Participation!

Signature of participants-----

Date-----

Questionnaire for Employees

Part I: Demographic Information

Please be so kind to provide general information about yourself.

1. **Gender:** Male ☐ Female ☐
2. **Level of Education:** Grade 10 ☐ Grade 12 ☐ Diploma ☐ Degree ☐ MA ☐
Others ☐
3. **Age :** 18-25 Years ☐ 26-35 ☐ 36-45 ☐ Above 45 ☐
4. **Family status:** Single ☐ Married ☐
5. **Working Department**-----
6. **Working experience in this Factory:** below 2years ☐ Above 5years ☐ 2- 5years ☐
6-10years ☐ 11-15 years above ☐
7. **Working experience in the current position:** below 2years ☐ 3- 8years ☐ 9-14years ☐ 15-20 years ☐ above 21years ☐
8. **Salary:** Below Birr 2000.00 ☐ Birr 2100.00 - 4000.00 ☐ Birr 4100.00 - 6000.00 ☐
Birr 6100.00-8000.00 ☐ above Birr 8100.00 ☐

Instruction II: Please put “√” mark on what you agree most relevant to the particular questions. Please read the following questions and select answers that best describes the degree of your agreement or disagreement with each statement by marking √ mark in the box on the right hand side that best represents your point of view about the employees’ attitudes toward the application of kaizen practice in your factory.

N°	Items	Strongly Disagree	Disagree	unsure	agree	Strongly agree
	Circle the response that BEST describes your opinion.	1	2	3	4	5
	Training					
9	I am given a real training opportunity to improve my skills on 5s kaizen practices	1	2	3	4	5
10	Training was provided before the start of kaizen practice for my current job	1	2	3	4	5
11	Training given on seven waste elimination improved my understanding of waste.	1	2	3	4	5
12	This work area measurably improved as a result of training given on 5s	1	2	3	4	5
13	Training given on kaizen continuous practice ease my work.	1	2	3	4	5
	Readiness and resistance to change					
	Readiness					
14	The rationale for changing former working style in to kaizen practice is clearly communicated to employees in a timely and effective manner	1	2	3	4	5
15	I feel positive toward work change made in to kaizen practice	1	2	3	4	5

16	I accepted the change made to kaizen practice to happen without any objection.	1	2	3	4	5
	Resistance					
17	I think it is a mistake to hold this kaizen practice here.	1	2	3	4	5
18	I feel a sense of resistance to kaizen practice.	1	2	3	4	5
19	I think that things would be better without this application of Kaizen practice.	1	2	3	4	5
	Team Work					
	Communication					
20	kaizen practice team fosters open communication and recognizes individual contributions	1	2	3	4	5
21	I feel that my suggestions are welcomed and valued by our leadership during kaizen practice	1	2	3	4	5
22	In the application of kaizen practice, there are both top-down and bottom-up communication.	1	2	3	4	5
23	Most of our team members can communicate new ideas about improvements as a result of participation the kaizen practice	1	2	3	4	5
24	During the application kaizen of practice, employees opinion/ suggestion are respected	1	2	3	4	5

	Understanding					
25	Over all this kaizen event increased our team members knowledge of the need for continuous improvement	1	2	3	4	5
26	In general the kaizen event increased our team members knowledge of what continuous improvement is and its application	1	2	3	4	5
	Attitude					
27	The kaizen event motivated the members of our team to perform better.	1	2	3	4	5
28	Most of our team members liked being part of this kaizen event	1	2	3	4	5
	Perceived organizational support					
	Supervisory support					
29	I feel my supervisor/team leader is supportive of my work	1	2	3	4	5
30	My immediate supervisor/team leader has commitment toward the application of kaizen practice	1	2	3	4	5
31	I receive credit from my immediate supervisor for a job well done	1	2	3	4	5
32	I feel my job performance in the kaizen practice is fairly evaluated.	1	2	3	4	5

33	In the application of kaizen practice, supervisor treats me fairly.	1	2	3	4	5
	Management support					
34	Managers and other leaders are easily accessible for employees to answer any difficulties made during kaizen practice.	1	2	3	4	5
35	Top Management support us with enough materials and supplies which aid us for kaizen practice	1	2	3	4	5
36	The organization values my contribution that I made on the application of kaizen practice.	1	2	3	4	5

የተሳታፊ ኮድ

እኔ በአዳማ ሳይንስና ቴክኖሎጂ ዩኒቨርሲቲ የኢንዱስትሪያል እና ኦርጋናይዜሽናል ሳይኮሎጂ ዲፓርትመንት የሁለተኛ ዲግሪ ተማሪ ስሆን "የድርጅቱ ሠራተኞች በካይዘን ትግበራ ላይ ያላቸው አመለካከት በሚል" ጥናት እያጠናሁ ነው።

ይህ ጥናት የተዘጋጀው "የድርጅቱ ሠራተኞች በካይዘን ትግበራ ላይ ያላቸውን አመለካከት ለማውቅ ሲሆን የጥናቱም ውጤት ሠራተኞች በካይዘን ትግበራ ላይ ያላቸውን አመለካከት ለማሻሻልና ለትግበራው ማነቆ የሆነባቸውን ነገሮች በመለየት የመፍትሄ አቅጣጫ ለማስቀመጥ ነው።

ይህ መጠይቅ ለትምህርታዊ ሥራ ብቻ የሚውል ሲሆን የሚሞላው መጠይቅም በሚስጥር የሚያዝ ይሆናል። ስለሆነም ይህን የጥናት ዓላማ ለማሳካት እርስዎ መጠይቁን ለመሙላት ተመርጠዋል። የእርሶ ማንነት በጥናቱ ላይ አይካተትም። ለሚያደርጉት ቀና ትብብር በቅድሚያ አመሰግናለሁ።

ለተሳትፎዎ አመሰግናለሁ !

የተሳታፊ ፊርማ -----

ቀን-----

መጠይቅ

እባክን እርሶን በሚመለከተው መርጃ ሳጥን ውስጥ ✓ ምልክት ያስቀምጡ

1. ያታ፡ ወንድ ☐ ሴት ☐

2. የትምህርት ደረጃ፡ 10ኛ ☐ 12ኛ ክፍል ☐ ዲፕሎማ ☐ ዲግሪ ☐ ማስተርስ ☐
ሌላ ካለ ይግለፁ -----

3. ዕድሜ፡ ከ18-25 ዓመት ☐ 26-35ዓመት ☐ 36-45ዓመት ☐ ከ45ዓመት በላይ

4. ትዳር፡ ያላገባ/ች ☐ ያገባ/ች ☐

5. የእርሶ የሥራ ክፍል -----

6. በፋብሪካው ለስንት ዓመት ሰርተዋል?-----

ከሁለት ዓመት በታች ☐ ከ15ዓመት በላይ ☐ ከ2-5 ዓመት ☐ ከ6-10ዓመት ☐
ከ11-15ዓመት ☐ ከ15ዓመት በላይ ☐

7. በአሁኑ የሥራ ድርሻ ምን ያህል ሰርተዋል?

ከ2ዓመት በታች ☐ ከ3-8ዓመት ☐ ከ9-14ዓመት ☐ ከ15-20ዓመት ☐
ከ21ዓመት በላይ ☐

8. ደሞዝ - ከብር 2000ሺ በታች ☐ ከብር2100-4000ሺ ☐ ከብር4100 -
6000ሺ ☐ ከብር 6100-8000 ☐ ከብር8100 በላይ ☐

ቀጥሎ የተዘረዘሩትን መጠይቆች ካነበባችሁ በኋላ የእርሶን ሃሳብ በትክክል ሊገልጽሎት የሚችለውን ከ1-5 ከተሰጡት አማራጮች ውስጥ አንዱ ላይ ብቻ በማክበብ ፤

ቁ	መጠይቆች	በጣም እስማማለሁ	እስማማለሁ	በተወሰነ እስማማለሁ	አልስማማም	በጣም አልስማማም
9	በ5s (በአምስቱ ማዎች) የካይዘን ትግበራ የተሰጠኝ ትክክለኛ የስልጠና ዕድል ክህሎቴን ወይም ችሎታዬን እንዳሻሽል እረድቶኛል።	1	2	3	4	5
10	የካይዘን ትግበራ ከመጀመሩ በፊት የተሰጠኝ በቂ ስልጠና አሁን እየሰራሁ ላለሁት ሥራ ጠቅሞኛል።	1	2	3	4	5
11	በሰባቱ ብክነት ማስወገጃ ላይ የተሰጠኝ ስልጠና ስለብክነት ያለኝን ግንዛቤ እንዳሻሽል ረድቶኛል።	1	2	3	4	5
12	በ5s(በአምስቱ ማዎች) ላይ በተሰጠኝ ስልጠና ምክንያት የሥራ ቦታዬ ምቹ እንዲሆን በከፍተኛ ሁኔታ አሻሽሎልኛል።	1	2	3	4	5
13	በካይዘን ቀጣይነት ያለው የመሻሻል ሂደት ትግበራ ላይ የተሰጠኝ ስልጠና ከበፊቱ አሰራር በተሻለ ሁኔታ ሥራዬን አቅሎል	1	2	3	4	5
14	መሠረታዊ የቀድሞ የድርጅቱ የሥራ አሰራር ሁኔታ ወደ ካይዘን ትግበራ መለወጡ ጊዜን በጠበቀና አመርቂ በሆነ ሁኔታ በግለጽ ስለ ካይዘን ለሠራተኛው ተገልጾአል።	1	2	3	4	5
15	የድርጅቱ የሥራ አሰራር ሁኔታ ወደ ካይዘን ትግበራ በመለወጡ ደስተኛ ነኝ	1	2	3	4	5

16	የድርጅቱ የሥራ አሰራር ወደ ካይዘን ትግበራ መለወጡን ያለምንም ቅሬታ በደስታ ተቀብዬ እየተገበርኩ ነው።	1	2	3	4	5
17	እንደኔ አስተሳሰብ የካይዘን ትግበራ በዚህ ድርጅት መተግበሩ ስህተት እንደሆነ አስባለሁ።	1	2	3	4	5
18	የካይዘን ትግበራን ያለመቀበል ስሜት ይሰማኛል	1	2	3	4	5
19	እንደኔ አስተሳሰብ የካይዘን ፍልስፍና ትግበራ ባይተገበርም የድርጅቱ ሥራ የተሻለ አፈጻጸም ይኖረዋል።	1	2	3	4	5
20	የካይዘን ትግበራ ቡድን ግልጽ የሆነ ውይይትን፣ የእያንዳንዱን ሠራተኛ የሥራ ላይ ግንኙነትና አስተዋፅኦ ያገናዘበ ነው	1	2	3	4	5
21	በካይዘን ትግበራ ወቅት የምሰጣቸው አስተያየቶች ወይም ሃሳቦች በቡድን መሪዎች ወይም ሱፐር ቫይዘሮች እንደ ሚበረታታና ዋጋ እንደ ሚሰጠው ይሰማኛል።	1	2	3	4	5
22	ለካይዘን ትግበራ ፍልስፍና የሠራተኞች የሥራ ላይ ግንኙነት (Communication) ከላይኞቹ	1	2	3	4	5

	አመራር ክፍል ወደ ታችኞቹ ብቻ ሳይሆን ከታችኞቹም ሰራተኞች ወደ ላይኞቹ የአመራር ክፍል የሚደረግበት ነው።					
23	አብዛኞቹ የካይዘን ቡድን አባላት ስለሥራቸው መሻሻል አዳዲስ ሃሳቦችን የሚለዋወጡት በካይዘን ትግበራ ፍልስፍና በመሳተፋቸው ምክንያት ነው።	1	2	3	4	5
24	በካይዘን ፍልስፍና ትግበራ እያንዳንዱ ሠራተኛ ስለ ሥራው መሻሻል የሚሰጠው ማንኛውም ሃሳብ ወይም አስተያየት ይከበራል (ዋጋ ይሰጠዋል)	1	2	3	4	5
25	በአጠቃላይ የካይዘን ትግበራ ፍልስፍና የካይዘን ቡድን አባላትን ግንዛቤ ወይም መረዳትን ፤ ካይዘን ቀጣይነት ያለው የሥራ ላይ ሂደት መሆኑን እንዲያውቁ አድርጓል።	1	2	3	4	5
26	የካይዘን ትግበራ ለቡድን አባላት ካይዘን ቀጣይነት ያለው የሥራ ላይ መሻሻል መሆኑን እና ያተገባበሩን እውቀት እንዲጨብጡ አድርጓል።	1	2	3	4	5
27	የካይዘን ትግበራ ለካይዘን ቡድን አባላት መነሳሳትና የተሻለ የስራ አፈጻጸም እንዲኖራቸው አድርጓቸዋል።	1	2	3	4	5

28	አብዛኞቹ የካይዘን ቡድን አባላት የትግበራው አንዱ አካል መሆናቸውን ወደውታል።	1	2	3	4	5
29	ሱፐርቫይዘሪን (የካይዘን ቡድን መሪዬን) በሥራዬ ላይ ይረዳኛል ያግዘኛል።	1	2	3	4	5
30	የቅርብ ሱፐርቫይዘሪን (የቡድን መሪዬን) ለካይዘን ትግበራ ውጤታማነት በከፍተኛ ቁርጠኝነትና በሙሉ ኃይሉ ይሰራል።	1	2	3	4	5
31	በካይዘን ትግበራ ለማሳየው ጥሩ የሥራ ውጤት ከቅርብ አለቃዬ (ሱፐርቫይዘሪ) ማበረታቻ አገኛለሁ።	1	2	3	4	5
32	በካይዘን ትግበራ ለማሳየው የሥራ ብቃት አግባብ ባለው መንገድ፣ መስፈርትና ግምገማ እንደሚካሄድ አምናለሁ።	1	2	3	4	5
33	በካይዘን አተገባበር ሱፐርቫይዘሮች ወይም የቡድን መሪዎች ሠራተኞችን እኩል ወይም አድልዎ በሌለበት መንገድ ይመለከታሉ።	1	2	3	4	5
34	ማናጀሮች እና ሌሎች የአመራር አካላት በካይዘን ትግበራ ወቅት ለሚያጋጥም ማንኛውም ችግሮች አፋጣኝ መልስ ለመስጠት በቅርበት ይገኛሉ።	1	2	3	4	5

35	የበላይ የማኔጅመንት አካል ለካይዘን ትግበራ የሚያስፈልጉንን በቂ እቃዎችና ቁሳቁሶች በማቅረብ ድጋፍ ያደርጋሉ።	1	2	3	4	5
36	ድርጅቱ በካይዘን ትግበራ ላይ ለማሳየው ማንኛውም አስተዋጽኦ ያበረታታኛል ወይም ዋጋ ይሰጠኛል	1	2	3	4	5

ANNEX- B

Sample Size Determination

Table28. Determining the needed size of a randomly chosen sample from a given population

population	sample		population	sample		population	sample		population	sample
10	10		60	52		130	97		230	144
15	14		65	56		140	103		240	148
20	19		70	59		150	108		250	152
25	24		75	63		160	113		260	155
30	28		80	66		170	118		270	159
35	32		85	70		180	123		280	162
40	36		90	73		190	127		290	165
45	40		95	76		200	132		300	169
50	44		100	80		210	136		340	181
55	48		120	92		220	140		360	186
380	191		800	260		1800	317		6000	361
400	196		850	265		1900	320		7000	364
420	201		900	269		2000	322		8000	367
440	205		950	274		2200	327		9000	368
460	210		1000	278		2400	331		10000	370
480	214		1100	285		2600	335		15000	375
500	217		1200	291		2800	338		20000	377
550	226		1300	297		3000	341		30000	379
600	234		1400	302		3500	346		40000	380
650	242		1500	306		4000	351		50000	381
700	248		1600	310		4500	354		75000	382
750	254		1700	313		5000	357		1000000	384

Source: Krejcie and Morgan's (Koul & Bahtt, 2001).