ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES

ANALYSIS ON EFFECT OF TOTAL QUALITY MANAGEMENT ON BUILDING COMPANY REPUTATION IN GARMENT INDUSTRY: CASE OF GMM GARMENT PLC.

BY

HAILE G/HIWOT

July, 2021

ADDIS ABABA, ETHIOPIA

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ID: (SGS/0272/2012A)

A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY, SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS OF ART IN PROJECT MANAGEMENT

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APPROVED BY BOARD OF EXAMINERS

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Advisor   Signature & Date

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External Examiner   Signature& Date

CERTIFICATION

This is to certify that Haile G/hiwot has done the study on the topic of "Analysis on Effect of Total Quality Management on Building Company Reputation in Garment Industry: case of GMM garment plc." Submitted to St. Mary's University, school of graduate studies a research thesis for partial fulfillments of the requirement of degree of Masters of Art in Project Management done by Haile G/hiwot, ID No SGS/0272/2012A.Therefore; the study is original and has not been done before by any other researcher at the same topic.

Advisor name_____

Signature_____

DECLARATION

I, the undersigned, declare that this thesis entitled "Analysis on Effect of Total Quality Management on Building Company Reputation in Garment Industry: case of GMM Garment plc." is my original work and has not been presented for a degree in any other university or organization, and that all sources of materials used for the thesis have been duly acknowledged.

Declared by: HAILE G/HIWOT

 Date: _____ Signature: _____

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ABBREVIATIONS

DHU: - Defects per hundred units

FOMO: - Fear of Missing Out

HR: - Human Resources

ISO: - International Organization for Standardization or International Organization for Standardization

PDCA: - Plan-do-check-act

PLC: - Public Limited Company (British)

QA: - Quality assurance

QC: - Quality control

QM: - Quality Management

TQM: - Total quality management

SPC: - Statistical Process Control

SOPs: - standard operating procedure

ABSTRACT

The Ethiopian garment sector is still at its infancy stage compared to competitive countries, And Most of manufacturing industries products are not satisfying the customers. TQM aims toward continuously improving the quality of products and meet customers 'expectations. The purpose of this study is to analyze how TQM (Total quality management) is applicable in garment manufacturing process and its implication for building a company's reputation in case of GMM garment PLC. Data was obtained from quality statues report data, checklist, interview and questionnaire, the results were recorded presented using tables, Pareto chart, pie chart and graphs. According to the result GMM has implemented TQM as a system for improving its product quality but this research finding shows that there are quality problems that can be eliminated easily using TQM. TQM is not fully implemented in the industry and Lack of Commitment to implement TQM, Lack of Motivation, Communication gap between different parties of within organization and beyond and Scarcity of skilled human resources are the main reasons. GMM can implement TQM using the pillar of TQM by a good approach in creation of QM environment, introduction of employees to TQM, encouraging cooperation and teamwork, customer focused product and process design and finally selection of right raw materials for production, Which all leads to a good reputation, and build a huge trust to its customers.

Key words: Quality. TQM, Reputation, Cause and Effect diagram, Pareto analysis

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

TQM is an integrative organizational-wide philosophy that aimed toward continuously improving the quality of products/processes and meet/exceed customers 'expectations (Prajogo and McDermott, 2005). Quality management is the act of overseeing all activities and tasks that must be accomplished to maintain a desired level of excellence. This includes the determination of a quality policy, creating and implementing quality planning and assurance, and quality control and quality improvement. It is also referred to as total quality management (TQM). (Adam Barone, 2020).

The definition given by ISO9001:2000 is "Quality is the degree to which a series of inherent characteristics meet the requirements" which is the requirement of our customers.

A Quality Management System is a set of business processes which are implemented to help an organization deliver products which consistently achieve customer satisfaction. That will enhance the name (brand) of the organization, an effective system for managing quality translates an organization's purpose and goals into policies and resources which help every member of the organization adopt standard operating procedures (SOPs). (Robert Fenton, 2019), Total quality management (TQM) is a firm-wide management philosophy of continuously improving the quality of the products/services/processes by focusing on the customers' needs and expectations to enhance customer satisfaction and firm performance. (Esin Sadikoglu and Hilal Olcay, 2014), having a quality product or service will have an influence on consumers purchasing behavior, and it is believed that the name of our organization is the reputation of the organization. Also Building quality into the core product is vital. The core product must achieve the basic functional requirements expected of it. Higher quality brands achieve greater market share and higher profitability than their inferior rivals. (smriti chand,2016). So in this study it is shows that how companies are implementing the (TQM) and build their name in the market.

The Ethiopian garment sector is still at its infancy stage compared to competitive countries. It is unable to compete in the global market due to inability to produce quality products. The reasons for low quality garments manufactured in Ethiopia are manifold, and extend vertically through the supply chain from inadequate raw materials to poor finishing. (Alem Demissie et

al, 2017). By analyzing TQM practices in the garment manufacturing industries, the study will try to show how TQM is helpful to overcame quality problems of products and how we can build the reputation of the manufacturer, for this study GMM garment plc. is the organization selected .

GMM Garment is a private limited company, established in Addis Ababa, Ethiopia, by three women entrepreneurs. It was established in September 2004 G.C. The factory is located in NefasSilk/Lafto, Sub City in Lebu Industrial Zone. GMM is mostly engaged in the production of different kinds of garments and textiles for the export market like polo shirts, t-shirts. But now GMM is mainly producing shirt. In GMM there are some TQM practices used to manage the quality of its product, many researchers identified internal factors including poor performance measurement practice, low financial capacity, low productivity, high cost of production, poor quality garment, poor logistics handling as well as poor customer and supplier relation thereby reducing the performance and competitiveness of Ethiopian garment enterprises

1.2 Statement of the Problem

In Garments manufacturing, division of labor is applied to make a complete part by using several man and machine according to the sequential operations where that's have some term and condition to maintain the customer satisfactory level e.g. quality and productivity. When manufacturing products is in large scale, some of variables are there like as Operator, Skill, Process, Machine etc. As in garment industries most of the operations are performed by Operator (human) so the deviation of quality requirement is high which mostly comes from Operator, Machine, Method, Material and Working environment. For quality problem a factory has to done a remarkable rework which increase manufacturing cost as well as decreases productivity. Ionele conducted a benchmark of Ethiopian garment enterprises with Turkey, Romania, and Bangladesh and stated that the Ethiopian garment sector lags behind its competitors in terms of competitive advantages such as quality, technology, and price. (Ionele R, 2010). Poor quality is a result due to poor understanding of quality by employees, less management commitment on quality assurance rather on quantity. Furthermore, customers are not involved in product development stage and industries don't properly do market research hence a gap exists between customer requirement and garments made, which results in poor performance activities in market and less satisfaction of customers. Quality control is done by using visual inspection which is not effective and mostly attention is given for detecting defects of the products rather than preventing it during production. Hence no analysis is done by using quality control techniques, which lets the industries, monitor their processes and determine

whether they are in or out of control. (Rahel sorri,2010) and it is believed that the local factories are providing low quality level compared from the imported products, which leads to customers losing interest in the product that is a big failure for the organization which leads to put a bad image and reputation on the organization. Total Quality Management (TQM) is an approach that organizations use to improve their internal processes and increase customer satisfaction.

1.3 Research Questions

To be able to meet the purpose of this study, the following questions have been raised.

- What are the result and effect of successful implementation of TQM on the organization?
- What kind of TQM tools is applicable for the organization?
- What are the main quality problems in the organization?
- How TQM imply to build reputation of company?

1.4 Research Objective

1.4.1. General Objective
The general objective of this study is to analyze how TQM (Total quality management) is applicable in garment manufacturing process and its implication to building a company's reputation in case of GMM garment PLC.

1.4.2. Specific Objectives
- To determine the key improvement areas and identify the basic pillars required to Implement TQM in practice
- To assess existing TQM practices.
- To make relevant recommendations in order to improve implementation of TQM in the industries
- To propose TQM tools for controlling and assuring quality of the products in the industries.

1.5 Significant of the Study

Many manufacturing industries are emerging in our county and most of them are textile and garment manufacturing, and it is known that the product for the local and export are not satisfying the customers compared to the ones being imported and also cost of quality is an extra cost for this industries, and the significant of this study is that it shows how TQM is

implemented and used as a tool for improving the products image in the eye of our customers, and that how we can build the profile of the company by being the company that provides the desired product in the market

1.6 Scope of the Study

This research is analysis on Quality management system in a garment industry, which means that how this organization is implementing and using the tools of this system to produce a product which will meet the desired level for the customers and its way of building the name of this organization. Even though the research can be for the manufacturing industries on the general country level, due to time and financial limitation, the research focuses on garment industries in Addis Ababa, In Lebu Industrial Zone a factory called GMM Garment PLC

1.7 Limitation of the Study

The challenge most while doing the study is to freely move and collect data by interviewing the employees because of the corona virus pandemic.

In addition to this, unwillingness of production heads, supervisors and some employee due to that they can't respond at time of work. The other thing is that some of the respondents can't speak Amharic or English.

1.8 Organization of the Study

The paper is composed of five chapters. The first chapter presents introductory materials, which includes background of the study, problem statement, research objective, and research questions, significances of the study and the scope and limitations of the study. The second chapter presents the related literatures reviewed during the desk research phase of the study. The methodology of research approach and design, data type, data gathering, with this background, the report presents analysis and interpretation of the data gathered in the third chapter. On the fourth chapter the data analysis and result are discussed and presented and finally, the report has summary and conclusion of the study with recommendations.

1.9 Definition of terms

Quality: The totality of features and characteristics of a product or service that bears on its ability to satisfy stated or implied needs (ISO)

TQM (Total quality management): - process as a total corporate focus on meeting and exceeding customer's expectations and significantly reducing costs resulting from poor quality by adopting a new management system and corporate culture ((Berry (1991).

SOP (Standard operating procedure): - is a set of step-by-step instructions compiled by an organization to help workers carry out routine operations.

Reputation: The term 'reputation' is defined in Encyclopædia Britannica (2009) as the "overall quality or character as seen or judged by people in general" and as the "recognition by other people of some characteristic or ability". Reputation refers to general beliefs or impressions of something, or to its evaluation (Bromley, 1993).

CHAPTER TWO

RELATED LITERATURE REVIEW

2.1. Theoretical Review

2.1.1. Definitions of Quality

The simple definition of quality is meeting the customer requirements. Moreover, and aiming at increasing customers' satisfaction, many organizations have focused on quality and reduced their costs to gain maximum customer satisfaction, examples of this being Toyota in Japan, Samsung in South Korea. Besides, the term quality has been defined by so many quality experts. Quality refers to the different workmanship of various activities. Consequently, each business or activity has a different definition of quality, for example in sales the term quality is more focused on the services which are provided to the customer, while in manufacture, the term quality is more focused on the production process, and in Apparel Manufacturing, quality refers to both of services provided and output products (R. Fukui et al, 2012). Quality is "The totality of features and characteristics of a product or service that bears on its ability to satisfy stated or implied needs". So, most of the quality concepts which mentioned above focuses on providing a product that satisfies and meet the customers' needs. Quality is therefore extremely necessary for the organizations to ensure that they have delivered their products or services according to the customer expectations and requirements.

2.1.2. Definitions of Total Quality Management

Numerous definitions have been given on Total Quality Management (TQM) by quality gurus, practitioners and academician. Bester field defined TQM as both a philosophy and a set of guiding principles that represents the foundation of a continuously improving organization. It integrates fundamental management techniques, existing improvement efforts and technical tools under a disciplined approach (D.H. Besterfield, (1995). Using a three-word definition, Wilkinson and Wither defines TQM as below- Total: every person is involved (its customers and suppliers) Quality: customer requirements are met exactly Management: senior executives are fully committed (Samuel, 1999). Berry defined TQM process as a total corporate focus on meeting and exceeding customer's expectations and significantly reducing costs resulting from poor quality by adopting a new management system and corporate culture (Yusof et al, 1999). In this context, TQM has emerged as a holistic management model because the concept of TQM is much broader than the traditional quality concepts. It encompasses not only product,

service and process improvement, but those relating to costs and productivity and to people involvement and development (Dale et al, 2007). TQM has been arguably the most significant approach to the management of organizations and their operations and its improvement and has provided many tools and techniques (Capon et al, 1995). Much research has been conducted about TQM. However, it is evident from the literature that different researchers have adopted different definitions and frameworks based on the context of the application or the theme of the research.

2.1.3. Philosophy of TQM:

Concept	Main idea
Customer focus	Goal is to identify and meet customer needs.
Continuous improvement	A philosophy of never-ending improvement.
Employee empowerment	Employees are expected to seek out, identify, and Correct quality problems.
Use of quality tools	Ongoing employee training in the use of quality tools.
Product design	Products need to be designed to meet customer expectations.
Process management	Quality should be built into the process; sources of quality problems should be identified and corrected.
Managing supplier quality	Quality concepts must extend to a company's suppliers.

2.1.4. PILLARS OF TQM IMPLEMENTATION

The definition of TQM may sound simple, but the implementation of it in practice requires an organizational culture and climate. It takes time and patience to complete the process. The process does not occur overnight, the results may not see for a long period of time. Some experts say that it takes up to ten years to fully realize the results of implementing quality management. There are several steps that must be taken in the process of shifting to quality management in an organization (M. M.Rahman and A.K.M. Masud, 2011).

There are six attributes for successful implementation of TQM program. Those are: Customer focus, Process focus, Prevention verses inspection, Employee empowerment and compensation, Fact-based decision making, Receptiveness to feedback.

From the literature, that have has been gathered thorough knowledge about the foundation of TQM. Some authors propose four pillars, while the others propose nine pillars for a successful implementation of TQM. However, adopting the scholars' guidelines in identifying pillars of TQM implementation, it has been selected 9 pillars, which are presented

- Creation of Quality Management (QM) environment
- Introduction of workers to total quality management (TQM)
- using of statistical control technique for measuring quality
- Sharing information with everyone for decision taking
- Encouraging cooperation and teamwork
- Customer focus as an element of design,
- Selection of right raw materials
- Benchmarking
- Building continuous improvement the goal

2.1.5. Quality Tools & Techniques

To ensure gains in quality, the results must be measured by using of statistical control technique as the company progresses toward its quality objectives. This requires that employees be trained to use SPC tools and techniques. Without knowledge of using quantitative tools, the organization cannot achieve the intended TQM results. (M. M.Rahman and A.K.M. Masud, 2011)

Chan said ' You cannot manage what you cannot measure' (Chan, F. T. 2003). Consequently, there is a need to establish a process for measurement of quality management system performance, aiming at monitoring data on current and end user customer satisfaction for all essential processes. Therefore, the organization needs to establish a sufficient and workable process. TQM tools are technical means used to work in the quality programs, and often include diagrams, statistical graphs, also, used to improve processes or develop products in any organization by identifying, analyzing and evaluating data that is relevant to their business. Therefore, by using the tools and techniques, one can investigate problems, identify solutions and implement them in work practices, by measuring and analyzing the outcome. The seven quality control tools described by Ishikawa are usually perceived as too simplistic and not appropriate (Bamford et al, 2005).In a study conducted by Scheuermann L. et al., the tools classified as Qualitative tools include flow charts, cause-and-effect diagrams, multi-voting, affinity diagram, process action teams, brainstorming, election grids, and task list), whereas Quantitative tools include Shewaryt cycle (PDCA), Pareto charts, control chart, histogram, run

chart, and sampling. TQM tools are practical methods, skills, means or mechanisms that can be applied to particular tasks. A technique has a wider application, often resulting in the need for more thought, skill and training to be used effectively, such as SPC, benchmarking, quality function deployment (McQuater, 1995).

The most popular sets of TQM tools are as below-

- Check sheet
- Pareto Principle: Identifying the key problems
- Control Charts: Variation Control
- Cause and Effects, Fishbone, Ishikawa Diagram
- Histogram or Bar Graph
- Traffic Light System

Check Sheets

Check sheets are used to organize information in order to facilitate data gathering. Check sheets are particularly effective for doing inspections, enabling focus on the particular attributes that may be contributing to potential or identified quality problems.

Pareto Diagrams

A Pareto chart or diagram is a specific type of histogram that is based on Pareto's principle, which states that a large number of defects or problems are caused by a small number of causes. Pareto's principle, frequently referred to as the 80/20 rule or 80/20 principles. Which means that eighty percent of the costs of defects are caused by twenty percent of the problems? A Pareto diagram is an ordered bar graph showing the number of defects and their causes ranked by frequency. The bars on the diagram graphically show the number and percentage of causes individually and the line shows the cumulative value. Pareto charts help focus attention on the most critical issues to get the most benefit.

Control Charts

Control charts are used to determine if processes are in or out of statistical control. Most processes experience a degree of normal variation (or common cause variation); that is to say, most processes do not achieve target performance all the time. Control charts provide a mechanism for establishing a statistically objective range of acceptable variation around the

target performance, thereby enabling attention to be focused on special cause variations (those that fall outside of the established performance limits).

Cause and Effect Diagrams

Cause-and-effect diagrams, or Ishikawa diagrams, were developed by Kaoru Ishikawa to illustrate and help determine how various factors relate to potential problems. Cause-and-effect diagrams are also called fishbone diagrams because they resemble the skeleton of a fish. The head of the fish is the effect and each bone of the fish is a cause that leads to that effect. The bones can branch off into smaller bones as you determine the lower-level cause-effect relationships. When all the bones are filled in, the diagram lets you look at all the possible causes (individual or combinations) of the effect (or problem) so that you can develop a solution to mitigate that effect. The diagram allows organized thought and encourages orderly consideration of the factors that result in a certain outcome.
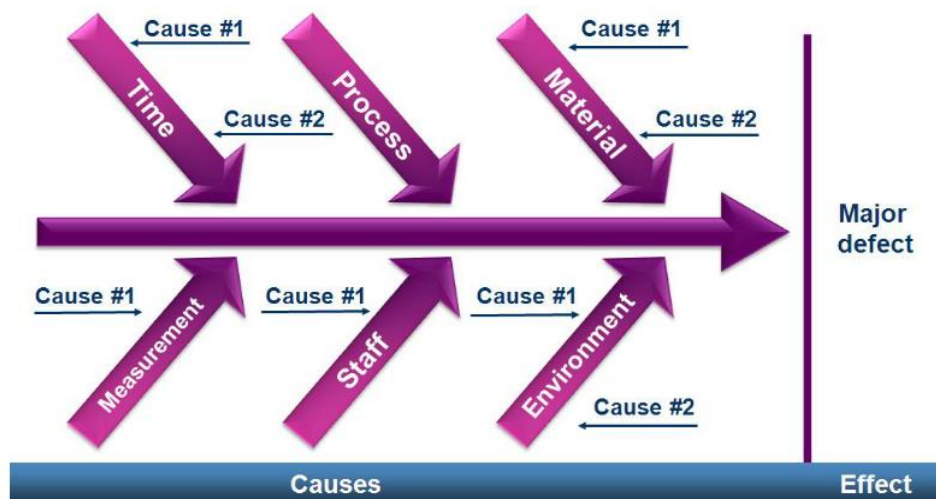
Figure 1 Fishbone diagram

Histograms

A histogram is a vertical bar graph that represents the frequency of each measured category (known as bins) of variable. In other words, the graph represents a rough frequency distribution of the data. The histogram is particularly useful for identifying common causes. The histogram can be ordered, similar to a Pareto chart, or unordered

2.1.6. Overview of Garment Production Process

GMM has been established 17 years ago but have a new building which makes the working environment is suitable for the workers. And have organizational structure in which general

managers (owners) do the administration the existing organizational structure have suitable working environment for workers. Which is that, cutting, sewing, quality, finishing, sampling and design, store (ware house),HR(human resource), marketing/sales and finance are classified as departments which work together for the manufacturing process which creates simplicity for the management and affects the performance Of the industries in a good way.

Here we can see garment manufacturing process in each department. Besides departments such as information technology and legal are missing which are important to be world class competitive in the current global market.

Sampling and design department

In this department both designing (developing new products) and sampling is done starting from pattern making, pattern grading also stitching the sample. Sampling is one of key elements of the pre-production processes in a garment industry to get approvals for starting the bulk production. In this section sampling is not only to get approval by the customer or buyer but also it is also important to the manufacturer derive estimates of yarn consumption for development of fabric, dyeing, printing, and stitching cost for a particular style or pattern given by the buyer. Once the patterns are developed and the sample garments are accepted by the buyers the patterns are send to cutting department for mass production.

Cutting department

In this section marker making, spreading, fabric cutting, bundling, fusing and embroidery are the main tasks done. And most of these tasks are done manually.

Marker Making**:** Marking refers to the process of placing pattern pieces to maximize the number of patterns that can be cut out of a given piece of fabric. Marker making considers fabric width, length, fabric type and subsequent cutting method used. Markers can be made manually or using software where the computerized method is more efficient. But in GMM it is done manually.

Fabric Spreading**:** It refers to spreading fabrics on tables by operators manually or by using spreading machine. The number of fabric layers depends upon the required demand of the product. After proper spreading is done, the pattern papers are properly laid upon the fabrics.

Fabric Cutting**:** Pattern pieces are cut out of fabric once the marker is made. At present, apart from using traditional tools, computerized cutting systems are widely used for cutting. Pattern specifications are kept into consideration while cutting which ensures that the constructed garment is exactly similar to the sample produced.

After all these processes are completed the cut panels will be dispatched to sewing department.

Sewing department

The sewing process is the attachment of different parts of the cut pieces received from the cutting department. The factory follows a type of chain work while doing the sewing process which means this work place there are many operators who perform single operation. This is the main assembly stage of the production process where fabric is stitched together and a garment is assembled. In doing so the final product is produced. After all, the final products are sent to finishing department

Finishing department

Finishing in garment industry is a process which consists of pressing or ironing, folding and packing of garments. Pressing makes a good contribution to the finished appearance of garments and their attractiveness at the point of sale. Pressing is done to smooth away unwanted creases and crush marks but also to make creases if the design of the garment requires.

Quality department

The department have garments quality team who work to control quality and responsible for Quality control and Quality assurance. Which this team have a quality checkers in each department except sampling and design department. They are authorized to stop production any time if quality falls significantly. In GMM the quality department has quality checkers (quality controllers) in cutting, sewing, finishing a department that makes sure that the output of all the departments is free from defects and the products are fit. in sewing there are 2 types of QC which are in-line quality (roving QC) that assure quality by checking what the sewing operators have done and end line QC that will check the final product if it is free from defects

2.2. Empirical Review

2.2.1. Quality as Implication of Building Company Reputation

Quality is one of the top if not the most important driving forces behind consumer trust. There are brands that are synonymous with quality because they know how to ensure quality throughout the product lifecycle and, as a result, can confidently promote that to their audiences.

On the other hand, there are also brands with tarnished reputations due to poor quality or mishandled product recalls. Some of those brands may never regain consumer trust or even market share. (Nina McIntyre, 2019)

Quality reflects on your company's reputation. The growing importance of social media means that customers and prospects can easily share both favorable opinions and criticism of your

product quality on forums, product review sites and social networking sites, such as Facebook and Twitter. A strong reputation for quality can be an important differentiator in markets that are very competitive. Poor quality or product failure that results in a product recall campaign can lead to negative publicity and damage your reputation.

Carr and Littman (1997) and Goodman (1999) reported that only 5% of all dissatisfied clients complain. This number has not really changed in the past 30 years (Grainer, 2003) despite the investment of billions of dollars in service recovery systems. The majority of those who do not complain change service providers, or retain the old provider temporarily for reasons of convenience while looking for other alternatives. While managers think that no news is good news, there is a groundswell of negative publicity-building that threatens to cause serious damage to the company. (Moshe Sharabi, 2014). Moreover, while a satisfied client shares his feelings with 1 or 2 people, a dissatisfied client shares his negative feelings with 9–10 people (Carr & Littman, 1997). Therefore, even if only 1 in 10 clients is dissatisfied, their negative influence overshadows the positive influence of the other nine clients. Would one acquire services or products from an organization about which one has heard both positive and negative reviews in a similar number? One would probably look for a different organization where the positive reviews outnumber the negative ones.

If your business consistently delivers what it promises, your customers are much more likely to sing your praises on social media platforms. This not only helps drive your brand awareness, but it also creates the much-desired FOMO effect, which stands for "Fear of Missing Out." Social-media users that see your company's strong reputation will want to become part of the product or service you're offering, which can boost your sales. (Sampson Quain, 2019)

Providing services will create a personal relationship, if it is given greatly, then the relationship will improve consumer trust, and vice versa. Several studies reveal that service quality influences customer trust. The higher level of service quality provided; the higher level of trust accepted by company. The successful and sustainable of company in competitive environment depends on the company's ability to produce services according to customer needs. (Parthiban, 2011).

2.3. Conceptual Framework

This section explores the linkages between TQM and company reputation. There are many corporate and industrial environmental philosophies and practices that are closely linked to and support the philosophy of TQM (total quality management)
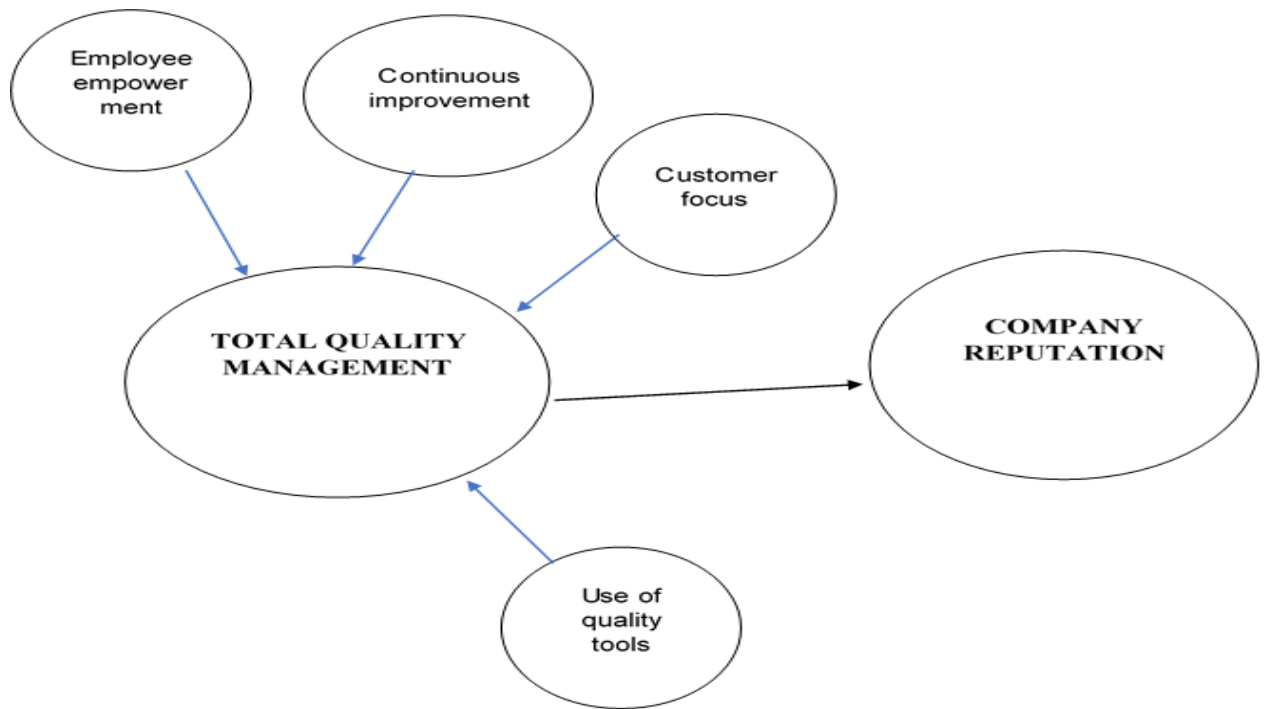
Figure 2 conceptual framework

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

This study is done in GMM garment PLC which is a garment manufacturing industry located in Addis Ababa, Lebu industries zone that the study analyzes total quality management and its implication for building the organization's reputation. To accomplish the objective of the thesis, the researcher has applied the following methodologies. Complete literature surveys have been conducted regarding the concept of Total Quality management, and also how quality of a product is one way of building an organization reputation and overview about Ethiopian garment manufacturing industries. Following literature survey, in order to analyze the Total quality management and its implication to build the reputation of the GMM garment PLC, data collection is carried out; both primary and secondary data is collected using a questionnaire, checklists, face to face interviews and, personal observations and review of previous research works.

3.2. Research Design

The research design for this study is Descriptive research. Descriptive research attempts to describe systematically a situation, problem, phenomenon, service or program, or provides information about, say, living condition of a community, or describes attitudes towards an issue. (Sam Goundar, 2012). In this study the researcher has described if there is any kind of TQM is being applied, how the organization is applying the TQM, the attitude of the employees and management toward quality of their product. For analyzing purpose the study collected defect name and defect quantity from production floor, and also the most common quality problems faced by the organization.

3.3 Population Study and Sample Size Determination

3.3.1 Population Study

In this study, the study design has adopted quantitative and quantitative data. For collection this data questionnaire, checklist and interview has been used. In the organization there are different departments (sections), which are sample making, cutting, sewing, finishing and store. In these sections there are 256 workers on current time which may fluctuate time to time. For the sampling in this study stratified random sampling technique is used considering to select employees from these sections.

3.3.2 Sample Size Determination

In principle, accurate information about given population could be obtained only from census study. However, due to time constraint, in many cases, a complete coverage of population is not possible; thus, sampling is one of the methods, which allow the researcher to study relatively small number of units representing the whole population (Sartnakos, 1998), currently in GMM garment there are 256 permanent workers who are assigned in different department of the company.

In order to decide number of respondents that will involve in the questioner survey and interviews, the researcher uses probability sampling of stratified sampling technique. From each section a randomly selected sample serve as a sampling frame.

This study applied simplified formula provided by Yamane, (1967) to determine the required sample size at 95% confidence level, degree of variability = 0.5.

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

Where:

n = Desired sample size

N = Total population size

e = Accepted error limit (0.05) on the basis of 95 percent degrees of confidences put into decimal *form*

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

$$n = \frac{256}{1 + 256(0.05)^2}$$

$$n = \frac{256}{1.64}$$

n = ~ 156

Currently, the company has 6 different sections. To have fair distribution between the sections, stratified random sampling method is used.

Table 3. 1 Sample size proportion

R/no	Respondent's strata	Proportion sample size
1	Sample department	3
2	Store and warehouse	3
3	Cutting department	16
4	sewing department	110
5	quality department	12
6	finishing department	15

3.4 Data Type and Data Sources

The data type for this research both qualitative and quantitative data is used

3.4.1 Primary Data Sources

The primary data is collected from employees from deferent department of the organization and the management by questionnaire to assess their awareness and the attitude about quality. The professional employees in this companies is chosen to fill the questionnaire. That will help to receive unbiased and more accurate response, and also check list is prepared that is helpful to easily identify the quality problems in the organization.

Direct observation

The method was used to acquire data on different methods, the research visits the organization and recorded the production process and how the quality assuring and controlling procedure.

Interview

Structured interview was used to collect information from operators, department heads and management. The interview includes the general awareness of quality and TQM, the reputation that they have about GMM for those who couldn't read and write

Questionnaire survey

Structured questionnaire survey was used to collect information from the employee and the management of GMM. The questionnaire generally includes data on Quality Practices in the company, causes of poor quality products and Reputation of GMM.

3.4.2 Secondary Data Sources

To strengthen the reliability of research data and the information gathered in the questioner survey, information is collected from other related researches, Journals, the company procedure and policy and other relevant documents or reports by the company.

3.5 Data Analysis

The collected data through the means of interviews, questionnaires, direct observation and checklists is analyzed & interpreted. Both qualitative and quantitative data analysis techniques are employed to analyze the data, the particular reason is that we have both qualitative and quantitative data. The data from the questionnaire is presented in a narrative form by using tables. Descriptive statistics is applied for the presentation, Frequency tables, charts, graphs, figures, percentages is used as appropriate to analyze, interpret, tabulate and present the result of the study.

3.6 Validity and Reliability

Validity indicates the accuracy of the instruments in relation to what they intend to measure. Checking the validity of data collecting instruments before providing to the actual study subject is the core to assure the quality of the data (Creswell. 2009). To secure the content validity of the instrument, the researcher referred previous researcher's questionnaires that fit the purpose, review the instrument before distributing to the respondents

To achieve reliability, respondents were given awareness on the objectives of the investigation and that there should be a consistency there feedback if the study was repeated as the same time the conclusion drawn from the feedback where considered the average or consolidated one.

3.7 Ethical Consideration

Research ethics is important in our daily life research endeavors and requires that researchers should protect the dignity of their subjects and publish well the information that is researched (Fouka & Mantzorou, 2011). So in this research the information and data collected will not be used for other purposes and also given for other 3rd party. During research a researcher must protect the information given in confidence by the respondent, also the identity of the respondent. Anonymity refers to keeping secret by not identifying the ethnic or cultural background of respondents, refrain from referring to them by their names or divulging any

other sensitive information about a participant (Mugenda, 2003). So the researcher will address ethical considerations of confidentiality and privacy. The researcher will use a rigorous and conscious effort at all times to sustain this promise. A guarantee is given to the respondents that their names should not be revealed in the research report. Moreover, participants will receive a verbal and written description of the study, and informed consent will not be obtained before the survey. Participation in the study are voluntary, and all participant responses is confidential and can quiet to respond the question anytime they like. Finally, a copy of the final report is available to the schools if necessary

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1.Introduction

This chapter focused on data analysis, interpretation and presentation. The purpose of the study was to analysis on total quality management in garment industry and its implication to build company reputation: case of GMM garment plc. The research assed what does the existing total quality management practice look like in the organization,

A total of 80 questionnaires were distributed out of which 58 of the questionnaires were completed by the respondents which is 73% response rate. The most common reasons given for non-response were low educational level, language barrier, shortage of time and unwillingness. And a total number of 75 interview was planned to do but it was able to do 35 participates which all of them are from all section, due to shortage of time.

4.2.Characteristics of respondents

Most of the respondents in this study are in different working department and have different working position, this is believed to be an important feature. The particular reason is that it is efficient to show that the TQM practices in all departments.

The table below shows that the 90% of the respondents are women and 10% of men, and the other is that they are from different departments which is 50% from sewing, 28% from quality, 10% from cutting, 9% finishing and 3% from sample and design department. The other thing is that the position, which 31% operators, 22% checkers, 22% supervisors, 10% helpers, 9% ironer, 7% department heads.

Table 4.1 Characteristics of respondents

GENDER		DEPARTMENT					POSITION						
MALE	female	sample	cutting	sewing	quality	finishing	department head	supervisor &ass-supervisor		operator	checkers	ironer	helper
10%	90%	3%	10%	50%	28%	9%	7%	22%		31%	21%	9%	10%

Source: Own computation

4.3. TQM practices in GMM

Table 4.2 quality practice

	Answers	
	YES	NO
Does the company have quality management system (TQM, QMS,)?	83%	17%
Does the company recognize and solve the quality related problems?	86%	14%
Are there inspection & tests for incoming, in-process and final products?	74%	26%
Does the company have a procedure for evaluating subcontractors or suppliers?	81%	19%

Source: Own computation

From the above table, 83% of the respondent believe that the company have a quality management system and 17 % of the respondents disagree, the 86% of the respondent have said that the company recognize and solve the quality problems and the other 14% answered that it does not recognize and solve.

When 74% of the respondent said that there is inspection & testing for incoming, in-process and final product the other 26% don't believe that the company does inspection & testing for incoming, in-process and final product. Also 81% of the respondents said the company have a procedure for evaluating the suppliers, but the other 19% said it doesn't have.

From the interview the top management and quality team assume that TQM is implemented on the production floor but the fact on the ground don't show that it is not fully implemented, general most of the quality practices that the quality team does is uses some SPC tools like check list, DHU (Defects per hundred units) percentage and identifying the top three defects occurring frequently.

4.3.1. Quality concept and understanding in the factory

	poor	fair	good	v.good
What is the quality awareness level in the company?	12%	31%	49%	8%

From the above the respondents said 8% V.good, 49% good, 31% fair and 12% poor quality awareness level The general understanding of quality concept in the factory is higher at the top

level of the organization which means operation manger, department heads, supervisors, quality checkers (QC) and assistance supervisors but gets lesser as it goes down to operators, helpers and ironers the particular reason to say this is 41% of the respondents are in operator, helper and ironing working position . All the operation manger, department heads, supervisors, assistance supervisors, especially quality checkers (QC) think and believe that they have responsibility and duty for producing a product which is fit in quality and also decrease rework amount and defective pieces. But most of the operators, helpers and ironers think that they are not responsible for the fail to achieving a product which is free from defect and think that the duty for assuring and controlling quality is only for quality department.

4.3.2. Employee empowerment

According to the respondents, the existence of strong cooperation and teamwork is also not satisfactory. Which is that when there is quality problems in the enterprise only responsible parties will be concerned about the quality, this actively demonstrate that employee empowerment is low that fixing things will not be easy. We know Employee Empowerment builds confidence in workers by showing them that the company has confidence in their ability to make decision on their own.

4.3.3. Customer focus

From the table below 87% of the respondents have said that the organization identifies customer requirements and 13% said it does not have, from the interview the management said that objectives of the company are linked to customer needs and expectations but from the respondent it shows that 43% of the respondent said the enterprise does not have customer's complaints handling mechanism, and 57% said it have.

Table 4.3 customer focus

	YES	NO
Does the company identified customer requirements?	87%	13%
Does the company have customer's complaints handling mechanism?	57%	43%

Source: Own computation

Most of the style of the product of GMM are selected by the customer and sometimes even the organization will provide its own products. Currently GMM have two customers one is local and the other is foreign, and the enterprise don't threat the quality level of local and export

products equally, most of the reason is that because of the price and by the requirement of the customer.

4.3.4. Continuous improvement

Table 4.4 training frequency

	Yes		No		
Did you have any form of training since joining the organization?	100%		0%		
Do the methods used during training have any impact on your skill?	100%		0%		
How often you have undergone training?	Quarterly	Every 6 months	once a year	Every 2 years	No Specific schedule
	0%	14%	22%	24%	40%

Source: Own computation

According to the first category of questions 100% of the respondent have said that training have been given to them and also believed that the methods used during training have positive impact on their skill also The frequency of trainings given to employees is very low. As a result, the overall skill of most of the employees is low but there are some employees which are multi skilled and with a good educational background which is related with what they are doing and also almost all of the department Heads are a graduate of university in their working field . Usually, the industry gives training only on hiring and if some other garment aiding organizations prepare some training programs. From the interview the QC are trained on job which means they don't have any background education regarding quality and TQM, From the interview and observation, it has been understood that the enterprise does not have quality improvement programs and spend most of their time in detecting the defects of the products rather than preventing the defects and plan for improvement. As a result, the quality control activities are more on inspection-based instead of prevention-based. Visual inspection techniques are not effective methods and low awareness about quality and application of the SQC tools is not strong.

4.3.5. Causes of poor-quality products in GMM

The Quality Practices in the company reveals the causes of poor quality products in the enterprises. Lack of required knowledge and skill of employees, poor quality of raw materials, and inadequate training of workers also have a significant impact on the quality of products. Referring to the subjective answers, from the questioner the cause of quality related problems

faced by the enterprises are lack of quality awareness, improper training, unskilled manpower, lack of motivation of workers, and improper inspection techniques.

Causes of poor quality products

- Low quality awareness of workers in the company — 23%
- Due to carelessness of workers in the company — 20%
- Defective raw materials delivered from suppliers — 14%
- Due to poor maintenance of machines in the company — 14%
- Inadequate training of workers in the company — 11%
- Lack of top management commitment to quality — 9%
- others(like poor communication & low technology) — 9%

Figure 3 Causes of poor quality   Source: Own computation

Other problems include low technological level, customer dissatisfaction because of late delivery, high rate of rework/rejects, low-quality fabric, internal communication problem and poor understanding of customers' requirement.

From the second category questioner it was to List down all defects that the employees encountered in their daily activities and If possible, to mention all the possible root causes for each defect. And 31% of the respondents from different department of the enterprise were able to fill the questions and 12% of the respondents were able to give name of the defect and their causes.

Cutting department defects

Most of the defects listed on the table below are defects encountered by the respondents in cutting room which are caused by machine, men (operator), method of working and material or fabric propriety as shown for the possible root cause for defect.

Table 4.5 cutting department defects

List of cutting Defects	Possible root causes for defects
wrong cutting	operator handling and skill
Incorrect tension of plies	Spreading mistake
Number &bundling	Negligence and lack of focus
pattern defect	Damaged pattern
Notch mark (big, invisible and incorrect placement)	operator handling and skill, cutting blade problem
marker problem (missing parts)	Negligence and lack of focus
Rugged cut	operator handling and skill, cutting blade problem
Bowing	Fabric problem and spreading mistake
wrong Fabric way	Spreading mistake, Negligence and lack of focus
Measurement problem	Pattern problem, marker mistake and cutting mistake
fusing problem	Machine problem and fusing material quality
Stain	Fabric problem, cutting room cleanness

Source: questioner

Sewing department defects

Most of the defects listed on the table below are defects encountered by the respondents in sewing section and the quality team which are caused by machine, men (operator), method of working and material or fabric propriety as shown for the possible root cause for defect.

This defects may be found in process checking by the roving QC, line supervisor, checker or the operator and it may also be found at end-table checking.

Table 4.6 Sewing department defects

List of Sewing Defects	Possible root causes for defects
uneven stitch	operator handling and machine problem
Runoff stitch	operator handling problem and machine control problem
Uneven topstitch	machine problem and low operator skill
Down stitch	machine problem and low operator skill
Puckering	Uneven stretching on to plies of fabric during sewing & Improper thread tension
Broken stitch	Due to improper trimming or machine usage.
Skip stitch	Improper setting and timing between needle and lopper or hook etc.
Open stitch	Improper handling of the parts of garments.
Size mistake	Negligence and lack of focus

Uncut thread	Improper trimming or finishing.
Bar tack Defect	operator handling and machine problem
Oil / Dirty	Machine cleanness
Raw edge out	Handling mistake
Damage	Fabric, machine, and operator problem
Needle Mark/Cut	Broken needle
uneven SPI	operator handling and machine problem

Source: questioner

Finishing department defects

Most of the defects listed on the table below are defects encountered by the respondents in finishing section and the quality team which are caused by machine, men (operator), method of working and material or fabric propriety as shown for the possible root cause for defect. This defects are found at final or presentation checking.

Table 4.7 Finishing department defects

List of finishing Defects	Possible root causes for defects
Iron problem (shining and color change)	Improper usage of iron machine
seam tear	Wrong setting of heat on ironing machine
pilling	Rough area on ironing machine
pleats	Lack of skill
stain and other unwanted marks on fabric	Ironing Machine cleanness

Source: questioner

4.3.6. SPC (Statistical process control) tools used to measure quality

In the enterprise the quality department team uses check list on end line to check and record the defects on the final product and at finishing the QC uses check list for checking and recording the final product presentation or appearance and doing the defective percentage and recording the top three defects to identify and focus on those area.

From the quality checking list filled by the end line checkers we can get the quantity of the total checked pcs, pass pcs, defective pcs, and types of defect and the occurrences frequency of the defects. By using check sheet, it has been collected the frequency of defect. The entire defect is not occurred in same frequency, some defect is appearing very frequently and some is in less frequent. To analyze the quality problems TQM Tools is help full as seen from the literature Pareto Chart is one method. Pareto analysis is a statistical technique in decision

making that is used for selection of a limited number of tasks that produce significant overall effect. It uses the Pareto principle the idea that by doing 20% of work, 80% of the advantage of doing the entire job can be generated. Or in terms of quality improvement, a large majority of problems (80%) are produced by a few key causes (20%). All the data collected by check sheet has been plotted in Pareto chart and found the 20% defects that causes of 80% problems. The 20% defects are open seam, skip stich, missing button and stain. From the observation the quality team don't use Pareto chart to identify the 20% defects which listed at the above which is helpful to eliminate the other 80% as the principle.
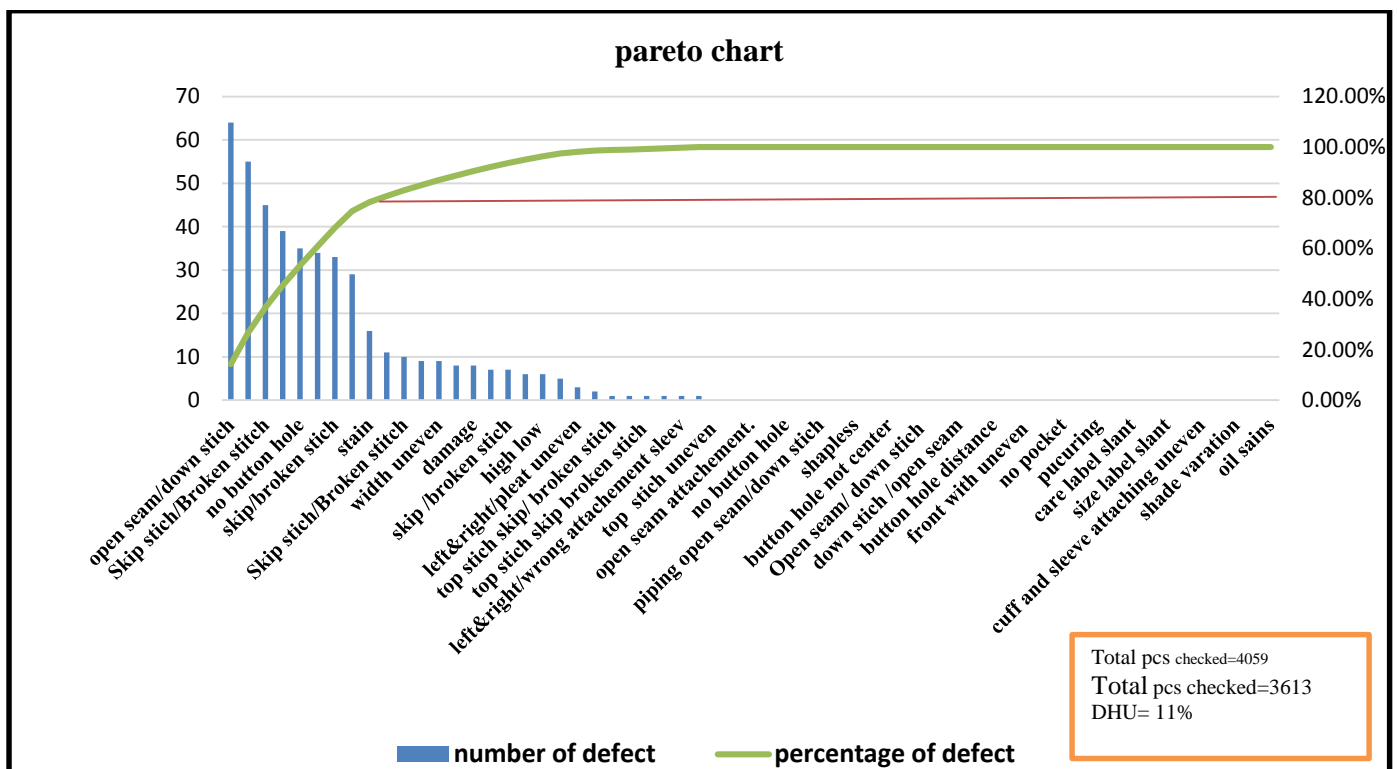
Figure 4 Pareto chart   Source: Own computation

Here on "Figure 3" there is Pareto chart done from the collected of one month, which is that the 20% of the total defect is open seam/ down stitch. And the top three defect are open seam/down stich, no (missing) button and Skip stich. If we identify the defects we can find the cause of this defects and came up with preventive plan and minimize or eliminate this defects.

Defect rate of the company

The defect rate graph (Figure 4) shows that the checked pcs, pass or ok pcs and the DHU in each day, in one month the QC have checked 24,058 shirts out of this t-shirts 22,749 pcs are free from defect and the average DHU is 5.4%. Which show from every hundred t-shirts made 5 or 6 pieces are defective.

DHU REPORT OF T-SHIRT

checked pcs = 24058 pcs   pass pcs= 22749 pcs   dhu = 5.4%
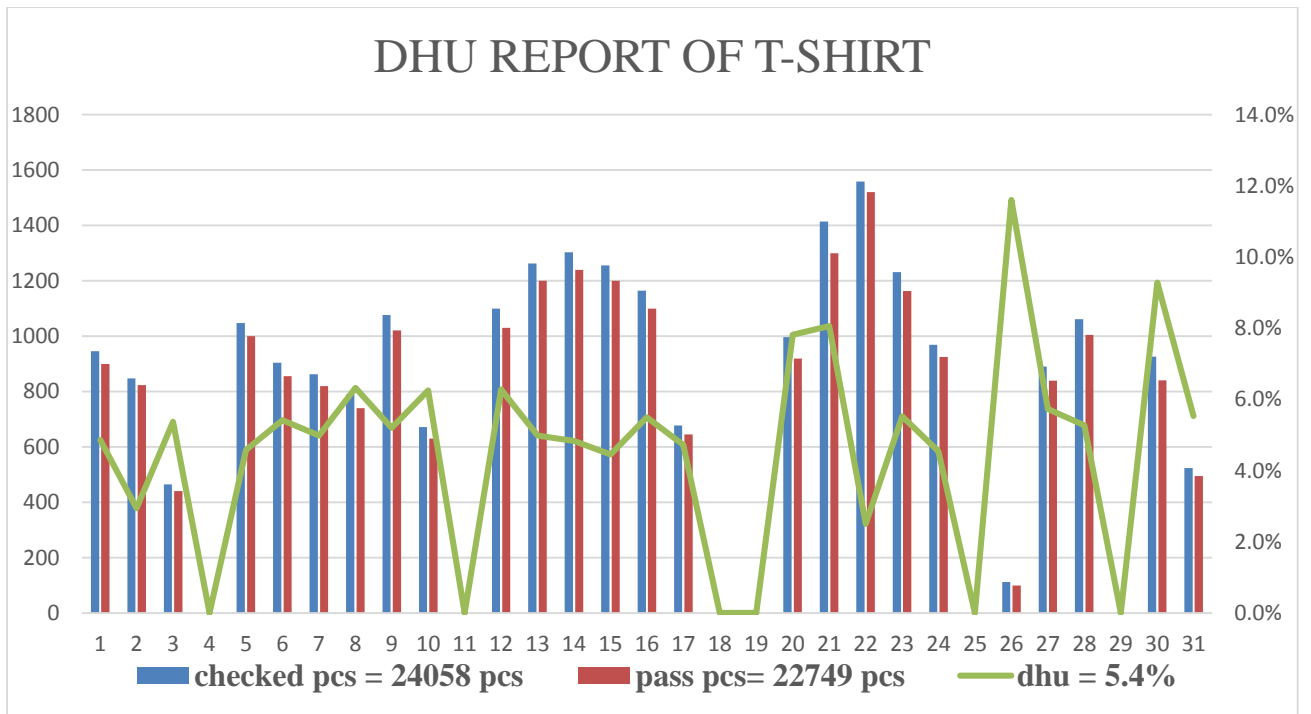
Figure 5 Defect rate of the company   Source: Own computation

Cause-Effect Diagram

Cause-and-effect diagram is a chart that identifies potential causes for particular quality problems. They are often called fishbone diagram**.**

As seen from the Pareto analysis the 20% defects are open seam, skip stich, missing button and stain, so to solve a problem you have to know the cause first and fishbone diagram is the easiest way to find "the root of the evil" for instance we can see what are the causes of the most frequent defect which is "open seam".

FISHBONE DIAGRAM

Man — Resistance to accept new system; Lack of skill; Piles not aligned properly

Machine

Incorrect threading; Stitching method not standardise; Incorrect thread tension — Methods

Weak thread — Material
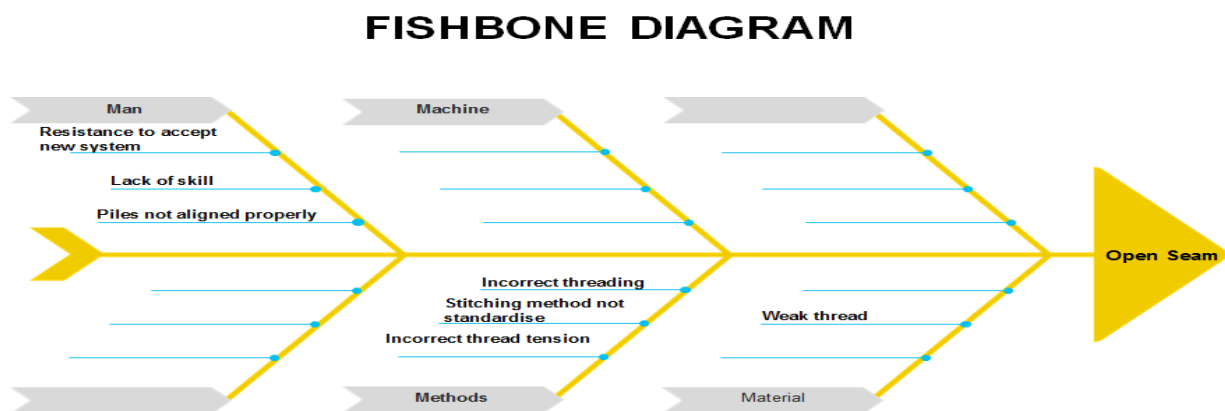
Open Seam

Figure 6 FISHBONE DIAGRAM FOR OPEN SEAM

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4.4. Reputation of GMM in the eye of its employee

15 questions were posed to the employees to uncover their opinion about GMM as an organization which will show the reputation of the organization in the eye of its employee and customers.

Table 4.8 Reputation of GMM

GMM….	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree		Mean	STD
	N	%	N	%	N	%	N	%	N	%		
1. Stands behind its products and services	-	0%	-	0%	3	5%	47	81%	8	14%	4.086	0.4306
2. Develops innovative products	-	0%	-	0%	7	12%	25	43%	26	45%	4.328	0.68538
3. Offers high quality products and services	-	0%	-	0%	3	5%	40	69%	15	26%	4.207	0.52176
4. Offers products/ services that are good value for money	-	0%	-	0%	12	21%	36	62%	10	17%	3.966	0.62029
5. Has a clear vision for its future	-	0%	3	5%	30	52%	20	34%	5	9%	3.483	0.7549
6. Recognizes and takes advantage of market opportunities	-	0%	3	5%	40	69%	10	17%	5	9%	3.293	0.70109
7. Is well managed	-	0%	4	7%	20	34%	26	45%	8	14%	3.655	0.80681
8. Is a good company to work for and work with	-	0%	2	3%	6	10%	40	69%	10	17%	4	0.64889
9. Is a company that have good employees	-	0%	-	0%	16	28%	40	69%	2	3%	3.759	0.50646
10. Has social responsibility to the community/ environment	-	0%	2	3%	25	43%	31	53%	-	0%	3.5	0.5697
11. Maintains a high standard in the way it treats people	-	0%	8	14%	30	52%	7	12%	13	22%	3.431	0.99317
12. Has strong record of quality	-	0%	-	0%	7	12%	39	67%	12	21%	4.086	0.57076
13. Tends to outperform its competitors	-	0%	2	3%	36	62%	20	34%	-	0%	3.31	0.53662
14. Uses corporate assets wisely	-	0%	8	14%	40	69%	10	17%	-	0%	3.207	0.89362
15. Has good reputation in the media	17	29%	38	66%	3	5%	-	0%	-	0%	1.759	0.53999

Source: Own computation

The mean level of agreement between the groups is categorized on the scale. According to Likert scale, to determine the minimum and the maximum length of the 5-point Likert type scale, First method is calculated by $(5 - 1 = 4)$ then divided by five as it is the greatest value of the scale $(4 \div 5 = 0.80)$. Afterwards, number one which is the least value in the scale was added in order to identify the maximum of this cell. Therefor this will be obtained from 1 to 1.80 represents strongly disagree, from 1.81 until 2.60 represents (disagree), from 2.61 until 3.40 represents neutral, from 3.41 until 4.20 represents agree and from 4.21 until 5.00 represents strongly agree. Therefore with this scale respondents are asked in which specify their level of agreement to a statement typically in five response categories. (Strongly agree =5, agree=4, neutral=3, disagree=2, strongly disagree=1).

The enterprise has a good reputation according to the respondents. The particular reason for saying that GMM has a good reputation is that the respondent strongly agree on that GMM Develops innovative products, offers high quality products and services, with a mean of= 4.21. Also the respondent Agree that the enterprise Offers products/ services that are good value for money, a good company to work for and work with, supports good causes, has social responsibility to the community/ environment and has strong record of quality. Which all the mean level of agreement between the groups is from 3.41 until 4.20 represents agree. As mentioned at the above GMM is currently working with two customers and both customers have said on the interview that they agree the enterprise offers a good quality products, excellent leadership, has strong record of quality and Has good reputation according to its previous customers because of the reasons mentioned at the above.

But the respondents disagree that GMM has good reputation on the media the reason for saying this is that the mean to this response is 1.759 but the managers have said that the enterprise have done some television advertisement on ASHAM TV about the company and its product, and also have a plan to do same advertisement on other TV channels and other plat forms which will show the quality of its product and creates awareness about its product for the local customers

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 Summary of Major Findings

Based on analysis made on the previous chapter, the major findings of the study are summarized as follows:

- 83% of the respondent believe that the company have a quality management system and also 86% of the respondent have said that the company recognize and solve the quality problems

- The quality awareness level in the company as the respondents said 8% V.good, 49% good, 31% fair and 12% poor quality awareness level The general understanding of quality concept in the factory is higher at the top level of the organization but gets lesser as it goes down to operators, helpers and ironers.

- 100% of the respondent have said that training have been given to them and also believed that the methods used during training have positive impact on their skill also The frequency of trainings given to employees is very low

- 87% of the respondents have said that the organization identifies customer requirements and 43% of the respondent said the enterprise does not have customer's complaints handling mechanism, this shows that the degree of communication with the customers to understand their requirements and translating into products is that the existence of favorable system for customers to express their feelings is very low

- As of the respondents the causes of poor quality products is 23%, Low quality awareness of workers in the company, 20% Due to carelessness of workers in the company, 14% Defective raw materials delivered from suppliers and Other problems include low technological level, customer dissatisfaction because of late delivery, high rate of rework/rejects, low-quality fabric, internal communication problem and poor understanding of customers' requirement

- The enterprise has a good reputation according to the respondents. The particular reason for saying that GMM has a good reputation is that the respondent strongly agree on that GMM Develops innovative products, offers high quality products and services, with a mean of= 4.21. But the respondents disagree that GMM has good reputation on the media the reason for saying this is that the mean to this response is 1.759

5.2 CONCLUSION

In this study, it tries to see how an organization has implemented TQM and how to improve quality by implementing it. Quality is what the customer needs, and TQM is a firm-wide management philosophy of continuously improving the quality of the products by focusing on the customers' needs and expectations to enhance customer satisfaction and firm performance, which is that a good way to build a good reputation as they say " Today's quality is tomorrow's reputation".

In today's competitive market, no organizations could survive without continuous improvement in their product quality and process, by focusing on ultimate customer. Even a little deviation from the customer demands can lead to the poor quality of design. So it's very much burning issue that how to ensure industrial quality production. That's why; many successes full enterprises have put a tremendous effort to develop a well-defined structure or framework for implementing quality tools particularly implementing TQM in the Apparel industry. And GMM has also implemented TQM as a system for improving its quality of product but this research finding shows that there are quality problems that can be eliminated easily using TQM. But TQM is not fully implemented in the industry for this failure, Lack of Commitment to implement TQM, Lack of Motivation, Communication gap between different parties of within organization and beyond and Scarcity of skilled human resources are the main reasons.

GMM can implement TQM using the pillar of TQM and can improve quality, satisfied the employee by providing a good approach in creation of QM environment, introduction of employees to TQM, encouraging cooperation and teamwork, customer focused product and process design and finally selection of right raw materials for production. Which all leads to a good reputation, and build a huge trust to its customers and makes it the number one choice within its customers, have a dominance, big market share and be the leader of the market.

5.3 RECOMMENDATIONS

The analyzed data indicates that the rework rate is high when it is evaluated with the company's quality target. To improve its quality of product the company focused in controlling the quality by the QC. The factory needs to address the critical causes of defects to improve its quality based on the following recommendations.

➢ Employee Empowerment: - Empowerment builds confidence in workers by showing them that the company has confidence in their ability to make decision on their own. Empowered employees take pride in their work and the resulting products or services produced by it. It helps generate a commitment to the organization and develop a sense of pride

➢ The company should have a continuous improvement plan

➢ Training to understand TQM and enhance commitment throughout the organization.

➢ Establish efficient communication chain for flow of information with the help of information technology

➢ Regular quality meetings with all concerned, reports should be shared and analyzed

➢ Use TQM tools like: -

1. Pareto Principle: Identifying the key problems
2. Control Charts: Variation Control
3. Cause and Effects, Fishbone, Ishikawa Diagram
4. Histogram or Bar Graph
5. Traffic Light System
6. 5S
7. Quality Function Deployment
8. Failure Mode & Effect Analysis.

➢ Do internal audit and properly organized roving quality procedures must be implemented.

➢ The cost of quality must become a major management information tool.

➢ The enterprise should improve its reputation on the media by showing its product using different methods like television, web-site or other plat form. Being more visible and transparent would even improve overall image of the company. A managed information flow would create much needed awareness and maintain or even enhance the people's perceptions of the company.

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Appendix 1

THIS QUESTIONNAIRE IS DEVELOPED TO CONDUCT A SCIENTIFIC RESEARCH ON "ANALYSIS ON EFFECT OF TOTAL QUALITY MANAGEMENT ON BUILDING COMPANY REPUTATION IN GARMENT INDUSTRY: CASE OF GMM GARMENT PLC."

Your answers will be treated confidentially, as we will only be using the results of the surveys as a whole, not individually

PERSONAL DATA:

1. Personal id n$_o$_____

2. Gender

a) Male ☐   b) Female ☐

3. Department: _____

4. Position: _____

5. Did you have any form of training since joining the organization?

a) Yes ☐   b) No ☐

6. How often you have undergone training?

a) Quarterly ☐

b) Every six months ☐

c) Once a year ☐

d) Every two years ☐

e) No Specific schedule ☐

7. Do the methods used during training have any impact on your skill?

a) Yes □ b) No □

Quality Practices in the company

8. What is the quality awareness level in the company? --- --- --- -----------

9. How high is your role and participation in quality activities? ----------------------------------- --- --

10. How is quality defined in the company? --- ---

11. Does the company recognize and solve the quality related problems? □ Yes □ No

12. Does the company identified customer requirements? □ Yes □ No

13. Does the company threats the quality level of local and export products equally? □ Yes □ No

If your answer is NO why?

_____

_____

_____

_____

14. Are objectives of the company linked to customer needs and expectations? □ Yes □ No

15. Does the company have a procedure for evaluating subcontractors or suppliers? □ Yes □ No

16. Are there inspection & tests for incoming, in-process and final products? □ Yes □ No

17. Does the company have quality management system (TQM, QMS,)? □ Yes □ No

18. Does the company have customer's complaints handling mechanism? □ Yes □ No

19. What are the causes of poor-quality products (garments)?

☐ Defective raw materials delivered from suppliers

☐Inadequate training of workers in the company

☐ Due to poor maintenance of machines in the company

☐ Lack of top management commitment to quality

☐ Low quality awareness of workers in the company

☐ Due to carelessness of workers in the company

Other_____

_____

_____

Reputation of GMM Garment plc

GMM….	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. Stands behind its products and services					
2. Develops innovative products					
3. Offers high quality products and services					
4. Offers products/ services that are good value for money					
5. Has excellent leadership					
6. Has a clear vision for its future					
7. Recognizes and takes advantage of market opportunities					
8. Is well managed					
9. Is a good company to work for and work with					
10. Is a company that would have good employees					
11. Has ability to attract and retain talented people					

12. Supports good causes					
13. Has social responsibility to the community/ environment					
14. Maintains a high standard in the way it treats people					
15. Has strong record of quality					
16. Looks like a low-risk investment					
17. Tends to outperform its competitors					
18. Is a company with strong prospects for growth					
19. Uses corporate assets wisely					
20. Has good reputation in the media					

THANK YOU FOR RESPONDING THE QUESTIONS!

Appendix 2

Questionnaire 2

1. Personal id no_____

2. Gender

a) Male □   b) Female □

3. Department: _____   Position: _____

no	List down all defects that you are encountered in your daily production as possible	If possible, mention all the possible root causes for each defect

Appendix 3

	END OF LINE CHEKING REPORT shirt									Document No.	
buyer			COLOR				CHECKER NAM				
STYLE	List of defects	PO#						DATE			
PARTS	top stich uneven /የኮሌታ ደርዝ ሰፊ ጠባብ	1ST	2nd	3rd	4th	5th	6th	7th	8th	REMARKS	
Collar Preparation Band/Before Joint(ኮሌታ)	top stich skip/ broken stich /የኮሌታ ደርዝ የዘለለ /የተበጠሰ										
	left &right not equal/የግራና የቀኝ ከርቭ እኩል ያልሆነ ቅርጽ										
Collar Band Preparation	Open seam attachment. /ሲያያዝ የከፈተ ስፌት										
	button hole not straight/የኮሌታ ቀዳዳ ቀጥ ያላለ መሆኑ ያልሆነ										
	top stich uneven /ለካፍ ደርዝ የዘለለ /የተጠበሰ										
Cuff preparation (ካፍ)	top stich skip/broken /የካፍ ደርዝ የዘለለ /የበጠሰ										
	button hole not center (ቀዳዳው መሃል ያልሆነ										
	piping open seam/down stich/ፓይፒንግ የከፈተ /የወረደ ስፌት										
Sleeve hem preparation(እጅጌ)	not straight/ ሲለጠፍ ቀጥ ያለ										
	shapeless/የተለጣፊዎቹ ቅርጽ የሌለ										
	shade variation/ የከለር ልዩነት										
	button hole not center(ቀዳዳው መሃል ያልሆነ)										
	Skip stich/Broken stitch/ የዘለለ የተበጠሰ ስፌት										
	Open seam/ down stich / የከፈተ/ የወረደ ስፌት										
	yoke attach uneven ዮክ ሲያያዝ እኩል ያልሆነ										
	button hole distance/ /የቀዳዳው ርቀት										
	button hole damage/ቀዳዳየተበላሸ										
	button misalignment/ ቁልፉ እኩል ያልሆነ										
	no button / ቁልፉ የሌለው										
	front with uneven /የፊት ለፊት ስፌት ካፍ …										
	yoke lable slant/not center/ከላይ የሚለጠፈው የተጣመመ መሃል ያልሆነ										
	shoulder attach (ትከሻ ማያያዝ)										
	pocket slant(ኪስ የተጣመመ)										
	Bar tack slant/የተጣመመ ባርታክ										
	Bar tack missing/ባርታክ የሌለው										
	skip stich/broken stitch/ የዘለለ የተበጠሰ ስፌት										
sleeve attaching	Puckering / የተሸበሸበ										

	Left &right/wrong attachment sleeve/ሲገጠም የግራና የቀኝ የተሳሳተ										
	Skip stich/Broken stitch/ የዘለለ የተበጠሰ ስፌት										
	Open seam/ down stich / የጎን ስፌት የከፈተ/ የወረደ ስፌት										
	top stich width uneven /ደርዝ ስፋ ጠባብ										
	Skip stich/Broken stitch/ የዘለለ የተበጠሰ ስፌት										
	open seam /down stich/ የጎን ስፌት የከፈተ የወረደ										
	high low /ጎን ሲያያዝ ብብት የተበላላጠ										
side seam	**collar point high low /የኮሌታው እና የልብሱ ምልከት ከፍ ዝቅ ያለ**										
	skip /broken stich/ኮሌታ ሲደፈን የዘለለ /የተበጠሰ ስፌት										
	open seam down stich/የወረደ ስፌት										
	uneven stich/ስፋ ጠባብ የሆነ ስፌት										
	size label slant/የሳይዝ ሌብል የተጣመመ/የተበላሸ										
	no top stitch/ ቶፕ ስቲች የሌለው										
	no button hole/ቁልፉ ቀዳዳ የሌለው										
collar attach & collar closing	**skip/broken stich/እምባር የዘለለ /የተበጠሰ ስፌት**										
	Open seam/ down stich / የከፈተ/ የወረደ ስፌት										
	Left & right/pleat uneven/የግራና የቀኝ እጥፋት እኩል ያልሆነ										
body &cuff attach	**skip/broken stich/የዘለለ/የተበጠሰ**										
	open seam/down stich/የከፈተ የወረደ										
	width uneven/ስጌፉቱ ስፋ ጠባብ										
bottom hem	**shade variation/የከለር ልዩነት**										
	weaving defect/የሽመና ችግር										
	oil satins/ዘይት										
	damage/የተበላሸ፣የተቀደደ ወይም የተቆረጠ										
fabric defect	**stain(ቆሻሻ**										
No of -checked											
No of- defective											
No of- defect											
No of- pass											

Appendix 4

DATE	LINE- **1** style :-			LINE- **2** style :-			LINE- **3** style :-			Total			Remark
	checked pics	pas s	DHU	checked pics	pass	DHU	checked pics	pass	DH U	checked pics	pass	DHU	
			%			%			%			%	
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			%			%			%			%	
			%			%			%			%	
TOTAL													

Company Name: BUYER :

Title: **DAILY QUALITY REPORT** revision : Page