FACTORS THAT AFFECT RELATIVE PRODUCT QUALITY OF THE SMES IN THE KENYAN APPAREL INDUSTRY

BY

CAROL WANJIRU KOMU

UNITED STATES INTERNATIONAL UNIVERSITY - AFRICA

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A Research Project Report Submitted to the Chandaria School of Business in Partial Fulfillment of the Requirement for the Degree of Masters in Business Administration (MBA)

UNITED STATES INTERNATIONAL UNIVERSITY - AFRICA

SUMMER 2017
STUDENT’S DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution, or university other than the United States International University in Nairobi for academic credit.

Signed: ___________________________  Date: ___________________________
Carol Wanjiru Komu (ID: 637843)

This project has been presented for examination with my approval as the appointed supervisor.

Signed: ___________________________  Date: ___________________________
Professor Scott Bellows

Sign: _____________________________  Date______________________________
Dean, Chandaria School of Business

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ABSTRACT

The purpose of the study was to establish the factors that affect product quality of the SMEs in the Kenyan Apparel Industry. The study was guided by the following research questions: How does a quality department affect apparel relative product quality? How does employee training affect the apparel relative product quality? And how does a set operating procedure affect the apparel relative product quality?

The study took up the approach of a descriptive survey. This aided in recognition of the factors that affect the relative product quality in the SME sector of the KAI. The target population of the study was on KAI SMEs in Nairobi. It will focus particularly on the owners or those in management of these SMEs. From the KAM and AFDAK directories, there are 800 in number. A stratified random sampling technique was used. From the population of 800 and by use of the rule of thumb a 20% sample size was considered, so our sample was made of 160 companies and the target was the owners or those in management of the company.

A total of 160 questionnaires were distributed to small and medium enterprises and only 119 questionnaires were filled and returned giving a response rate of 74.7%, which was considered sufficient for the study. Once the descriptive statistics was applied on the collected data, the results were summarized on different tools such as charts, graphs and tables this allowed the researcher to investigate and draw conclusions on the relationships that existed between the independent and dependent variables in question.

The first objective sought to establish the effects of quality department on the clothing quality. The findings revealed that there was a high extent of autonomy of the quality department (freedom to run the department as they find fit), and high extent was also experienced when quality department coordinates with other departments. Most respondents also noted to a high extent that there was visible quality department and quality department has access to the top management. The findings established that there was a positive relationship between quality of clothing and quality department (r=0.127, p>0.05).

The second objective sought to establish the impact of the employee training on the clothing quality. The finding revealed that to a medium extent there are available resources for employee training and top management is committed to employee training.
However, to a low extent it was revealed that quality achievement training is given to management and specific technical skill training is given to every employee. The findings established that there was a positive relationship between quality of clothing and employee training ($r=0.254$, $p<0.05$).

The third objective sought to establish the impact of a standard operating procedure on the clothing quality. The findings revealed that to a high extent there was a thorough final inspection of the clothes and incoming raw material, as well as clarity of work and process instructions given to employees. There was also a high extent of continuous self-inspection. The findings established that there was a positive relationship between quality of clothing and a standard operating procedure ($r=-0.073$, $p>0.05$).

The study concluded that there exists a high extent of autonomy of the quality department and coordination with other departments. There is also a high coordination between the quality department and the top management to ensure operational efficiency. It was also concluded that the firms have ample resources for employee training, and this is fostered by the top management commitment to ensure employees are well trained. It was also inferred that due to high cost associated with correcting errors there is a vast clarity of work and process instructions given to employees as a standard operation procedure accompanied by continuous self-inspection to minimizes the chance of employee error.

It was recommended that there should be a continuous autonomy of the quality department (freedom to run the department as they find fit) as well as coordination with other departments to ensure quality is maintained. It was also recommended that the sector needs to ensure that available resources for employee training are effectively used this should be supported by top management to ensure its effectiveness. It was also recommended that the firms should maintain a continuous thorough inspection of the clothes and incoming raw material to ensure the quality of the outputs is not compromised.

Further studies need to be undertaken in other sectors so as to be able to generalize the findings. There is a need to undertake a research in the same industry in order to establish what causes the 94% variation in quality of clothing.
ACKNOWLEDGEMENT

I would like to give thanks to God for the guidance he has accorded me up to this level of my master’s program. I also give special thanks to my family for the support and to my supervisor Prof. Scott Bellows, for the guidance throughout this research project.
DEDICATION
I would like to dedicate this research project to my father, mother and sister for all the motivation and support they offered me throughout the course.
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CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Problem

Quality of a product is a major influence on how successfully the product will do once placed in the market and in the long term, its profitability. The term quality is frequently used by both consumers and producers. The consumers are usually looking for a quality that fits their expectation while the producers want their product to be their product. According to Deming (1986), quality is defined as a predictable degree of uniformity. He further states that there should be a consistency of conformance and performance and keeping the customer in mind. For something to be categorized as good or bad, it needs dimensions that can be measured. Sethi (2000), states that the dimensions that are used to measure quality include; aesthetics, performance, durability, workmanship and safety.

Sethi (2000), defines quality as the superiority of the mentioned dimensions as compared to the competing firms. This comparison of product quality between competitors is known as relative product quality. Every firm should aim at having a high relative product quality within the industry. Juran (1998) defines quality as having a product that meets the needs of the customer. He says that this is achieved through three processes that are quality planning, quality control and quality improvement. To achieve good quality there is need to understand the needs of the customer and set goals that are in accordance to the same.

Crosby (1979), defines quality as the full and perfect conformance to the customers’ requirements. Both Juran (1998) and Crosby (1979) agree that quality is based on the needs of the customer and that the needs are met. Once one has done the needed research to find the specific needs of the customer, there is then a plan needed to be put in place to achieve that that is needed to achieve that satisfaction. Quality planning is a key component to achieving of quality. Goals need to be set in line with the needs according to Juran (1998). There is a need for those in charge to understand the psychology of the customers to achieve the conformance (Deming, 1986).

The planning should be followed by measures put in place for the control of the activities. Crosby (1979) states that quality should be free, he focuses on a zero defect production
process that leads to a product that has no problems or variations. He believes, and in accordance to Deming (1986), that the product should be perfectly done and that there should be constant uniformity all through. For zero defects to be achieved there is need for close monitoring of the process from start to end. A firm has to be highly quality oriented (Sethi, 2000). This means that a firm has to have goals of achieving the best quality and have in line, the resources, procedures, planning and control to achieve this. These goals should be communicated to everyone in the firm (Crosby, 1979). This allows for a firm to achieve the best quality and in turn have high relative product quality and success.

It has been observed how product orientation and in turn good quality products have greatly grown industries in some countries and in turn their economies massively improved. It has been argued that product quality gives an organization competitive advantage (Dunk, 2007). This has been observed particularly in the Apparel industries of the world. Many countries have had an apparel industry that has grown in leaps and bounds and become a top earner of the country’s economy. Bangladesh is a good example of this. Bangladesh for a long time depended on agriculture as the economy’s backbone. With time and growth of population, the land to person ratio was very high and it decided to diversify into manufacturing (Yunus & Yamagata, 2012). In the year 2014, Bangladesh garment industry earned USD 19 million which was 80% of the export earnings. It created employment for 4.2 million workers in 4,200 factories.

India is another case study on the success of an apparel industry. India is the second largest producer of clothing in the world after china. The apparel industry contributes in a substantial way towards the country’s export earnings as a result of its high product quality. Just the apparel brings in 30% of the earning from exports. The industry creates employment to over 15 million people and contributes to 20% of the national production industry (Varukolu, 2007).

Sri Lanka is a similar success case after a choice of diversification of the country’s economy by opening up industrialization as an investment option and welcoming foreign investment. The manufacturing industry grew at a great rate and in 2014, apparel industry as a sub sector contributed to the export earnings at 19.7%. It is a leading exporting earner and contributes greatly to the country economy. The apparel industry of Sri Lanka is
highly reputable and carries praises of reliability and high quality of product (Embuldeniya, 2015).

The similar characteristic of these three cases is the level of product quality they offer the world and this is why the world responds to them by buying and that explains the export earnings. It is similar with the AGOA, the quality of products created in the EPZ in Kenya increased drastically as a result of foreign investment and the earnings moved from USD 8.6 Million in 2000 to USD 332 Million in 2014 (Bean, 2010).

According to (Deming, 1986), quality of a product is solely keeping the customers need in mind. This means that the products designed have to fulfill these needs and expectation. This is the definition of quality. The country industries above are highly quality oriented and this has led to their production of high quality clothing that led to high demand of their product (Varukolu, 2007; Embuldeniya, 2005).

To unlock the potential of the apparel industry would mean to focus on the SMEs and strengthen and support them into growth. Creating a growth strategy that enhances high value addition on the product offering by encouraging original design manufacturing (ODM) (Amolo, 2015). This would mean different stakeholders putting in effort to improve the national value chain to develop a product offering that suites the highly westernized needs in apparel off the domestic market and one of high quality.

The Kenyan domestic apparel industry has been in existence for a very long time. It ranges from large to micro sized companies and this has been the case in Kenya since the start. It includes large manufacturing firms that produce an offering meant for export to small tailoring units that create clothing for people in their neighborhood. The apparel industry was able to grow at a good rate after Kenya independence in 1963 (Charmy, 2013). Import substitution industrialization policies that were introduced in the period soon after independence years were an advantage to cotton farmers and to the textile and garment industries, as a result of the 100% duty on imported goods (Mangieri, 2006).

In the 1984, the Kenyan textile industry was able to manage the best performance in history when the cotton farmers were able to supply 70,000 bales of cotton that were able to very comfortably manage the demand of the local textile industry and apparel industry (Charmy, 2013).
At the time the textile industry consisted of 52 textile mills (Dawn, 2015). The mills were able to make available jobs for about 42,000 Kenyans. At that particular time the KTI, was able to create jobs to the people and was ranked as the second largest job creator (Charmy, 2013).

Early in the 90’s, the KTI and KAI fell apart as a result of a number of reasons. The main one being, The Global Economic Reforms that came under the Structural Adjacent Program’s. Also there was a Trade Liberalization that took place in Kenya in the 80s and early 90s (Rael, 2012). There were also the issues of corruption and mismanagement in the Cotton Board of Kenya which led to the drop of these industries (Charmy, 2013). Having the economy of Kenya Liberalized in 1993 allows for the influx of imported good both new and used. This gave the garment industry a kick and it collapsed (Charmy, 2013).

Liberalization of the Kenyan Economy in 1993 meant great competition from imported clothing (Rael, 2012). In the year 2016, many years later after the liberalization, the imported clothing still is a major problem. In the year 2014, Kenya spent US$ 96.7 Million on second hand goods only. This translated to about 100,763 tons of used clothing (Amolo, 2015). This shows that the demand on the garment industry is present; it is unfortunately being satisfied by imported clothing. This is one of the reasons as to which the locally producing and especially non-EPZ sector is failing as it is. All this money is going to foreign countries while it should be maintained here which would help the industry grow further. This would greatly increase Kenya’s GDI which among many other positive results such as job creation, poverty reduction and the resurrection of the KTI.

The apparel industry and textile industry are joined at the hip. The KTI supplied fabric from the cotton produced by the farmers. The fabric is then used to produce clothing. The KTI currently only supplies 45% of the textile demand. The rest of the demand is supplied by the imported clothing both new and used and the imported fabric (Omolo, 2006). The apparel industry especially the non-EPZ sector has mostly survived by importing fabric as is currently the case (Dawn, 2015). Ensuring that these two industries grow together would be key to reduce the cost of production of clothing. The cost of production of clothing in Kenya makes it very difficult to compete with second hand
clothing and imported clothes. The high cost of production is as a result of cost factors such as electricity, the high cost of labor in the country, outdated equipment, extremely difficult logistical systems and the imported fabric cost (Dawn, 2015)

The Kenya apparel industry also known as Kenya garment industry consists of thousands of companies. It is made up of two sectors. This is the Export Processing zones (EPZ) and the non-EPZ. The EPZ is made up of companies that came up after The African Growth and Opportunity Act (AGOA). This was a trade program which makes the United States market accessible to 41 sub-Saharan countries in Africa. It was originally an 8 year agreement from October 2000 to the year September 2008, however, amendments further moved it into 2015. It allows access to the U.S. market duty free (Bean, 2010) The EPZ is made up of 21 companies that are able to employ about 1,800 individuals each (Dawn, 2015). Apparel from these companies is exported to the US market and none of it is used locally.

The EPZ as a result of the AGOA act produces clothing that is intended for the international market. As a result of the partnership, they are highly quality oriented. The EPZ is able to access good resources, be highly mechanized and automated, access financing and train their people well and have operating procedures that work which greatly improves on the quality (Deming, 1986). As a result of the large numbers they do, (Dawn, 2015), they are able to bring their costs down and with the ready demand. So both in terms of quality and financially, they are able to perform quite well (Dawn, 2015).

The non-EPZ which is the main focus of this research is made up of very many companies. These range in size from large to micro. The non-EPZ sector consists of about 170 companies that are ranked as large and medium and a whooping 7,400 companies that are ranked as small (Dawn, 2015). A few of these companies do produce garment that goes into export outside of the AGOA but most of them produce for local use from companies in production of uniforms to the supply to hospitals and industries to small tailoring units in the residential areas. Some produce made to measure clothing and some ready to wear to those who are tailors in the estates (Amolo, 2015).

The non-EPZ KAI is made up of a number of different types of companies such as specialty clothing store such as the Deacons Stores with multi-products which carry new
imported clothes, stand alone designer shops these are made locally such as Kiko Romeo, local designer boutiques which carry local designer collections such as Fiona Kay, local supermarkets which all carry new imported clothes, local tailoring units that make made to measure clothes locally and second hand clothing vendors (Amolo, 2015). Another part of the apparel industry that makes a decent portion of it is the uniform producing companies. Many of these came up as a result the competition that came from imported clothing (Fukunishi, 2012).

A big problem that is faced by the industry is the low product quality of the locally produced apparel. This makes many of the people opt for the clothing that is imported both new and used (Rael, 2012). Product quality in the garment industry is dependent on the quality of fabric, the workmanship and equipment and techniques used. In Kenya, especially in the non-EPZ sector, our biggest problem is the low product quality and that is why the domestic market is not interested in our local product and exporting is even a greater problem (Mangieri, 2006). The domestic market is already made aware of the high quality apparel can have as a result of use of all the imported clothing and in turn have also acquired a very westernized taste. Product quality is dependent on factors such as training of workers and the skills that they acquire (Deming, 1986), the set operating procedure that a company has put in place for production and how well it is known and understood by the workers (Juran, 1998) and (Yunus & Yamagata, 2012).

In Kenya, many companies are not able to achieve high quality. This is as a result of many factors such as training on how to achieve the quality from top management downward to the employees (Dawn, 2015). For this reason, many companies do not set up operating procedures to constantly work on achieving zero defects in the product (Juran, 1998).The technical workers carry skills that are outdated. Many acquire their skills from informal training which is pretty much learning on the job as they go. The companies do not set aside resources to offer training to the workers. Many companies are not committed to training of staff. The institutes that offer formal training also have outdated syllabus which do not offer a competitive edge. As we know the apparel industry is highly dynamic (Fukunishi, 2012). As a result of the lack of commitment to achieving good quality, many companies are not quality oriented.
Sethi (2000), states that a company has to be highly or positively quality oriented to set up the needed requirements to achieve good quality. One of the requirements is having a well trained quality department that ensures that quality is the best from the raw material, to the in-process and the final product. The quality department has to be aware of the need and advantages of having the best quality and know what elements need to be checked to ensure good quality and at what points. This allows zero defects according to Juran (1998).

A company management’s core job is to be committed to ensuring that the quality of a product is good. This product is to sell and for it to sell, its quality must satisfy the needs of the customer. Otherwise, the customers will not be interested in it. Management should put in line the needed arrangements and strategies that constantly improve the quality of the products that are produced (Sethi, 2000). The continuous improvement is at the core of good and even higher quality when comparing ones quality to that of the competitor. According to the fathers of quality Deming (1986), Crosby (1979), Juran (1998) continuous improvement is key and is the way to great quality and the great success of the company, in turn industry and eventually the country.

1.2. Statement of the problem

In a good number of countries the apparel industry earnings do a lot to hold up their economy. In countries such as China (Kane, 2015), Sri Lanka (Embuldeniya, 2015) and Bangladesh (Blake, 2011), their manufacturing industry is a big money maker and the apparel industry is always a top player. In Kenya, it is the absolute opposite. We spend so much money buying from other countries both used and new clothing (Mangieri, 2006).

In the year 2014, we spend about U$ 96.7 million importing SHC. This shows that there is a very high demand on clothing in Kenya. These imports of both new and used clothing are not to supplement what we produce here. The apparel production in Kenya is almost negligible. With thousands of companies that locally produce apparel, we still are not able to set up an industry that can create apparel here within to satisfy this need. In the early post independence years, we were doing well with the industry producing garments and creating jobs (Charmy, 2013). Today, the poor quality of product made locally cannot allow even the domestic market to buy from the local Kenyan industry (Rael, 2012).
Today, Kenya has a rundown industry with barely any textile produced and apparel made is mainly for export (Dawn, 2015). The smaller designers and local tailors some of whom have set up companies employing up to 50 people are left to survive with almost zero support to grow into companies that would produce trendy and high quality garments, create sustainable jobs and reduce poverty in Kenya (Amolo, 2015).

Good product quality means that a customer is satisfied (Yong Zheng, 2010). If a customer is happy with the quality of products supplied, they will continue to buy. This is what the KAI need to focus on, improving the quality of product that is produced here. This will definitely cost to achieve (Bean, 2010; Crosby, 1979; Dawn, 2015) but the returns are incomparable. Kenyans as a result of exposure for many years to imported clothing have a high expectation of the quality of clothing they are willing to purchase.

With improved quality, the KAI can grow across the board from the small to the large companies (Omolo, 2006). And investment into product quality should be made first priority and this is through investment into technical education and training, growth of the KTI, quality education across all levels of the company, creation of set operation procedures to help achieve the zero defect policy, creation of well trained quality departments within the companies (Rael, 2012) , government intervention, private sector intervention and empowerment of workers both through technical and business management skills (Amolo, 2015).

1.3 Purpose of the study

The purpose of the study was to establish and analyze the factors that affect relative product quality of the SMEs in the Kenyan Apparel Industry

1.4 Research Questions

1.4.1 How does a quality department affect apparel relative product quality?

1.4.2 How does employee training affect the apparel relative product quality?

1.4.3 How does a set standard operating procedure affect the apparel relative product quality?
1.5 Importance of the Study

1.5.1 To the Apparel Industry

This was to find out where the problems in product quality lie. This is to help focus on what can be done to improve or solve them for the industry to grow into one that is not only used to make clothing for foreign countries but to make clothing of good quality for the domestic market. To create a reputable name for the Kenyan apparel industry in the world.

1.5.2 To the Domestic Market

To create clothing that is of good quality but is made locally. To ease the availability affordability of certain garments and to reduce the use of second hand clothing. To allow the domestic market to enjoy clothing made for them in their sizes and to buy Kenya and build Kenya.

1.5.3 To the government

To clearly state where the problems are and to advice on how it can come in to support the growth of the industry and in turn create earnings for the country from the industry

1.5.4 To the private sector

To make it known that the apparel industry is one that can be of great impact as it has been in other countries such as China and Bangladesh and to encourage investments into the industry.

1.5.5 Researchers

The findings from this study will also be used by other researchers for future references to other studies relating to quality of products.

1.6 Scope of the Study

The study was set to analyze the industry and find out that factors lead to the low product quality in the Kenyan apparel industry especially in the non- EPZ sector of the industry
and concentrating on the MSMEs who are closer to the domestic market. The study showed that product quality in the apparel industry is of top priority to a customer and that is why even the domestic market opts to buy imported clothing because it is believed to be of good quality even after it has been already used.

The study was a descriptive one and both qualitative and quantitative data was analyzed. Primary data was collected using questionnaires issued to individuals running and managing SMEs in the Apparel industry in Nairobi area over a period of three months. The study was carried out from April until June 2017. Data was collected and analyzed in the month of May 2017.

1.7 Definition of Terms

1.7.1 Apparel/Garment

This is a complete clothing item ready to be worn (Phelps, 2008). A clothing item that has gone through the process of cutting, sewing and finishing (Rajitha, 2005).

1.7.2 Product Quality

Amounts of un-priced attributes contained in each unit of the priced attribute (Garvin, 1984)

1.7.3 Technology Adoption

Taking up new technology to ease a process (Deming, 1986).

1.7.4 Ready to wear

Clothing that is made in general sizes such as large, Small etc (Phelps, 2008)

1.7.5 Made to measure

Clothing that is made to specific measurements that are measured off someone (Phelps, 2008).
1.7.6 Quality Orientation

Amount of emphasis that a company lays on the need for quality and their commitment on the same (Sethi, 2000)

1.7.7 Zero Defect

Avoiding errors during production by setting up a very close monitoring culture (Crosby, 1979)

1.8 Chapter Summary

Chapter one is a brief introduction to the full analysis of the apparel industry in Kenya. The industry is introduced and its background and its statistics. The chapter also covers the statement of the problem to be discussed in the report and the purpose of the research. It also states the research questions that will facilitate the topic of the research. It also outlines the importance of the study and how various stakeholders will benefit from it. It also discussed the scope of the study.

In chapter two, literature review on factors that affect product quality in the apparel industry will be analyzed. This will be guided by the specific objectives of the study. The different theories that support the main objective of the study will be discussed.

In chapter three the methodology used will be discussed, and this will include the population of the study, the sampling procedure applied, and the methods of collection and analysis of data. Chapter four discusses results and findings of the study. Chapter five provides summaries and findings of the study.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter will cover previously documented information on the topics of importance of having a set aside quality department, the necessity of having employee training and having a set operating procedure and their effects on the production of offerings of high quality. The case of the SMEs in the KAI will be looked at as it is already documented from prior study. Theories based on product quality will also be covered.

2.2 Effect of Quality Department on Relative Product Quality

Many industries carry many companies and firms that are competing amongst themselves. Every firm that is in competition works towards having a high relative quality to attract more buyers to gain a larger market share. The one way of doing this is ensuring that the quality is good, this is the best way of gaining competitive advantage (Deming, 1986). One sure way of managing this as a competitive advantage is through use of a well organized and qualified quality department (Kane, Chur, Janet, & Callagy, 2015). A quality department allows one to ensure that the quality of product is the highest and in accordance to the need of the customers. Once one has a high relative quality, this means that the firm will do well within the industry and this is what customers are looking for (Ahire, Golhar, & Waller, 1996).

Crosby (1979) states that quality is free and is of the theory of zero defects. This means that a firm should at the end of the production line give a product that has no defect. This means that the product is ready to go to the market and will sell without return to manufacturer. A product with defect becomes very expensive to correct (Giri & Vancza, 2015). Many times, it means that the product is thrown out and it is a total loss. The one way to ensure that there are zero defects is through the instituting of a quality department.

Carrying a zero defect production means that the general cost of production per unit is reduced. The quality department works to achieve this. However it requires a general commitment of the entire company and different departments to achieve this. Otherwise,
working alone will not make a difference in the quality cause (Badri, Davis, & Davis, 1995). A company has to be quality oriented wholly and placing a quality department without the rest of the company on board will not improve the quality issue (Sethi, 2000). If the entire company is on board, each department doing what they should do and the quality department enuring that they are doing so and making necessary corrections along the way, it becomes much easier to achieve the zero defect product (Crosby, 1979).

2.2.1 Creation of a Quality Department

A quality department is one that ensures that the final packed product is of the expected quality. It is a core department in any industry, both product and service industries. A visible and effective quality department shows results both in quality and cost. A number of factors have to be considered and put in line to ensure the success of the quality department (Badri, Davis, & Davis, 1995; Sain & Abhimanyu, 2015).

A majorly important and the core factor of the success or failure of the quality department is the top management. Just creating a quality department has no effect, the top management has to be commited to the quality course. The top management has to be quality oriented in itself (Sethi, 2000). This means that the management has to make and allow for the necessary arrangements to come to fruition. This includes arranging and setting apart the needed resources to ensure that the department is effective (Revelle, 2015). The resources are towards the support of the department such as setting up trainings to improve skill sets, buying new technologies to allow better quality work e.t.c (Ahire, Golhar, & Waller, 1996).

The top management also needs to create a quality awareness in the entire firm as a goal. There is need for the clarity of the goals is quality. This influences the quality effort in a great way and the department is greatly supported (Colledani, Tulio, Fischer, Lung, & Lanza, 2014). Top management has to ensure that the quality is a priority for the firm. Quality offers a competitive advantage and this allows the form to do well against their competitors and successfully (Deming, 1986). The top management, after it has set these things in line, creates the quality department.

The quality department is a team that will ensure that the intended quality is achieved. To achieve this the secret is to ensure that there is continual quality control (Juran, 1998). A
firm can do all the quality planning that is needed but will fail due to lack of quality control (Oker, 2016). He states that, the secret is for the department to have control measures set up in-process as opposed to waiting to the end when errors are already done. This is supported by Crosby (1979) the zero defect theory.

Crosby (1979) also states that the system that will work in achievement of this is by closely monitoring the process at every stage and correcting the errors. It is preventative. Both Crosby (1979) and Juran (1998) agree on this and many studies have shown this as successful (Sain & Abhimanyu, 2015). The success of many manufacturing quality goals are based on this theory. The studies by Arditi & Gunaydin (1998); Adenuga (2013), Bamber & Dale (2010); Blake (2011) among others support the in-process control as opposed to the final product inspection used alone. This means that the quality department has to be made up of people who carry all the necessary technical skills.

Generally, employee attitude is a factor in the failure or success of the department (Bamber & Dale, 2010). The people that make up the department have to first be involved in the planning of the strategies for quality. This allows them to be heard and give information that is key to the success. This way, due to the inclusion, they are able to work at it with full ownership and attention (Groselj, 2014). There is training that also is needed to ensure that they are aware of what exactly one is going to do. Deming (1986) states that training is key on achievement of quality. They have to be well trained to be able to be effective as a department.

The individuals chosen to be part of the department have to be people who can interact with other people. They are accountable to the top management, work with the middle management and work directly with the production floor people (Oker, 2016). They have to be individuals who can interact smoothly with all. Since this is a step to step process, the department has to be multi skilled (Kotey & Folker, 2007). It is best for the team to have individuals who come from various parts of the process or are well aware of the entire process. This will allow them to monitor step by step as they are skilled and are well aware or trained to monitor every step for effectiveness (Arditi & Gunaydin, 1998).

The team has to be accountable to the top management, be able to work with other departments well, but also carry autonomy when it comes to quality. This allows a whole
work cycle that reduces the errors and achieve the Crosby (1979) zero effect. The sole job of this department is so that the firm employees have to understand and be very clear on the goal of quality and they should know what specs establish quality for the firm.

### 2.2.2 Breakdown of the Role of the Quality Department

It is known that the quality department is supposed to ensure that the intended quality goal of the firm is achieved in accordance with the customer needs. However, the job of control includes different processes and duties that come together to achieve quality control (Scott & Ashish, 2016). Total quality control is defined as a culture that is carried by quality oriented firms which results in increased satisfaction of the customer and is achieved through continual improvements which are a result of all employees participating actively (Dahlgaard & Park-Dahlgaard, 2005).

The quality department involve a lot of work beyond ensuring the product is done as intended at every stage. A big part of their job is to do researches and surveys and anticipate the problems that could occur on the production floor. Juran (1998) states that quality planning is key, however it has been noted that that is not enough. Once one has planned for quality, it does not mean that the quality intended will be achieved. This is because of the variations that occur on the floor (Colledani, Tulio, Fischer, Lung, & Lanza, 2014). Sometimes the variations may rise from the type of raw material that comes in, other times it could be a machine that is not in usual order, sometimes the worker skill may fail the process even after training and at times it can be a condition maybe a personal one or an environmental condition (Ahire, Golhar, & Waller, 1996).

These things can affect quality as they cause variations in the process. One can not really control everything and neither can the quality department (Grosej, 2014). As the department, they should always stay aware by constantly researching and collecting information to anticipate some of the things that can be controlled to maintain the goal. If a department is efficient in the anticipating problems, they are able to avoid certain errors (Bamber & Dale, 2010). The quality department can apply the use of Statistical Process Control (SPC) tools that enable them to detect the causes of the mentioned variations and more.
This allows them to handle them before they become or cause a problem, error or defect. These tools also allows the department to realize where the problems lie and where there is need for improvement. This allows the Deming (1986) theory of continuous improvement possible. The tools used for SPC include scatter diagrams, cause and effect diagrams, pareto charts, control charts, graphs e.t.c (Bamber & Dale, 2010). This also allows the department to analyze the process internally.

Quality is based largely on customer needs. That is why it is essential to know what the customers are saying through the use of customer surveys. It is essential also to know what the competitors are up to and how the best in the industry are doing and for this reason, benchmarking is very important (Badri, Davis, & Davis, 1995). The use of surveys and constant analysis of internal processes is very important also. This allows the department to look at the process and seek the problems out and act on them to improve the processes (Gao, Yihai, & Wang, 2015). This continuous improvement allows for the quality of the firm to keep improving.

Continuous improvement is a theory by Deming (1986) that insists on the continual seeking out of problems found both in the quality and the process involved in production, correcting these problems and hence a continuous improvement process. This is a key role of the quality department as it interacts directly with the product, it understand the specs that are expected and directly works with the people on the production line (Revelle, 2015). A big part in achievement of continuous improvement in collection of data and relaying possible solutions to the problems to management. This allows for the top management to plan for the resources needed to insitute these solutions (Joseph, Rajendran, & Kamalanabhan, 1999).

The department is largely expected to solve the arising problems as it goes. Variations occur and some may not affect the process marjorly and need be solved, it is the job of the department to make these decisions (Sallis, 2014). It is said that a good department interacts and works with the other employees even the technical ones. They collect information and from this information they are able to make the decisions (Sethi, 2000). This is a common factor in firms that are successfully quality oriented.
Another key role of the department is being a quality resource for the rest of firm (Crosby, 1979). Top management looks to them to find the problems that are present and that lead to low quality products. They are to come with proposed solutions to each of these problems. Secondly, the department as a resource to other departments is a point of consultation (Kane, Chur, Janet, & Callagy, 2015). In case any other department has a query on their processes or something unusual is happening, they refer to the quality department. Also based on the interactions with the firm, they should organize for trainings where necessary (Joseph, Rajendran, & Kamalanabhan, 1999).

Another major role of the department is the reduction of waste and eventually reduction of cost (Giri & Vancza, 2015). Waste is described as the increase of the cost of a unit without the addition of value to the customer. The reason as to why many industries have grown is as a result of a good quality product. Good quality is used as a competitive advantage to sell however, quality goes with cost reduction (Gunasekaran, Korukonda, Virtanen, & Yli-olli, 1993). Waste reduction is a key role in this department. It is to reduce amount of scrap generated from each unit and also reduce greatly the number of reworks (Ahire, Golhar, & Waller, 1996).

A way to achieve the intended quality, and the quality cost benefit that has great benefits, is coming up with a set of standard operating procedures. This is created by interacting with the department. They observe a lot and collect a lot of information and from this information from all the departments, they can come up with the most efficient process of production and this procedure is used as a set standard operating procedure (Sain & Abhimanyu, 2015). The department is further supposed to inform the rest of the departments of the standard procedure and ensure that there is clarity on it (Joseph, Rajendran, & Kamalanabhan, 1999).

2.2.3 Support of the Quality Department

The firm in question is in need of quality as a competitive advantage and also to ensure that it has a positive or high relative product quality. It is however essential for the firm to have an orientation to quality. This means that achievement of the intended and needed quality is a core priority for the entire firm (Sethi, 2000). The intended quality, has to be oriented as a core part of the firm, and has to conform to the needs of the customer (Juran,
1998) and has to be in line and mostly better than the competitors to gain a competitive advantage.

This burden is largely placed on the quality department. This is the main reason why the department is put in place, however, it is impossible for the department to be efficient on their own. They have to work hand in hand with each department playing a particular role to allow them achieve what they are intended to do and also achieve the intended quality (Crosby, 1979).

The main support is from the top management. It needs to be committed to the goal that is quality (Sallis, 2014). Achievement of quality should be in line with the firms strategic goals. This allows for the management to allow resources to be used to help the department achieve this. For quality to be achieved there is need of resources to allow programs such as training of the employees (Bartel, 1994). This study greatly emphasizes on the need of the top management to arrange for the resources to achieve the needed quality. Another need of the quality department from the top management is to allow easy access between the two departments (Dean, 2015).

There is also the need for autonomy in the quality department. The department is in the best place to see and observe the general production process according to Joseph, Rajendran, & Kamalanabhan (1999) so they need some leeway to make decision on what they deem best for the department and the general subject of quality. They are supposed to be accountable to the top management but autonomy is essential (Oker, 2016). During production, there are many things that occur on the floor that cause variations according to the 1996 study done by Ahire, Golhar, & Waller. This means that the department should be at a place to make these decisions and also make decisions concerning the department that allows them to run swiftly and efficiently.

The department also needs a lot of support from the departments that deal and interact with the customers directly. A good example of this is the marketing department. The marketing department is the department that bridges the firm and the market. They talk with the clients, know their needs and they need to relay this information to the department. During the design process of the product, its best to have the marketing department, manufacturing department, R and D department and the quality department
on the design table. According to the study by Dunk in 2007, this allows for the coordination between these departments to come up with the most innovative, conforming to customer needs, most possible to manufacture with the best quality. This also is in accordance with the Crosby study in 1979 on zero defect product.

There is also a need from the concern departments to receive external feedback. This would be feedback from the customers on the perceived quality according to the 1984 study by Garvin and also feedback or information collected from the competitors through benchmarking (Ahire, Golhar, & Waller, 1996). Benchmarking involves studying the best performing firms within the industries and even further studying those that are not in your industry. This allows the department to get the information on their processes and to learn how their process is so effective (Gao, Yihai, & Wang, 2015). The customer feedback is essential to learn what the customers are liking and not liking about the product to make the necessary changes.

The quality department needs to be fully supported and it is in all the other departments doing what they need to do and the coordination of all these departments for smooth and swift movement of information from one to the other (Giri & Vancza, 2015). This allows the department to be effective and the quality is achieved leading to the firm achieving the competitive advantage.

### 2.2.4 Effect of a Quality Department in an SME Firm

It is generally assumed that the need of a quality department is only for the large firms that are already established (Colledani, Tulio, Fischer, Lung, & Lanza, 2014). Many people assume this and it slows down the growth of the a small company because the focus is lost on the quality of its product (Dunk, 2007). A quality department is a key part of an SME firm. It aids the firm by ensuring that it puts in line the needed measures and controls to ensure that the quality is of the highest level. This allows the company to propel itself within the market with that as a competitive advantage (Bamber & Dale, 2010).

A quality department also allows a SME firm to cut unnecessary costs which helps the firm use efficiently a budget that is already pressed. This also allows them to have price as an advantage. The quality department is able to ensure reduced defects and errors and
hence no repetition is needed (Rao & Devadas, 2006). It is also a resource for the employees on what the quality goal is and how to achieve this. This allows for employees to avoid errors in the production process. SMEs can appreciate this as they are limited in financial resources, probably human resources and time as a resource.

Having a department that can find the easiest and most effective way of carrying out the process helps. It also greatly helps that it helps the management of the SME to organize and set apart the resources needed to achieve the intended quality. It helps avoid and solve problems (Yunus & Yamagata, 2012). The quality department for and SME firm is a key part as it ensures that the offering the firm is producing is of the best quality and this is how a company is propelled from small and keeps growing.

2.3 Effects of Employee Training on Relative Product Quality

There is a constant increase in skill demand in every manufacturing industry, this as a result of innovation, technology adoption and change in market trends. This is a problem faced by many industries and training has to be picked up as fast as the rate of innovation is moving at. Many industries face skill shortages and skill gaps at one point of the other (Pye, 2011). In the manufacturing industry, in the era of constant introduction of new and more improved ways of performing the same processes to improve quality such as use of technology, for example, computer aided technology; this may be a problem when not handled well. The adoption of the technology and new ways of performing old processes has to go hand in hand with skill adoption. As we look at improving the quality in the KAI, we have to consider the need of instilling of skills to work towards it (Amolo, 2015).

2.3.1 Effect of Well Trained Workers in an Organization

Organizational success is highly pegged on the workforce or the employees it carries. The employees’ motivation, confidence, discipline and work ethic can determine the success of the organization. According to Srivastava, Neelam & Agarwal (2016), all of these aspects can be brought in by basically instilling the technical skills required for the workers to be productive. When the training is in check, the worker is productive and produces good quality clothes. According to Ratnakar & Yumiko (2007), the absence of
skills or presence of the untrained workers impeded productivity and product quality greatly.

Training is said to be an activity that is highly skilled and professionally driven that aids in the overall production process. It ensures that the process is efficient and that the end product is of high quality (Chen & Ying, 2013). The more trained the work force is, the better the quality of the product. This shows greatly in China where they remain highly competitive compared to other Asian countries that have lower wages. This is as a result of the highly trained workers (Goestch & Davis, 2015). This is as a result of their investment in training their employees. Their product is of very high quality the buyers opt for it (Srivastava, Anandita, & Radhika, 2016).

The increase of training has shown to result in high productivity and high product quality. In Lesotho, manufacturing companies have highly invested in training of their workers and the results are increased production of over 25% (Ratnakar & Yumiko, 2007). To run the company there is the need of the management staff and like every other company, there is always the need of support staff (Kinuthia, Mburugu, & Mutuku, 2014), all of these staff members need to be highly trained and in turn skilled. People are of higher value to a firm when they are trained and skilled. Well trained workers result in good product quality (Stokus, Vaitkuviene, & Balvociute, 2015).

According to Pryor, White, & Leslie (1999), 5p model that is a strategic management model that is made up of five key components that can make or break a firm. These include the purposes of the firm, the principles that lead the firm, the processes that the firm used and have set up to produce its product or services, the people working in the firm are a key component of the theory and lastly the firms performance which includes the metrics and the measures put in place. They key ‘P’ here is the people and the firm should consider the qualifications and the skills carried by the people they intend to employ. They should also look at the skill gaps in existence within the same employed people and identify the training that is needed and ensure that it happens. Training of employees is a major and core part of a firms quality success (Atkinson & Storey, 2016).

According to Juran (1992) quality has to be constantly improved and the achievement of this is majorly affected by how invested a firm is in upgrading the skills of its workers.
This can be achieved through experience, many can argue, however, training is a great and faster and most effective way to start the process of skill instillation (Manuti, Pastore, Scardigao, & Giancaspro, 2015). Deming (1986) clearly stated that quality should be constantly worked on and this can be done through having on the job training. It is essential as customer preferences and other factors change, skills have to be enhanced. When technology is upgraded and new ways of doing things are created such as the seamless production in the manufacturing industry, the skills have to be upgraded along with these changes (Sweety Jaggal, 2014).

Crosby (1979) states a theory that believes in zero defects. This means that the product that ends up at the end of the production line has no defect in it and will not need resources wasted on correcting the wrong or creating a new product. He states that quality is free. One can achieve quality for free. Deming (1986) states that the only way to succeed in producing quality products in by having a continuous improvement policy. A key part of a continuous improvement policy is by ensuring that the skills in the company keep improving. This is mainly through investments in training by the firm. Yesterdays quality expectations of the customer is not what they are looking for today. Ensuring that the skills that are needed to achieve this improved quality are available is the key to this type of achievement (Cainelli, Marchi, & Grandinetti, 2015). Every day in all industries, technology keeps improving. If one intends to acquire this, the skills needed to run it are necessary. The firm needs to continuously train.

### 2.3.2 Employee Training at Work

Human capital is a key component of the success of the work force. If a company lacks in this type of capital, the failure of the company is almost assured. Deming (1986), states that training of the employees is a major factor in the successful production of quality products. Human capital is defined as any information and knowledge that leads to acquired skills that are built thorough channels such as educational institutions, vocational type of training and also experience acquired from working (Behagel, Carol, & Roger, 2014). Human capital can either be generic, specific to task and also specific to firm. Generic capital is also known as general skills that are not unique to the said firm. This can be found in people who are employed newly to the company. Many firms when
recruiting choose supposedly the best people they can find, the most skilled people (Deming, 1986).

This leads to many firms feeling that there is no need to train. Many of these generally skilled employees will work but at the level they know. Many times, this is not the best or most effective level of skill and may not in line with the company's quality goals (Edward, Sieminski, & Zeldin, 2014). Generic skills are supposed to be converted further into task specific skills. There are a few ways of achieving this. This could be through vocational training and also experience from work. For a quality oriented company, training should be a top priority (Sethi, 2000). Training has to be organized and prepared for by lining up all the needed elements that are necessary to make it a part of the company. Companies should all have set training policies. For the employees that work at task level skills, they also need training to further smoothen their skills to completely be in line with the quality goals of the company (Koinings & Varnomeligen, 2015).

Skills are best harnessed into firm specific skills. These are skills that are only achieved through in-house training. A curriculum is created to suite the information in line with the goals of the company. Arditi & Gunaydin (1998), states that in building projects, it is essential to teach all the concern departments and especially the technical department in the ways of the firm. This allows the employees to learn the set operating procedures and do every of their duties as the firm should. This allows quality control (Firescu & Popescu, 2015). The firms intended quality level is achieved through this.

Employee training systems should be focussed on the needs of the company according to Alan, Ming, Yochanan, & Josse (2008). In Nigeria, the housing industry has terribly suffered with errors that keep causing damages and losses to house and business owners. The Nigerian Public housing sector is faced by many quality problems. This is as a result of many factors but according to Adenuga (2013). One of the factors that play a big role according to the the study, is use of poor training systems. This lack of employee training was a general problem across all departments; the managerial, design and technical. The lack of labour skills was ranked as the second highest factor that affects quality followed by poor communication.
Arditi & Gunaydin (1998) states that training is teaching the way to high quality. If a company achieves high quality by itself, it is competitive when it comes to relative product quality. Sethi (2000) says that a company has to be quality oriented to ensure that all the things that are needed to achieve quality are of the highest priority. There is an importance in conducting training in every phase and level of a company (Renwick, Redman, & Maguire, 2013). Many would argue that the technical department is the most important to train. There is however value in training the supporting and managerial departments also to help in the overall success of the quality goal (Arditi & Gunaydin, 1998).

Crosby (1979) states that quality is free. He carries a theory that states that the firm should learn the customers needs and in line with those create a product that conforms to those. The item has to be suited for the customer and that should be the quality goal of the firm (Manuti, Pastore, Scardigao, & Giancaspro, 2015). They only way that the product is made into this perfect item is through creation of systems that allow the firm to achieve this. One of these systems is training and instilling the skills that are needed and awareness of the quality intended into the employees through training (Hasle, 2012).

Training is required from top to bottom and not focused on only one part of the company. Both technical and quality training is needed. Technical training is training in your area of work (Renwick, Redman, & Maguire, 2013). One should carry the needed skills that are needed to do your part of the entire process. There is a training that is highly neglected however, that is quality training. Quality training is the creation of awareness of the quality goals of the firm and the systems set in place to achieve them (Deming, 1986). The knowledge of this by the employees allows one to do their specific job with this as a goal (Koinings & Varnomeligen, 2015). This allows for the intended quality to be achieved.

Training leads to great labour productivity and one of the biggest goal of productivity is the achievement of good quality (Bartel, 1994). Once a firm prioritizes training, the general firm becomes competitive within the industry, regionally or even internationally (Goestch & Davis, 2015). Competitive advantage is having a unique quality to yourself that sets the firm apart from everyone else. Quality goals across a company are achieved through training of every individual in the firm to do their jobs in a way that is curated to
achieve the quality intended (Stokus, Vaitkuviene, & Balvociute, 2015). In turn, customers choose to buy your product as opposed to your competitors. One of the greatest element of competitive advantage is product quality. If a firm is able to achieve higher product quality, then their relative product quality is perceived as high. Once the customers realize this, they are able to buy from you. This is how the chinese manufacturing industry grew in its leaps and bounds (Kane, 2015).

For training to occur and success to come from the training, it has to be a priority for a firm (Edward, Sieminski, & Zeldin, 2014). There has to be training systems that are put in place from all departments in the firm, both for technical and quality training. For training to occur, there must be a cost to it, so a budget has to be set aside for training (Cainelli, Marchi, & Grandinetti, 2015). Training carries both direct and indirect costs and it is necessary for the firm to realize this. Direct costs include things like the participants and facilitators costs. These also include developmental costs for the course, research development and facility costs. There are other intangible costs such as the opportunity cost of the training (Bloomberg, 1989). The firm has to put this into consideration for a good organization plan. The benefits also have to be considered both tangible like the financial implications of the good quality achieved and intangible such as improved value of workers to the society. Training should not be looked at as a consumptive good but as an asset that should be invested in (Behagel, Carol, & Roger, 2014).

2.3.3 Poor Training Policies

According to Kotey & Folker (2007) as the firms grows, the informal management systems start failing and they are forced to create formal management systems and a core part of this is create a training policy (Edward, Sieminski, & Zeldin, 2014). These allows structured plans that covers both the technical training and quality training. This includes allocation of resources, researches and course developments done (Bartel, 1994).

Many firms as they grow get to this particular place but many of the policies that are set up many times may have problems here and there. The fact that the firm is transitioning from small to medium also means that financially there might be a financial strain. This means that there may be lack of enough investment to be put in the training (Alan, Ming, Yochanan, & Josse, 2008). The policies are also faced by a recruitment problem (Rael,
2012). Many people opt to employ overqualified people with the hope that there will not be a need to invest in training. Many times, the need and challenges of the overqualified employees is absent and they end up frustrated and less productive. Many of them leave.

There is a problem of the focus of the training in many SME firms. They focus the training on especially middle level employees as they assume that they will grow into superior management and that the investment will pay back (Firescu & Popescu, 2015). It is unfortunate that the low level skills in SMEs are ignores and not trained, this is from the assumption that their jobs are routine jobs and of low skilled. The market is also thought of as saturated with the supply of low skills. In Nigeria, the construction employees are a big cause of low quality as they are ignored and not trained (Adenuga, 2013). Lowly ranked individuals are not looked at as worth the investment. They are also thought of as replaceable (Chen & Ying, 2013).

The level of lack of technical training in the lowly ranked employees who are actually doing the production in fields such as manufacturing is alarming. This leads to low quality of the product and low success of the company. This results in low product quality (Garvin, 1984). According to Crosby (1979) zero defects is only achievable when the process that leads to the product is error free. This is not possible without technical skills. Training of the lowly ranked employees is core to the success of a company and great quality (Atkinson & Storey, 2016).

### 2.3.4 Employee Training Systems in the SME

Training systems can be classified as informal or formal (Kotey & Folker, 2007). Informal training systems are not really structured or planned. They happen on the job and have little to no supervision (Manuti, Pastore, Scardigao, & Giancaspro, 2015). Many of the smaller firms in the SME industry use this system as its opted training channel. This explains why many of the small firms are faced by problem of poor quality. The formal training system is one that is structured and has resources that are set aside for it (Firescu & Popescu, 2015). These include facilitators, a developed course and a good research that has been done on the course.

Productivity and good quality is as a result of implementation of mostly formal training (Hasle, 2012). It is focussed on a certain problem area and the area is made better. This
solves a problem (Bartel, 1994). Small firms miss out on this as a result of various factors. They hence opt for informal training which barely does the job. Smaller firms of the SME industry avoid formal training mainly because of the cost of formal training (Atkinson & Storey, 2016). Many small firms are already struggling and this means that they have a budget only to do what is absolutely needed. Many of these firms feel uncertain as they are young and may not feel stable so a training investment does not seem like a good idea (Kotey & Folker, 2007).

As much as training is a good idea, it is called an investment because the benefits may not show immediately after (Bloomberg, 1989). Alan, Ming, Yochanan, & Josse (2008) state that the best way in investing in human capital is through training them. For SMEs, the long term benefits do not seem like a priority. They are usually concerned that once they formally invest in training, the employees will move on to bigger and better companies and that will be a lost investment which they can not afford (Atkinson & Storey, 2016). Kotey & Folker (2007) also state that the formal training leads to specialization of employees when in a small company, employees are needed to be multiskilled for flexibility of duties.

The SME training system most opted is the informal training system (Manuti, Pastore, Scardigao, & Giancaspro, 2015). It is in response to a pressing need. There is no structure in place at all. It is mostly on the job. It is learn as you go and it is difficult in this way to move generic skills to firm specific need (Bartel, 1994). SMEs and especially the smaller firms are reluctant to taking up the formal training of employees (Koinings & Varnomeligen, 2015).

2.4 Effect of a Set Standard Operating Procedure on Relative Product Quality

A standard operating procedure (SOP) has been seen as a great need in many firms and sectors across the world (Sadgrove, 2015). Sectors like medical and pharmaceutical industries would not survive without SOPs (Sajdak, Trembath, & Thomas, 2013). The absence of SOPs in these industries would lead to very negative results. Sectors like education can not do with an absent SOP as it will cause many problems if people were left to their devices. Even the financial sector highly needs SOPS in place to avoid errors that can bring a whole firm down as we have seen happen. SOPs as a core element of a
firm (Alhstrom, 1996). This allows an industry such as manufacturing to offer products that are of the highest quality. A firm that is run through a known and well presented SOP to the employees allows them to clearly know what is expected of them and how to achieve this (Becker & Kugeler, 2015). They carry a high or positive relative quality and this gives them such a good competitive advantage.

SOPs are key elements of a firm despite the size or income. Even as individuals, everyone has some sort of routine that they follow at some point in the day. What would turn this into an SOP is by documenting it (Hale & Boyrs, 2013). Small firms with small business are require an SOP. This allows anyone who is working in the firm to know exactly what is expected of him or her and also what precedes them. An SOP is supposed to cover all parts of the production process and should be presented in a good organized matter (Kuratko, Hornsby, & Covin, 2014).

An SOP is defined as a document that contains a detailed instructions of a repetitive activity that is followed by a firm to achieve the goals the firm has such as uniformity, good consistent quality and product performance (Peltier, 2014). It is also a document that clearly states the person who does what activity and how he or she does it and why this activity is done (Gidey, 2012). This creates a very clear procedure that all employees can follow and understand. This also allows the creation of a great training program according to Bloomberg (1989) that is needed once the SOP is created.

In large companies, SOPs carry a great influence on the type of final product produced. Large firms have very little control over every worker as compared to smaller firms (Dahlgaard & Park-Dahlgaard, 2005). It is however best to have instructions that guide everyone. An SOP comes in handy when each worker knows exactly what they are supposed to do and are held accountable for it (Turker & Altuntas, 2014).

SOPs reduce the variations that affect the product quality. Crosby in his 1979 study stated that to achieve zero defect, one has to eliminate all the errors that come along the way. This means that the final product will be carrying no errors and this means that the product will be of good quality while ensuring the cost of production stays down (Bolouri-Yazdel & Bozorg-Haddad, 2014).
2.4.1 Development of a Standard Operating Procedure

Standard operating procedures are not a one size fits all. Different firms can not have the same SOP across the board. This is because each firm is from a different industry and most importantly the goals of each firm are different and the SOPs are heavily based on the goals of the firm (Jurado & Fuentes, 2014). In larger firms, with a production process that is multi level, there is a need for every single activity to have a SOP specific to the task. These SOPs all tie into the general firms SOP (Garvin, 1984). The main element to consider before creating a SOP is the purpose of the operation or the goals of the company (Bolouri-Yazdel & Bozorg-Haddad, 2014).

The firms purpose of operation is the core base of the SOP. This procedure is created for this purpose. A manufacturing firm’s goal would be to give a good quality product (Badri, Davis, & Davis, 1995). Once the goal is stipulated, the needed equipment and any other material is listed down. With these two stated, the third element of the SOP is to realize the activities that are needed for the process to take place. The activities make up the SOP when they are put down with detail (Gidey, 2012). The SOP is a core influence on the quality (Juran, 1998) and hence these three elements of the SOP have to be considered to ensure that the SOP is developed correctly.

The SOP is made for the workers to use, so it is advisable to involve them in the process of its development (Jurado & Fuentes, 2014). The inclusion is of most importance when it comes to motivation of the workers, implementation of the SOP and the adherance of the same (Arditi & Gunaydin, 1998). The workers should be allowed to include their views and suggestions as especially they are the ones on the floor and performing the activities of the procedure (Boin & Van Eten, 2013). The workers will feel like they are heard and they feel some sense of ownership of the SOP as opposed to the SOP being pushed upon them (Gunasekaran, Korukonda, Virtanen, & Yli-olli, 1993). When a firm collects the suggestions and information carried forward by the workers, they should go a head and test it and further refine it and implement it as part of the SOP (Kuratko, Hornsby, & Covin, 2014).

To start the development process, one has to plan and planning involves laying down the goals that the firm carries and its values (Becker & Kugeler, 2015). This allows the writer
of SOP to get the general idea of where the procedure should head based on the goals (Bamber & Dale, 2010). The goals intended by the firm and the information that is collected from the workers help to start the process. The writer also should carry a lot of information and knowledge on the activities of the firm (Bamber & Dale, 2010).

The second part of the process of the SOP development is the drafting. With the goals in place, workers input and technical know how from the internal environment, the writer should put together the first draft. The development of the SOP ties in a firms strategic quality goal (Turker & Altuntas, 2014). This draft is expected to be a detailed documention of the step to step activities that happen in the general procedure. It is best that the draft is done from observation. This way the actual detail of the activities are captured which will lead to a detailed more effective SOP (Gidey, 2012). Once one has observed, then the next thing is presenting it in an organized way. Crosby in 1979 in his theory quality is free, he states that the system of quality is prevention. This is what the SOP allows a firm to do.

An SOP can be very effective if developed right but can led to failure of the firm if not written well (Sajdak, Trembath, & Thomas, 2013). It needs to be written in a way that is well observed, presented and reviewed. The third step after drafting is the reviewing of the draft. It has to be reviewed to ensure that the information is legitimate but also that the procedure that is proposed is funtional (Hale & Boyrs, 2013). The review is done in two phases. The internal review. Is done by the people within the organization and particularly those who directly interact with the intended procedure and its activities. They will see that their input was appreciated and if they have more suggestions and correctional input they can forward it to the writer (Alhstrom, 1996).

Alhstrom in his 1996 study also stated that there is a need for the review to be extended to an external one. This is the presentation of the draft to individuals who are technically trained to understand the procedure and break it down from that perspective to see the loopholes and advice on how to best correct them (Bolouri-Yazdel & Bozorg-Haddad, 2014). The fourth step after the review is to revise the draft based on the information collected from the internal and external sources.
This is then followed by a test of the reviewed document (De Treville, Antonakis, & Edelson, 2012). A test is necessary as the reviewed document is still largely based on theoretical knowledge and observation. The best way to test this out according to Gidey (2012) is to ensure that the person testing the document out is a person that is not familiar with the work. It should be an easy and simple presentation of the document that the person should be able to follow. The writer should be observing and noting the points of low clarity to correct them.

After correction, the document is done and should be posted to the concern parties. It should be clearly documented and placed at a central location or locations where people can easily access and get the information needed (Peltier, 2014). A copy should be put away for record. The staff should then undergo a detailed training on all things procedure. Training leads to understanding of what is expected by the firm. Task specific training should be offered to the different individuals to learn exactly the skills needed to achieve the procedure as expected and for the firm to achieve the intended goals (Alan, Ming, Yochanan, & Josse, 2008). The training also allows for the employees to understand the SOP and have clarity on it to avoid any sort of misinterpretation that will lead to errors during the procedure (Badri, Davis, & Davis, 1995).

Training is now followed by control measures of the SOP and the necessary checks to ensure that the procedure is working well. If there are still loopholes, solutions should be created and implemented (Bloom, Eifert, Mahajan, & Mackenzie, 2016). In the event that there is a better way of doing some things, improvements can be made towards efficiency. Any mistakes that happen as the procedures continues, then the corrections need to be made. It is a continuous process (Gunasekaran, Korukonda, Virtanen, & Yli-olli, 1993).

The SOP has to be developed well and also presented well. The presentation should be clear. The sentences written in simple language. This allows for everyone to be able to understand the procedure. This allows adherance and the effectiveness of the Sop. It is best written in active voice and a present verb tense. This avoids sentences like ‘you are expected” which is direct and can cause lack of motivation. It should also not be redundant. It should be detailed but not lengthy (Sajdak, Trembath, & Thomas, 2013).
2.4.2 Who Develops the Standard Operating Procedure

This is a topic that is not totally agreed on. Some studies say that the best individuals to come up with the SOP is the quality department (Bamber & Dale, 2010). This is because they are interacting with the total procedure from start to finish and carry the technical know how of the activities. They are also advised upon because they are in constant observation and can make the necessary changes to the SOP to make it the best procedure possible (Cainelli, Marchi, & Grandinetti, 2015).

Others state that the best people to make the SOP are technical experts of the work. This is because they believe that the experts are external and hence should be objective (Rao & Devadas, 2006). They just need to be well informed of the activity and they have the technical knowledge of the details of the activities. This can be useful especially in firms that do not carry a quality department for one reason or the other.

It is also advised highly that if the firm carries a multi-skilled procedure, it is best to approach the development through a team (Becker & Kugeler, 2015). This team should have a representative from every concern department. This way, they are able to grasp even the smallest details to be used in the SOP. Each department representative can create their own department specific SOP and when the team comes together compares all of these and comes up with the most effective general procedure (Sajdak, Trembath, & Thomas, 2013).

2.4.3 Importance of a Standard Operating Procedure to an SME

The greatest importance of a SOP is the achievement of quality as intended in conformance to the customer needs and providing this quality consistently (Firescu & Popescu, 2015). An SME’s biggest weapon should be the quality of the product it offers. The SOP is able to allow the firms production arm to avoid things and situations that cause variations that lead to these inconsistencies in quality. These inconsistencies lead to variations that affect the quality of the product or service. It allows each individual to know what exactly is expect of them in their activity (De Treville, Antonakis, & Edelson, 2012). All workers end up working in a uniform way across departments. And with every unit every employee performs an activity in the same exact way.
The SOP is also a record holder. It allows the SME firm to hold the knowledge and information. This can then be easily transferred where there is a need. Many time employees can leave a job or resign or retire or just be on temporary leave (Sallis, 2014). This is particularly common in a SME firm where there is a lot of employee turnover. The new person has a resource in the SOP to get to know what exactly is expected of them. The SOP also largely reduces misinterpretation and miscommunication within the firm. It creates clarity (Gidey, 2012). It also greatly increases the speed of the integration of a new employee.

SOPs allow the SME firm to stay compliant to any regulations that they need to adhere to. The SOP is written with this in mind. The firm is always protected when it comes to compliance. Especially when an SME firm is still young, there are very many things to put into consideration and a lot that is coming at the management that they can forget things like regulations. Ignoring these can lead to a firm ending up into a lot of problems (Sadgrove, 2015). Also the SOP allows the firm to ensure that the workers are working with a procedure that is concern for their safety (De Treville, Antonakis, & Edelson, 2012). The SOP has a number of importances and this is why all firms, large and small should adopt the use of a well developed Standard Operating Procedure.

2.4.4 Effect of a Standard Operating Procedure on Quality

An SOP is a key element in achieving the goal of quality (Arditi & Gunaydin, 1998). It is essential to realize that the main reason of picking up an SOP for a firm is to ensure that the activities that lead to the production of an offering are well understood by all that are involved in the production (Badri, Davis, & Davis, 1995). It also allows the people who are part of the production to have a point of consultancy as to what they should be doing in their activities (Becker & Kugeler, 2015). These are important factors that affect the eventual quality of the offering. The SOP allows for people to have no errors in their production. It reduces quality risk and encourages zero defects (Crosby, 1979

The SOP is made with the base being the goals intended by the company. So, with an SOP they are able to communicate in clear and simple language what the expected quality goal is (Turker & Altuntas, 2014). When everyone is working, they are able to be clear on what they are working towards. An SOP is able to help the people in the production floor
to do their jobs and always give a product that is of the expected quality because they are clearly told what to do and how to do it and also what level of quality they are looking to achieve (Bolouri-Yazdel & Bozorg-Haddad, 2014).

2.5 Chapter Summary
This section has reviewed literature in line with the topic and research objectives of this study. This data has been retrieved from journals websites and previous studies done. The next chapter considers the methodology to be applied for the study.
CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

The study was conducted and analyzed the factors that affect the relative quality product of SMES in the KAI. This chapter will seek to outline the methodology that will be applied to do the research. It consists of a layout for the population choice, the collection of information, measurement and analysis of the information that was acquired. Therefore, in this section, the researcher will describe the strategies that were used and techniques that were utilized in the collection, processing and analysis of data.

3.2 Research Design

The study took up the approach of a descriptive survey. This aided in recognition of the factors that affect the relative product quality in the SME sector of the KAI. The descriptive design was taken as the proper one to use because the core interest of the research was to analyze and establish the relationship between the factors and the industry’s relative product quality. Cooper & Schindler (2014), states that a descriptive study is interested in finding the elements that are what, where and how of a phenomenon. Descriptive research design was chosen because it allowed the researcher to generalize the results to a larger population.

According to Saunders, Lewis, & Thornhill (2012) it is of essence and necessary to apply the use of data where subjects are observed in their normal and natural set ups without introducing of foreign elements into the environment. It comes very much in handy when there is a need to collect an individual's opinions and attitudes on a particular case or problem. It is efficient when it comes to collection of information that is needed to explain further the attitudes and opinions that are views in their natural environment. In this case, it thoroughly came in handy when the collection on data on the views of the SME owners in the Kai over relative product quality.
3.3 Population and Sampling Design

3.3.1 Population
A population is a clearly defined group of people, things, elements, events that are being investigated or from whom a researcher needs to draw inference from. It should be a homogenous group (Denscombe, 2007). The target population of the study was on KAI SMEs in Nairobi. It will focus particularly on the owners or those in management of these SMEs. From the KAM and AFDAK directories, there are 800 in number.

Table 3.1 Target Population

<table>
<thead>
<tr>
<th>Category</th>
<th>Population</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Enterprises</td>
<td>600</td>
<td>75</td>
</tr>
<tr>
<td>Middle Enterprises</td>
<td>200</td>
<td>25</td>
</tr>
<tr>
<td>Total</td>
<td>800</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: KAM and AFDAK directories (2016)

3.3.2 Sampling Design

3.3.2.1 Sampling Frame
A sampling frame is in relation to the target population. It consists of the elements from which the research sample is chosen from. It is the entirety of the population (Cooper & Schindler, 2014). The sampling frame of this study was drawn from The Association of Fashion Designers of Kenya (AFADK) and the Kenya Association of Manufacturers (KAM) directories. These gave 800 SMEs based in Nairobi.

3.3.2.2 Sampling Technique
The stratified random sampling was used. The target population was subdivided into groups with identifiable strata which is chosen based on an attribute or a few attributes (Saunders, Lewis, & Thornhill, 2012). The groups allowed the study to have a sample that allowed total representation of the entire population. This allowed the researcher to pick a sample from all groups which makes the entire sample representative in a proportional way. One, however, has to make sure they are aware of what the strata of the population that are identifiable are. The advantages of this way are, the total cost of the survey will be reduced by the reduction of each observation and also having estimates for each sub population instead of doing the entire which would be very expensive. It also allowed all
members and the elements of the entire population are included in the study and that estimates of the parameters will be used for each sub-population. A random sample was preferred because it is free from bias and therefore each unit had a chance to be included in the sample.

### 3.3.2.3 Sample Size

There is a common discussion as to how large or small a sample should be. According to Cooper & Schindler (2014), a sample size should be dependent on the variation that the population carries. It is however known that the larger your sample size the lesser the potential errors. According to Saunders, Lewis, & Thornhill (2012), the choice of sample size should be a result of a number of factors, the percentage of error allowed in your study. One needs to figure the allowable error, the choice type of analysis that will be utilized and the entire size of the population. A census is however expected to be taken when the population one is focusing on is of 100 elements or less. This means that the whole population should become the sample. In this case, the total population is of 800 companies. According to Field (2005), anything above a population of 800 should carry a 20% sample size, so our sample was made of 160 companies and the target was the owners or those in management of the company.

<table>
<thead>
<tr>
<th>Category</th>
<th>Population</th>
<th>Sample Ration</th>
<th>Sample Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Enterprises</td>
<td>600</td>
<td>0.20</td>
<td>120</td>
</tr>
<tr>
<td>Middle Enterprises</td>
<td>200</td>
<td>0.20</td>
<td>40</td>
</tr>
<tr>
<td>Total</td>
<td>800</td>
<td>0.20</td>
<td>160</td>
</tr>
</tbody>
</table>

### 3.4 Data Collection Methods

Cohen, Manion, & Morrison (2011), state that there are many ways of approaching data collection. This is done through tools that are chosen after considering the elements of the samples. One has to consider the attributes of the samples. Other factors that one should consider when choosing a tool is the topic of research, the problem being researched on, the intended aim of the research, the type of data that will be expected and the results that will come from the study. All of these have to be considered because every tool was used to collect specific information.
This study used primary data that was collected from the respondents of the chosen sample. The respondents in this case were the SME owners or managers in the KAI. The tool that was of choice in the study was the questioner. It was based on the research questions that were the guide study. The questionnaire had subsections. One of which contained the information that tells more of the company, its background, its period of operation, kind of items it produces and its intended market. It also covered the position that the respondent held and asked how long the respondent had worked for the company. The second sub section allowed the researcher to analyze the factors affecting relative product quality in the SME sector of the KAI. For interval measures, a five-point Likert-scale (1-‘strongly agree’ to 5-‘strongly disagree’)/(1-‘very high’ to 5-‘very low’) will be used to measure respondents’ agreement with the concept under investigation.

Secondary data was also collected for this study. This data was useful for generating additional information for the study from already documented data or available reports on the KAI and other country’s apparel industries. Kothari (2006) says that secondary data is an essential quantitative technique for evaluating historical or contemporary confidential or public records, reports, government documents and opinions.

3.5 Research Procedure

The procedure was started by getting authorization from USIU to collect the data. This was received by obtaining an introductory letter which was presented to every respondent. A pilot test of the questionnaire was done by administering it to 20 respondents of which the results were not included in the eventual data. This allowed for any corrections that were needed to be addressed accordingly. This step was necessary ensured that the tool was reliable and objective according to Mugenda (2003).

The researcher administered the research instruments individually to a sample of 200 SMEs in the KAI. The researcher exercised care and control and ensured that all questionnaires were issued to the respondents and to achieve this, the researcher maintained a register of questionnaires which are administered and those which were received.

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3.6 Data Analysis Methods

This is the breaking down of the information collected to answer the questions the study is based on. One needs to calculate and score each questioner. This is followed by tabulation and the coding of the data. The procedure for data analysis involved first coding the data into the Statistical Package for the Social Sciences (SPSS). Coding is simply assigning a number to a piece of group of information that was collected, with the intended aim of allowing the collected data to be taken through analysis in quantitative terms. The statistical tests that were taken were used to draw out a different analysis. The descriptive statistics tests were used to determine the mean (M) distribution, frequency (f) and standard deviation (SD) of the data. The mean, as stated by (Cohen, Manion, & Morrison, 2011), is what most people think of when they are simply thinking of what the “average” is. The standard deviation, allowed the researcher to measure how far the data deviate in relation to the mean. Once the descriptive statistics was applied on the collected data, the results were summarized on different tools such as charts, graphs and tables this allowed the researcher to investigate and draw conclusions on the relationships that existed between the independent and dependent variables in question.

3.7 Chapter Summary

This chapter has outlined the strategy layout of data collection and the data analysis. It has given a proper layout of the choice of research design, the intended population, the design that will be used to pick sample. It has gone further to describe the choice of data collection methods, research procedures and the chosen data analysis procedures. Chapter four looks at the data collected and its analysis.
CHAPTER FOUR

4.0 RESULTS AND FINDINGS

4.1 Introduction

This chapter presents the results obtained from analyzing the data collected. The data are analyzed in line with the specific objectives of the study which were to establish the effects of quality department, employee training and operating procedure on the quality of clothing.

4.1.1 Response Rate

A total of 160 questionnaires were distributed to small and medium enterprises and only 119 questionnaires were filled and returned giving a response rate of 74.7%, which was considered sufficient for the study and the results are presented in table 4.1.

Table 4.1: Response Rate

<table>
<thead>
<tr>
<th>Variable</th>
<th>Distribution</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filled and returned</td>
<td></td>
<td>119</td>
<td>74.7</td>
</tr>
<tr>
<td>Non-response</td>
<td></td>
<td>41</td>
<td>25.3</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>160</td>
<td>100</td>
</tr>
</tbody>
</table>

4.2 Demography

This section presents the findings with regard to the various demographical features of the respondents.

4.2.1 Gender

An analysis of the gender revealed that female gender had the highest number of respondents representing 61% of the total while male was only 39% as shown in figure 4.1.
Figure 4.1: Gender

4.2.2 Duration of Employment

As shown in Table 4.2, respondents who had been in the various firms for Less than 1 year were 5 representing 4%, while those of 1-2 years were 46 and represented 39%. Those of 3-5 years were the majority at 53 and represented 45%, in addition, those who had been in employment for 6-8 years were 12 and represented 10%, while those of 9-10 years were 2 and represented 2%. The least were those above 10 years and they represented 1%.

Figure 4.2: Duration of Employment
4.2 3. Position Held

As shown in Table 4.3 respondents were asked about the positions they held and the findings established that owners were 3%, managers 9% and production supervisor were 15% with the majority being employees at 72%.

![Figure 4.3: Position Held](image)

4.2.4 Company Duration of Operation

To analyze how long the various companies have been in operation the findings revealed that firms older than 10 years were 12% while those of 6-8 years were 34%. Majority of the firms had been in operation for 3-5 years and accounted for 51% of the total while those in operation for 0-2 years were 3% as illustrated in figure 4.4.

![Figure 4.4: Duration of Operation](image)
4.2.5 Number of Employees

As highlighted in figure 4.5 most of the firms with 0-10 employees represented 73% while firms with 11-20 employees represented 24% and those with 21-30 employees were 3% and the least were firms with 31-40 at 1%

Figure 4.5: Number of Employees

4.2.6 Clothing Produced

In regard to the nature of clothing produced the findings revealed that firms who process the adult ready to wear clothing 29%, firms that deal in adult made to measure were 41%, those who were work wear 25% and baby clothes were 4% as indicated in figure 4.6

Figure 4.6: Clothing Produced
4.2.7 Market for the Clothing Produced

As presented in figure 4.7, the findings revealed that most of the market for the clothing produced was domestic and accounted for 96% of the respondents while those produced for the regional market was only 4%.

![Figure 4.7: Market for the Clothing Produced](image)

4.3 Effects of Quality Department on the Clothing Quality

The first objective sought to establish the effects of quality department on the clothing quality and several statements were posed to the respondents and for each they were prompted to pick the appropriate number on a scale from 1 to 5 where: 1= Very Low, 2= Low, 3=Medium 4= High, and 5= Very High

4.3.1 Descriptive on Effects of Quality Department on the Clothing Quality

The findings revealed that there was a high extent of autonomy of the quality department (Freedom to run the department as they find fit) (4.34), and high extent was also experienced when quality department coordinates with other departments (4.28), most respondents also noted to a high extent that there was visible quality department (4.17) and quality department has access to the top management (4.02).

The study also established that to a medium extent the quality department was considered effective (3.40) and quality department staff are utilized as a consulting resource (3.37). It was also noted to a medium extent that quality department was accountable to top management (3.24) as shown in table 4.2.
Table 4.2: Descriptive on Effects of Quality Department on Clothing Quality

<table>
<thead>
<tr>
<th>Variable</th>
<th>MEAN</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extent to which there is autonomy of the quality department (Freedom to run the department as they find fit)</td>
<td>4.34</td>
<td>.397</td>
</tr>
<tr>
<td>Extent to which the quality department coordinates with other departments</td>
<td>4.28</td>
<td>.514</td>
</tr>
<tr>
<td>Extent to which there is a visible quality department</td>
<td>4.17</td>
<td>.528</td>
</tr>
<tr>
<td>Extent to which the quality department has access to the top management</td>
<td>4.02</td>
<td>.394</td>
</tr>
<tr>
<td>Extent to which the quality department is effective</td>
<td>3.40</td>
<td>.587</td>
</tr>
<tr>
<td>Extent to which the quality department staff are utilized as a consulting resource</td>
<td>3.37</td>
<td>.687</td>
</tr>
<tr>
<td>Extent to which the quality department is accountable to top management</td>
<td>3.24</td>
<td>.607</td>
</tr>
</tbody>
</table>

4.4 Impact of the Employee Training on the Quality Of Clothing

The second objective sought to establish the Impact Of the employee training on the clothing quality and several statements were posed to the respondents and For each they were prompted to pick the appropriate number on a scale from 1 to 5 where: 1= Very Low, 2= Low, 3=Medium 4= High, and 5= Very High.

4.4.1 Descriptive on the Impact of Employee Training on the Quality of Clothing

The finding revealed that to a medium extent there are available resources for employee training (3.93) and top management is committed to employee training (3.71). However, to a low extent it was revealed that quality achievement training is given to management (2.87) and specific technical skill training is given to every employee (2.82). The study also established that extent to which technical training is a continual process was a low one (2.76) and employee training was not considered much as a core part of the company (2.76) as well as quality achievement training is given workers (2.72) as shown in table 4.3.

Table 4.3: Descriptive on the Impact of Employee Training on The Quality of Clothing

<table>
<thead>
<tr>
<th>Variable</th>
<th>MEAN</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extent to which there is autonomy of the quality department (Freedom to run the department as they find fit)</td>
<td>4.34</td>
<td>.397</td>
</tr>
<tr>
<td>Extent to which the quality department coordinates with other departments</td>
<td>4.28</td>
<td>.514</td>
</tr>
<tr>
<td>Extent to which there is a visible quality department</td>
<td>4.17</td>
<td>.528</td>
</tr>
<tr>
<td>Extent to which the quality department has access to the top management</td>
<td>4.02</td>
<td>.394</td>
</tr>
<tr>
<td>Extent to which the quality department is effective</td>
<td>3.40</td>
<td>.587</td>
</tr>
<tr>
<td>Extent to which the quality department staff are utilized as a consulting resource</td>
<td>3.37</td>
<td>.687</td>
</tr>
<tr>
<td>Extent to which the quality department is accountable to top management</td>
<td>3.24</td>
<td>.607</td>
</tr>
<tr>
<td>Score</td>
<td>Description</td>
<td>Relevance</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
<td>-----------</td>
</tr>
<tr>
<td>3.71</td>
<td>Extent to which top management is committed to employee training</td>
<td>.633</td>
</tr>
<tr>
<td>3.93</td>
<td>Extent to which there are available resources for employee training</td>
<td>.899</td>
</tr>
<tr>
<td>2.82</td>
<td>Extent to which specific technical skill training is given to every employee</td>
<td>.799</td>
</tr>
<tr>
<td>2.76</td>
<td>Extent to which technical training is a continual process</td>
<td>.736</td>
</tr>
<tr>
<td>2.72</td>
<td>Extent to which quality achievement training is given to workers</td>
<td>.700</td>
</tr>
<tr>
<td>2.87</td>
<td>Extent to which quality achievement training is given to management</td>
<td>.839</td>
</tr>
<tr>
<td>2.76</td>
<td>Extent to which employee training is a core part of the company</td>
<td>.663</td>
</tr>
</tbody>
</table>

**4.5 Impact of the Operating Procedure on the Quality of Clothing**

The third objective sought to establish the impact of the operating procedure on the clothing quality and several statements were posed to the respondents and for each they were prompted to pick the appropriate number on a scale from 1 to 5 where: 1= Very Low, 2= Low, 3= Medium 4= High, and 5= Very High.

**4.5.1 Descriptive on Impact of the Operating Procedure on the Quality of Clothing**

The findings revealed that to a high extent there was a thorough final inspection of the clothes (4.08) and incoming raw material (4.06), as well as clarity of work and process instructions given to employees (4.03). There was also a high extent of continuous self-inspection (4.00).

The findings also revealed that to a medium extent the process minimizes the chance of employee error (3.98). In addition, constant preventative equipment maintenance (3.93) and process inspection (3.88) was also done to a medium extent.
Table 4.4: Descriptive on Impact of the Operating Procedure on the Quality

<table>
<thead>
<tr>
<th>Variable</th>
<th>MEAN</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extent to which there is clarity of work and process instructions given to employees</td>
<td>4.03</td>
<td>.356</td>
</tr>
<tr>
<td>Extent to which the process minimizes the chance of employee error.</td>
<td>3.98</td>
<td>.411</td>
</tr>
<tr>
<td>Extent to which there is a thorough inspection of the incoming raw material</td>
<td>4.06</td>
<td>.397</td>
</tr>
<tr>
<td>Extent to which there is continuous self- inspection</td>
<td>4.00</td>
<td>.432</td>
</tr>
<tr>
<td>Extent to which there is in-process inspection</td>
<td>3.88</td>
<td>.679</td>
</tr>
<tr>
<td>Extent to which there is a thorough final inspection of the clothes</td>
<td>4.08</td>
<td>.497</td>
</tr>
<tr>
<td>Extent to which there is constant preventative equipment maintenance</td>
<td>3.93</td>
<td>.578</td>
</tr>
</tbody>
</table>

4.6 Relative Clothing Quality
The study also sought to establish the factors affecting relative clothing quality clothing quality and several statements were posed to the respondents and for each they were prompted to pick the appropriate number on a scale from 1 to 5 where: 1= Very Low, 2= Low, 3=Medium 4= High, and 5= Very High.

4.6.1 Descriptive on Relative Clothing Quality

Analysis of the variables established that to a medium extent having a quality department improves the clothing quality (3.68) and clothing the company produces is of superior quality compared to the competitors (3.58). It was also noted that having a set operating procedure had a medium extent on improving the clothing quality (3.58). The clothing produced were also found to be equivalent quality compared to the competitor to a medium extent (3.24).

Employee training was found to have a medium extent on improving the clothing quality (3.22) and sales volume was also averagely achieved due to the quality of the clothing (3.03). On the other hand, sales decline in volume in the past year had minimal association
with the quality of clothing produced (2.74) and most of the respondents noted that to a
low extent the clothing produced is of inferior quality compared to the competitor (2.35).

**Table 4.5: Descriptive on Relative Clothing Quality**

<table>
<thead>
<tr>
<th>Variable</th>
<th>MEAN</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>The clothing the company produces is of superior quality compared to the</td>
<td></td>
<td></td>
</tr>
<tr>
<td>competitors</td>
<td>3.58</td>
<td>.707</td>
</tr>
<tr>
<td>The clothing we produce is of equivalent quality compared to the competitor</td>
<td>3.24</td>
<td>.747</td>
</tr>
<tr>
<td>The clothing we produce is of inferior quality compared to the competitor</td>
<td>2.35</td>
<td>.850</td>
</tr>
<tr>
<td>The sales volume in the past year was achieved cause of the quality</td>
<td>3.03</td>
<td>1.053</td>
</tr>
<tr>
<td>The sales volume in the past year were reduced cause of the quality</td>
<td>2.74</td>
<td>.764</td>
</tr>
<tr>
<td>Having a quality department improves the clothing quality</td>
<td>3.68</td>
<td>.703</td>
</tr>
<tr>
<td>Employee training improves the clothing quality</td>
<td>3.22</td>
<td>.865</td>
</tr>
<tr>
<td>Having a set operating procedure improves the clothing quality</td>
<td>3.58</td>
<td>.707</td>
</tr>
</tbody>
</table>

**4.7 Inferential Statistics**

To establish the relationship between the dependent variable and the independent variable
the study undertook a correlation and regression analysis.

**4.7.1 Correlation Analysis**

As shown in table 4.6 a correlation analysis was done between quality of clothing against
quality department, employee training and operating procedure. The findings established
that there was a positive correlation between quality of clothing and quality department
(r=0.254, p< 0.01). No correlation was established between employee quality of clothing
and Training (r=0.127, p=0.169); operating procedures (r=-.073, p=0.432).

There was also a significant correlation between quality department and employee and
training (r=.620, p<0.01).

**Table 4.6: Correlation Analysis**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Clothing Quality</th>
<th>Employee Training</th>
<th>Quality Department</th>
<th>Operating Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clothing Quality</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4.7.2 Regression Analysis

A regression analysis was done between quality of clothing against quality department, employee training and operating procedure. The findings established that the R squared was 0.069 therefore only 6.9% of the variation in quality of clothing was caused by the variations in quality department, employee training and operating procedure as shown in table 4.7.

**Table 4.7: Model Summary**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>Change Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>R Square Change</td>
</tr>
<tr>
<td>1</td>
<td>.262&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.069</td>
<td>.045</td>
<td>.40785</td>
<td>.069</td>
</tr>
</tbody>
</table>

<sup>a</sup> Predictors: (Constant), Quality department, operating procedures, employee training

To determine whether any of the differences between the means was statistically significant, an ANOVA analysis was done at 95% confidence interval and the P-value was (0.041) and therefore significant. This implied that not all of population means were equal as indicated in table 4.8.

**Table 4.8: Anova Analysis**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>1.415</td>
<td>3</td>
<td>.472</td>
<td>2.835</td>
</tr>
</tbody>
</table>
Residual | 19.129 | 115 | .166 |
--- | --- | --- | --- |
Total | 20.544 | 118 | 

a. Dependent Variable: clothing quality

b. Predictors: (Constant), Quality department, operating procedures, employee training

As per Table 4.9, the equation \( Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 \) becomes:

\[ Y = 1.998 - 0.038X_1 - 0.092X_2 + 0.434X_3 \]

Where \( Y \) is the dependent variable quality of clothing

\( X_1 \) – employee training

\( X_2 \) – operation procedures

\( X_3 \) – quality department

**Table 4.9: Coefficient of Quality of clothing and cofactors**

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>1.998</td>
<td>.833</td>
<td></td>
<td>2.398</td>
</tr>
<tr>
<td>Employee Training</td>
<td>-.038</td>
<td>.077</td>
<td>-.057</td>
<td>-.497</td>
</tr>
<tr>
<td>Operating Procedures</td>
<td>-.092</td>
<td>.153</td>
<td>-.055</td>
<td>-.601</td>
</tr>
<tr>
<td>Quality Department</td>
<td>.434</td>
<td>.175</td>
<td>.284</td>
<td>2.479</td>
</tr>
</tbody>
</table>

The regression equation illustrated in Table 4.9 has established that taking all factors into account (Quality department, operating procedures, employee training) all other factors held constant quality of clothing increases by 1.998. The findings presented also showed that with all other variables held at zero, a unit change in employee training had no significant effect on clothing quality, and a unit change in operating procedures also had no significant effect on clothing quality. However, the study showed that a unit change in quality department would affect a clothing quality at a significant level. From the analysis only the variable quality department was significant \((p<0.05)\). This implies that at the
clothing factories the quality department is the main determinant of the quality of clothing produced.

4.8 Chapter Summary
This chapter has presented the results and findings from the data analysis undertaken. The first part has presented a pictorial presentation from the analysis done on the demographic data, the second section dealt with data on quality department, the third section looked at the findings from the analysis done on employee training, and the fourth section shows the findings from data on operation procedures. In chapter five the results established will be discussed and conclusions and recommendations made.
CHAPTER FIVE

5.0 DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction
This chapter presents the discussions in with regard to the findings established in the previous chapters. This is chapter also presents the conclusions and recommendations made from the findings.

5.2 Summary
The purpose of the study was to establish the factors that affect product quality of the SMEs in the Kenyan Apparel Industry. The study was guided by the following research questions: How does a quality department affect apparel product quality? How does employee training affect the apparel product quality? And how does a set operating procedure affect the apparel product quality?

The study took up the approach of a descriptive survey. This aided in recognition of the factors that affect the relative product quality in the SME sector of the KAI. The descriptive design was taken as the proper one to use because the core interest of the research was to analyse and establish the relationship between the factors and the industry’s relative product quality. The target population of the study was on KAI SMEs in Nairobi. It will focus particularly on the owners or those in management of these SMEs. From the KAM and AFDAK directories, there are 800 in number. A random sampling technique was used. The stratified option was the best to use considering the population in question. From the population of 800 and by use of the rule of thumb a 20% sample size was considered, so our sample was made of 160 companies and the target was the owners or those in management of the company.

A total of 160 questionnaires were distributed to small and medium enterprises and only 119 questionnaires were filled and returned giving a response rate of 74.7%, which was considered sufficient for the study. The procedure for data analysis involved first coding the data into the Statistical Package for the Social Sciences (SPSS). The descriptive
statistics tests were used to determine the mean (M) distribution, frequency (f) and standard deviation (SD) of the data. Once the descriptive statistics was applied on the collected data, the results were summarized on different tools such as charts, graphs and tables this allowed the researcher to investigate and draw conclusions on the relationships that existed between the independent and dependent variables in question.

The first objective sought to establish the effects of quality department on the clothing quality. The findings revealed that there was a high extent of autonomy of the quality department (Freedom to run the department as they find fit), and high extent was also experienced when quality department coordinates with other departments. Most respondents also noted to a high extent that there was visible quality department and quality department has access to the top management. The study also established that to a medium extent the quality department was considered effective and quality department staff are utilized as a consulting resource. It was also noted to a medium extent that quality department was accountable to top management. The findings established that there was a positive relationship between quality of clothing and quality department (r =0.254, p<0.01). Similarly, Kaynak (2003) study on the relationship between total quality management practices and their effects on firm performance established a positive correlation between quality data and reporting and quality performance (r=0.251, p<0.01).

The second objective sought to establish the impact of the employee training on the clothing quality. The finding revealed that to a medium extent there are available resources for employee training and top management is committed to employee training. However, to a low extent it was revealed that quality achievement training is given to management and specific technical skill training is given to every employee. The study also established that extent to which technical training is a continual process was a low one and employee training was not considered much as a core part of the company as well as quality achievement training is given to workers. The findings established that there was no correlation between quality of clothing and employee training (r=0.127, p=0.169). However, there was a significant correlation between quality department and employee training (r=0.620, p<0.01). Similar results have been established by Algharibeh, Almsafir & Alias (2014) in their study to establish the relationship between
training and employee performance at Jordanian public universities where a positive correlation between quality training and employee performance \( (r=0.720, \ p<0.01) \).

The third objective sought to establish the impact of the operating procedure on the clothing quality. The findings revealed that to a high extent there was a thorough final inspection of the clothes and incoming raw material, as well as clarity of work and process instructions given to employees. There was also a high extent of continuous self-inspection. The findings also revealed that to a medium extent the process minimizes the chance of employee error. In addition, constant preventative equipment maintenance and process inspection was also done to a medium extent. The findings established that there was no correlation between quality of clothing and operating procedure \( (r=-0.073, \ p=0.432) \). The findings established that the R squared was 0.069 therefore only 6.9% of the variation in quality of clothing was caused by the variations in quality department, employee training and operating procedure.

5.3 Discussion

5.3.1 How Quality Department Affect Apparel Product Quality

The first objective sought to establish the effects of quality department on the clothing quality. The findings revealed that there was a high extent of autonomy of the quality department (Freedom to run the department as they find fit) \( (4.34) \). Ahire, Golhar, & Waller (1996) established that a quality department allows one to ensure that the quality of product is the highest and in accordance to the need of the customers. Once one has a high relative quality, this means that the firm will do well within the industry and this is what customers are looking for. Crosby (1979) established that quality is free and is of the theory of zero defects. This means that a firm should at the end of the production line give a product that has no defect and is ready to go to the market ad will sell without return. The one way to ensure that there are zero defects is through the instituting of a quality department.

The findings also revealed that to a high extent of quality was also experienced when quality department coordinates with other departments \( (4.28) \). Indeed, carrying a zero-defect production requires a general commitment of the entire company and different departments to achieve this. Otherwise, working alone will not make a difference in the
quality cause (Badri, Davis, & Davis, 1995). A company has to be quality oriented wholly and placing a quality department without the rest of the company on board will not improve the quality issue (Sethi, 2000). If the entire company is on board, each department doing what they should do and the quality department ensuring that they are doing so and making necessary corrections along the way, it becomes much easier to achieve the zero-defect product (Crosby, 1979).

Most respondents also noted to a high extent that there was visible quality department (4.17). Badri, Davis, & Davis (1995) noted that a quality department is one that ensures that the final packed product is of the expected quality. Badri, Davis, & Davis (1995) added that it is a core department in any industry, both product and service industries. A visible and effective quality department shows results both in quality and cost. A number of factors have to be considered and put in line to ensure the success of the quality department.

It was also noted that to a high extent the quality department has access to the top management (4.02). This is very important as established by Sethi (2000) who concluded that a majorly important and the core factor of the success or failure of the quality department is the top management. Just creating a quality department has no effect, the top management has to be committed to the quality course. The top management has to be quality oriented in its self. Ahire, Golhar, & Waller (1996) noted that this means that the management has to make and allow for the necessary arrangements to come to fruition. This includes arranging and setting apart for the needed resources to ensure that the department is effective. The resources are towards the support of the department such as setting up trainings to improve skill sets, buying new technologies to allows better quality work e.t.c.

The findings established that there was a positive relationship between quality of clothing and quality department (r=.254, p=0.05). This implied that the more the quality department minimized errors the higher the quality of the clothing will be. Bamber & Dale (2010) established that for such a development to occur employee attitude is a factor that either lead to the failure or success of the department. They added that the people that make up the department have to first be involved in the planning of the strategies for quality. This allows them to be heard and give information that is key to the success. Dahlgaard & Park-Dahlgaard (2005) noted that the quality department is supposed to
ensure that the intended quality goal of the firm is achieved in accordance to the customer needs. However, the job of control includes different processes and duties that come together to achieve quality control.

5.3.2 How Employee Training Affect the Apparel Product Quality

The second objective sought to establish the impact of the employee training on the clothing quality. The finding revealed that to a medium extent there are available resources for employee training (3.93). Organizational success is highly pegged on the workforce or the employees it carries. The employees’ motivation, confidence, discipline and work ethic can determine the success of the organization. According to Srivastava, Neelam & Agarwal (2016), all of these aspects can be brought in by basically instilling the technical skills required for the workers to be productive. When the training is in check, the worker is productive and produces good quality clothes. According to Ratnakar & Yumiko (2007), the absence of skills or presence of the untrained workers impeded productivity and product quality greatly.

The findings revealed that to a medium extent and top management is committed to employee training (3.71). This could be with the aim of offering the best to the consumers. Srivastava, Anandita, & Radhika (2016) established that training ensures that the process is efficient and that the end product is of high quality. The increase of training has shown to result to high productivity and high product quality. In Lesotho, manufacturing companies have highly invested in training of their workers and the results are increased production of over 25% (Ratnakar & Yumiko, 2007). To run the company there is also the need of the management staff and like every other company, there is always the need of support staff (Kinuthia, Mburugu, & Mutuku, 2014). All of these staff members need to be highly trained and in turn skilled. People are of higher value to a firm when they are trained and skilled.

The findings show that to a low extent specific technical skill training was given to every employee (2.82). Sweety (2014) highlighted that it is essential as customer preferences change, factors are also changed, skills have to be enhanced and other things such as technology is upgraded and new ways of doing things are created such as the seamless production in the manufacturing industry and training of the employees is a major factor in the successful production of quality products.
The study also established that extent to which technical training is a continual process was a low one (2.76) and such arrangements has seen other countries fail. For instance, in Nigeria, the housing industry has terribly suffered with structures that keep causing damages and losses to house and business owners. The Nigerian Public housing sector is faced by many quality problems. This is as a result of many factors but according to Adenuga (2013) one of the factors that play a big role according to the study, is poor training systems. This lack of employee training was a general problem across all departments; the managerial, design and technical. The lack of labour skills was ranked as the second highest factor that affects quality followed by poor communication unique to the said firm. Deming (1986) added that many firms when recruiting choose supposedly the best people they can find, the most skilled people. This leads to many firms feeling that there is no need to train. Many of these generally skilled employees will work but at the level they know. Many times, this is not the best level of skill and not in line with the company’s quality goals.

There was no significant correlation however, the findings established that there a positive relationship between quality of clothing and employee training ($r=0.127$, $p=0.169$). However, there was a significant correlation between quality department and employee training ($r=.620$, $p<0.01$). Training is said to be an activity that is highly skilled and professionally driven that aids in the overall production process. It ensures that the process is efficient and that the end product is of high quality. Srivastava, Anandita, & Radhika (2016) in their study noted that the more trained the work force is, the better the quality of the product. This shows greatly in China where they remain highly competitive compared to other Asian countries that have lower wages. This is because of the highly-trained workers. Their product is of very high quality the buyers opt for it.

Sethi (2000) says that a company must be quality oriented to ensure that all the things that are needed to achieve quality are of the highest priority. There is an importance in conducting training in every phase of a company. Many would argue that the technical department is the most important to train. There is however value in training the supporting and managerial departments also to help in the overall success of quality (Arditi & Gunaydin, 1998).
5.3.3 How a Set Operating Procedure Affect the Apparel Product Quality

The third objective sought to establish the impact of the operating procedure on the clothing quality. The findings revealed that to a high extent there was a thorough final inspection of the clothes (4.08) and incoming raw material (4.06). A standard operating procedure (SOP) has been a great need in many firms and sectors across the world. Sectors like medical and pharmaceutical industries would not survive without SOPs (Sajdak, Trembath, & Thomas, 2013). The absence of SOPs in this industry would lead to very negative results. Sectors like education cannot do with an absent SOP as it will be a big mess if people were left to their devices. Even the financial sector highly needs SOPs in place to avoid errors that can bring a whole firm down. SOPs as a core element of a firm (Alhstrom, 1996). This allows an industry such as manufacturing to produce products that are of the highest quality. A firm that is run through a known and well-presented SOPs to the employees, they carry a high or positive relative quality and this gives them such a good competitive advantage.

The findings also revealed that to a high extent there was clarity of work and process instructions given to employees (4.03). There was also a high extent of continuous self-inspection (4.00). Large firms have very little control over every worker as compared to smaller firms (Dahlgaard & Park-Dahlgaard, 2005). It is however best to have instructions that guide everyone. An SOP comes in handy when each worker knows exactly what they are supposed to do and are held accountable for it. SOPs reduce the variations that affect the product quality.

The findings also revealed that to a medium extent the process minimizes the chance of employee error (3.98). Crosby in his 1979 study stated that to achieve zero defect, one has to eliminate all the errors that come along the way. This means that the final product will be carrying no errors and this means that the product will be of good quality while ensuring the cost of production stays down. SOPS are key elements of a firm despite the size and even as individuals. Everyone has some sort of routine that we follow at some point in the day. What would turn this into an SOP is by documenting it. Small firms with small business also require an SOP. This allows anyone who is working in the firm to know exactly what is expected of him or her and also what comes before them and after them. An SOP is supposed to cover all parts of the production process and should be presented in a good organized matter.
There was no significant correlation, however the findings established that there was a positive relationship between quality of clothing and operating procedure \((r=-0.073, p=0.432)\). The findings established that the \(R^2\) was 0.069 therefore only 6.9% of the variation in quality of clothing was caused by the variations in quality department, employee training and operating procedure. The greatest importance of a SOP is the achievement of quality as intended in conformance to the customer needs and providing this quality consistently. The SOP is able to allow the firms production arm to avoid things and situations that cause variations that lead to these inconsistencies. These inconsistencies lead to variations that affect the quality of the product or service. It allows each individual to know what exactly is expect of them in their activity (De Treville, Antonakis, & Edelson, 2012). All workers end up working in a uniform way across departments. And with every unit every employee performs an activity in the same exact way. De Treville, Antonakis, and Edelson (2012) notes that SOPs allow the firm to stay compliant to any regulations that they need to adhere to. The SOP is written. The firm is always protected when it comes to compliance. Also, the SOP allows the firm to ensure that the workers are working with a procedure that is concern for their safety.

5.4 Conclusion

5.4.1 How Quality Department Affect Apparel Product Quality

From the study, it is inferred that there exist a high extent of autonomy of the quality department and coordination with other departments, In the sector the quality department is the most visible as errors associated with production can be too costly for the organization. There is also a high coordination between the quality department and the top management to ensure operational efficiency.

5.4.2 How Employee Training Affect the Apparel Product Quality

It can be inferred that the industry has ample resources for employee training, and this is fostered by the top management commitment to ensure employees are well trained. As a result of the firms hiring qualified staff very little quality achievement training is given to management and also due to the routine nature of the jobs little specific technical skill training is given to every employee and employee training is not considered much as a core part of the company.
5.4.3 How a Set Operating Procedure Affect the Apparel Product Quality

It was also inferred that due to high cost associated with correcting errors, a thorough final inspection of the clothes and incoming raw material is done. There is also a vast clarity of work and process instructions given to employees as a standard operation procedure accompanied by continuous self- inspection to minimizes the chance of employee error.

5.5 Recommendation

5.5.1 Recommendation for Improvement

5.5.1.1 How Quality Department Affect Apparel Product Quality

There should be a continuous autonomy of the quality department (Freedom to run the department as they find fit) as well as coordination with other departments to ensure quality is maintained. The quality department also need to improve on areas they deem to have a weakness in order to be considered effective.

5.5.1.2 How Employee Training Affect the Apparel Product Quality

The sector needs to ensure that available resources for employee training are effectively used to offer the relevant training to the employees and this should be supported by top management to ensure its effectiveness. More quality achievement training should be given to management and technical training given to employees should be a continuous process.

5.5.1.3 How a Set Operating Procedure Affect the Apparel Product Quality

The firms should maintain a continuous thorough inspection of the clothes and incoming raw material to ensure the quality of the outputs is not compromised. All employees should also be informed of the work and process as expected by the firm. There should also be an increased constant preventative equipment maintenance and process inspection in order to minimize errors.

5.5.2 Recommendation for Further Studies

This study focused on establishing the factors that affect product quality of the SMEs in the Kenyan Apparel Industry. There is a need to undertake a similar study in other sectors.
so as to be able to generalize the findings. From the regression analysis, it was established that only 6.9% of the variation in quality of clothing was caused by the variations in quality department, employee training and operating procedure. There is a need to undertake a research in the same industry in order to establish what causes the 94% variation in quality of clothing.

5.5.3 Chapter Summary

This section has offered the discussion, conclusion and recommendations in line with the specific research questions of this study were; How does a quality department affect apparel product quality? How does employee training affect the apparel product quality? And how does a set operating procedure affect the apparel product quality? This section has also offered recommendation for further studies.
REFERENCES


Fukunishi, T. (2012). The Kenyan Garment industry, is it able to revivein the economic boom? *IDE-JETRO*.


APPENDIX I: QUESTIONNAIRE

The purpose of this study is academic only. Your participation is entirely voluntary: you retain the right to participate in it. All responses are confidential. Thank you for agreeing to participate in this survey.

Instruction: kindly answer each question to the best of your ability, tick appropriate.

SECTION A: BACKGROUND & DEMOGRAPHIC FACTORS

Please tick the most appropriate answer (✓)

1. Gender:
   a) Male
   b) Female

2. How long have you been employed in the company?
   a) Less than a year
   b) 1 to 2 years
   c) 3 to 5 years
   d) 6-8 years
   e) 9-10 years
   e) 10 years and above

3. Position
   a) Owner
   b) Manager
   c) Production supervisor
   d) Other

4. How long has the company been in operation for?
   a) 0-2 years
   b) 3-5 years
   c) 6-8 years
   d) 10 and above years
5. How many employees does the company have?

a) 0-10  

b) 11-20  

c) 21-30  

d) 31-40  

e) 41-50  

f) 51 and above  

---

6. What kind of clothing does the company produce?

a) Adult ready to wear  

b) Adult made to measure  

c) Work Wear  

d) Baby clothes  

---

7. What is the market of the clothing the company produces?

a) Domestic  

b) Regional  

c) International  

d) All of the above  

SECTION B: RELATIVE CLOTHING QUALITY

For each of the following statements, please tick under the appropriate number on a scale from 1 to 5 where 1=Strongly Disagree and 5= Strongly Agree
1= Strongly Disagree 2= Agree 3=Neutral 4= Agree 5= Strongly Agree

<table>
<thead>
<tr>
<th>Relative Clothing Quality</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 The clothing the company produces is of superior quality compared to the competitors</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2 The clothing we produce is of equivalent quality compared to the competitor</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>3 The clothing we produce is of inferior quality compared to the competitor</td>
<td></td>
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</tr>
<tr>
<td>3 The sales volume in the past year was achieved cause of the quality</td>
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</tr>
<tr>
<td>4 The sales volume in the past year were reduced cause of the quality</td>
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</tr>
<tr>
<td>5 Having a quality department improves the clothing quality</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>6 Employee training improves the clothing quality</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>7 Having a set operating procedure improves the clothing quality</td>
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</tr>
</tbody>
</table>

SECTION C: EFFECTS OF QUALITY DEPARTMENT ON THE CLOTHING QUALITY

For each of the following statements, please tick under the appropriate number on a scale from 1 to 5 where 1=Very low and 5= Very high
1= Very Low 2= Low 3=Medium 4= High 5= Very High

<table>
<thead>
<tr>
<th>Quality Department</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Extent to which there is a visible quality department</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>2 Extent to which the quality department has access to the top management</td>
<td></td>
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</tr>
<tr>
<td>3 Extent to which there is autonomy of the quality department (Freedom to run the department as they find fit)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Extent to which the quality department coordinates with other departments</td>
<td></td>
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</tr>
<tr>
<td>5 Extent to which the quality department staff are utilized as a consulting resource</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>6 Extent to which the quality department is accountable to top management</td>
<td></td>
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</tr>
<tr>
<td>7 Extent to which the quality department is effective</td>
<td></td>
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</tr>
</tbody>
</table>

SECTION D: IMPACT OF THE EMPLOYEE TRAINING ON THE QUALITY OF CLOTHING.
For each of the following statements, please tick under the appropriate number on a scale from 1 to 5 where 1= Very low and 5= Very high
1= Very Low 2= Low 3= Medium 4= High 5= Very High

<table>
<thead>
<tr>
<th>Employee Training</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Extent to which top management is committed to employee training</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Extent to which there are available resources for employee training</td>
<td></td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>3 Extent to which specific technical skill training is given to every employee</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>4 Extent to which technical training is a continual process</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Extent to which quality achievement training is given workers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Extent to which quality achievement training is given to management</td>
<td></td>
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<tr>
<td>7 Extent to which employee training is a core part of the company</td>
<td></td>
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</tr>
</tbody>
</table>

SECTION E: IMPACT OF THE OPERATING PROCEDURE ON THE QUALITY OF CLOTHING.

For each of the following statements, please tick under the appropriate number on a scale from 1 to 5 where 1= Very low and 5= Very high
1= Very Low 2= Low 3= Medium 4= High 5= Very High

<table>
<thead>
<tr>
<th>Operating Procedure</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Extent to which there is clarity of work and process instructions given to employees</td>
<td></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>2 Extent to which the process minimizes the chance of employee error</td>
<td></td>
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</tr>
<tr>
<td>3 Extent to which there is a thorough inspection of the incoming raw material</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Extent to which there is continuous self-inspection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Extent to which there is in-process inspection</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Extent to which there is a thorough final inspection of the clothes</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Extent to which there is constant preventative equipment maintenance</td>
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</tbody>
</table>

THANK YOU FOR YOUR CO-OPERATION