QUALITY MANAGEMENT SYSTEM OF UNILIVER GHANA LIMITED

A DISSERTATION PRESENTED
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FULFILLMENT OF THE REQUIREMENT
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DEDICATION

This work is first and foremost dedicated to the Almighty God for His protection from the beginning to the end of this research work.

Also, I dedicate this work to my wife, Fidelia and children, Sharon, Ethel and Samuel, Jnr.

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Samuel Odartey Lamptey
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ABSTRACT

Unilever Ghana became noted for its willingness to develop best in class operations and to establish best practices by benchmarking. These qualities seemed to dominate the firm's long-term strategic development but did not offer a clear strategy to grow the firm or expand its businesses. Unilever Ghana has made use of a variety of quality management strategies in which characteristics of Six Sigma and Total Quality Management or TQM to name a few. Additionally, the firm has already integrated an ERP platform into its existing information and technology infrastructure. This sophisticated network architecture facilitates web and network analytics in which the company has been able to gain a great deal of accountability. However, through business process reengineering the company has managed to maintain its competitive advantage over even larger firms and markets. The quality processes at Unilever Ghana could be improved by introducing a greater variety of decision-making skills. Improved decision-making skills allow both management and employees to take a greater deal of interest in the inner-functioning of the organization. This project employed a qualitative research methodology based on the case study method. The research project finds that not only are all of the research hypotheses verifiable by scanning the research library, but also, Unilever has some way to go before it can claim a quality crown from other fierce competitors. The recommendation is made based on the four hypotheses in which it is recommended that Unilever Ghana add-on a knowledge management program that would align its quality management strategy with the company's and its management's perspectives and opinions.

Quality has been expressed in different ways. The term quality has been referred to as fitness for use or purpose by J. M. Juran. Philip Crosby also said that quality is

conformance to requirements and another guru, H. James Harrington referred to quality as meeting or exceeding customer expectations at a cost that represents value to them. In defining quality, therefore, we need to include recognition of the true requirements of the end-user or customer. The existence of an organization depends upon its customers. Satisfying their requirements must be our main aim. This aim can therefore, be achieved by putting quality into everything the organization does.

Any organization in any line of business requires a quality management program or some sort of quality program that is instituted from executive management down to the lowest level employee. While each particular function within an organization requires quality processes modelled after its own unique requirements, these individual quality processes should be designed and established based on the principles of the overall quality management program.

In Ghana, several organizations are underperforming and finally collapsing because they have relegated quality management to the background. Most of them, especially, the service and manufacturing ones operate as if customers are the beggars, forgetting that in contemporary business world customers are the kings and queens and therefore, should attach much importance to quality. The organizations also do not pay attention to the quality of their employees. Training and development of employees from top to bottom is relegated to the background, hence the production of inferior goods by these workforce.

This study examines Unilever Ghana Limited quality systems, policies, procedures and activities within the company. In other words, finding out whether the company has a well-documented and comprehensive policy on quality performance systems, and if it does,

whether this policy meets international standards. If these quality management policies on quality performance systems meet international standards, then this study would discover whether the policy is being implemented according to industry best practices and also, whether the implementation is yielding the expected or desired results.

Researchers such as Ebrahimpour and Schonberger (1984) described problems encountered by manufacturing firms in developing countries and made an attempt to show the potential of practices such as just-in-time (JIT) and total quality control in helping to ease these problems. Carddick and Dale (1987) pointed out that sourcing from developing countries is more complex than from domestic markets where regional locality facilitates supply and delivery issues that cannot be as easily resolve in developing markets. Similarly, there have been a number of studies that have examined existing practices in several developing countries and others have compared practices between developing and developed countries. Among the studies that have been done in developing countries, very few have been devoted to countries in Africa and for that matter Ghana to be specific. Ghana is slowly recognizing that it must elevate not only it physical infrastructure but also its internal business practices in order to attract further foreign direct investment (FDI) as well as to make its own organically developed industries more competitive. The examination and development of more effective quality management programs is an ideal target to begin this procedural elevation within its corporate hierarchy.

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CHAPTER I: General Background

1.1 Introduction and Conceptual Framework

Any organization in any line of business requires a quality management program or some sort of quality program that is instituted from executive management down to the lowest level employee. While each particular function within an organization requires quality processes modelled after its own unique requirements, these individual quality processes should be designed and established based on the principles of the overall quality management program. While there are many different quality management programs, such as: total quality management (TQM), kaizen based programs, and Six Sigma, one feature unique to all of them is that they are, and should be, part of the strategic DNA of an organization and an integral part of the strategic planning process. Beinhocker and Kaplan (2002, para.20-2) argue that by instituting a quality management program as a chief component in the strategic planning process, executive management achieves not only quality management initiatives that are inline with an organization's stated business objectives, but also gain a new, creative management approach that in itself breeds innovation.

Because of this unique ability of quality and quality management to align itself with corporate strategy, multi-national corporations (MNCs) such as Unilever and certainly Unilever Ghana Limited (Unilever and Unilever Ghana respectively) can utilize quality management to elevate itself above the competition as well as to create competitive separation. Quality and management of quality processes through the implementation of a comprehensive quality management program is a defining moment for most organizations and is now an effective requirement if a company, and by extension, a country, is going to

join the global economy. Most developed markets have product and service quality expectations that cannot be fully met unless they are manufactured or produced within the context of a quality management program that also provides for oversight and monitoring. Unilever, the largest manufacturing and marketing company in Ghana, is a public company listed on the Ghana Stock Exchange (GSE) and as such carries a high profile in the country where such large, internationally recognized MNCs are recognized for their economic contributions to the local market. Unilever Plc owns 66.6% of the shares in Unilever Ghana and CWA Holding Limited. The remaining 33.4% shares belong to portfolio investors and several individual Ghanaians. Unilever Ghana came into being on July 14, 1992, when two significant and complimentary Ghana subsidiaries of Unilever, UAC of Ghana and Lever Brothers Ghana Limited, merged to form Unilever Ghana. Thus, the company in its current incarnation in Ghana has only been in operation since 1992 and as such is relatively young when compared to the international profile and heritage of its corporate parent. Currently, Unilever Ghana consists of Lever Brothers with Swanzy Real Estate Limited as a wholly owned subsidiary of Unilever Ghana. The Company has majority shares in BOPP and 40% shares in TOPP. Because of its association with Unilever, Unilever Ghana maintains a solid reputation as a responsible manufacturer in the country and it relies on constant reinvention of itself to keep abreast of market developments as well as to remain competitive.

Unilever Ghana is an efficiently organized enterprise with recognized market power in Ghana. The company is a multi-product institution with a variety of lines of business (LOBs). It markets an extremely wide variety of products and services while mandating the highest quality standards available. Unilever Ghana's products and services are segmented into the following six categories:

(i) Home Care Products, e.g. Key Soap

(ii) Personal Care Products, e.g. Pepsodent

(iii) Food Products, e.g. Frytol

(iv) Real Estate Development

(v) Plantation Firms

(vi) Diversey lever

which functions as a small business unit (SBU) offering house keeping services as well as kitchen care to large hotels, factories, guest houses, and the like, in Ghana. These diverse products and services allow the company to remain solvent in virtually any type of market. Regardless of the severity of a market downturn in one LOB or increasing competitive forces in another, this diverse product and service line allow the company to compensate for any loss of revenues in one of its primary businesses with an increase in another. Based on the character of this product and service line, it can be said that Unilever Ghana Limited operates as an oligopolistic firm where it is one of the few firms in that market with differentiated products. The company enjoys economies of scale and scope across the full spectrum of its operations.

Because of Unilever Ghana's product and service diversity, the only way the company could maintain its competitiveness without losing focus on any single product or service line is to develop and implement a structured operating environment where best practices are continually introduced and updated. The use of best practices is a technique associated with quality management programs such as Total Quality Management (TQM), Six Sigma, and other quality management systems, which owe most of their processes and underlying logic to the work of Dr. Deming who was the first researcher to promote the use of statistics as a management device (Hahn, 2002). Dr. Deming was, for example, instrumental in facilitating Japan's rise to the top of the quality chain and his methods have influenced every quality management program in existence to one extent or another: "His teachings were encapsulated in his 14 points, his 7 deadly diseases and...his system of

profound knowledge. Deming challenged us...to reconsider both our fundamental roles and our technical teachings..." (Hahn, 2002, paras.5-7). It is his fundamental use of statistics and quantitative analysis that have allowed industries such as Unilever and Unilever Ghana to continually improve based on modelling industry best practices. Regardless of a competitors market in the contemporary business environment, the use of best practices is a virtual requirement in order to remain fully competitive as well as relevant.

Deming offered fourteen (14) key principles for management for transforming business effectiveness (Deming, E.W, Out of the Crisis, p.23-24).

1. Create constancy of purpose toward improvement of product and service, with the aim to become competitive and stay in business, and to provide jobs.

2. Adopt the new philosophy. We are in a new economic age. Western management must awaken to the challenge, must learn their responsibilities, and take on leadership for change.

3. Cease dependence on inspection to achieve quality. Eliminate the need for inspection on a mass basis by building quality into the product in the first place.

4. End the practice of awarding business on the basis of price tag. Instead, minimize total cost. Move towards a single supplier for any one item, on a long-term relationship of loyalty and trust.

5. Improve constantly and forever the system of production and service, to improve quality and productivity, and thus constantly decrease cost.

6. Institute training on the job.

7. Institute leadership. The aim of supervision should be to help people and machines and gadgets to do a better job. Supervision of management is in need of overhaul, as well as supervision of production workers.

8. Drive out fear, so that everyone may work effectively for the company.

9. Break down barriers between departments. People in research, design, sales, and production must work as a team, to foresee problems of production and in use that may be encountered with the product or service.

10. Eliminate slogans, exhortations, and targets for the workforce asking for zero defects and new levels of productivity. Such exhortations only create adversarial relationships, as the bulk of the causes of low quality and low productivity belong to the system and thus lie beyond the power of the workforce.

11. (a) Eliminate work standards (quotas) on the factory floor. Substitute leadership.

    (b) Eliminate management by objective. Eliminate management by numbers, numerical goals. Substitute workmanship.

12. (a) Remove barriers that rob the hourly worker of his right to pride of workmanship. The responsibility of supervisors must be changed from sheer numbers to quality.

    (b) Remove barriers that robe people in management and in engineering of their right to pride of workmanship. This means, inter alia, abolishment of the annual or merit rating and of management by objective.

13. Institute of vigorous program of education and self-improvement.

14. Put everybody in the company to work to accomplish the transformation. The transformation is everybody's work.

Deming also propounded the seven (7) deadly diseases which are also known as seven wastes. They are-:

1. Lack of constancy of purpose.
2. Emphasis on short-term profits.
3. Evaluation by performance, merit rating, or annual review of performance.
4. Mobility of management.
5. Running a company on visible figures alone.
6. Excessive medical costs.
7. Excessive costs of warranty, fuelled by lawyers who work for contingency fees.

In his later years, Dr. Deming taught many concepts that boarded on quality issues which are of great relevance to the study under review. These are some of the concepts worth noting.

* There is no substituted for knowledge -
  This statement emphasizes the need to know more, about everything in the system. It is considered as a contrast to the old statement, "There is no substitute for hard work" by Thomas Alva Edison (1847-1931). Instead, a small amount of knowledge could save many hours of hard work.

* The most important things cannot be measured -
  The issues that are most important, along term, cannot be measured in advance. However, they might be among the factors that an organization is measuring, just not understood as most important at the time.
* The most important things are unknown or unknowable -
  The factors that have the greatest impact, long term, can be quite surprising.

* Experience by itself teaches nothing -

  This statement emphasizes the need to interpret and apply information against a theory or framework of concepts that is the basis for knowledge about a system. It is considered as a contrast to the old statement, “Experience is the best teacher”. Dr. Deming disagreed with that.

To Dr. Deming, knowledge is best taught by a master who explains the overall system through which experience is judged; experience, without understanding the underlying system, is just raw data that can be misinterpreted against a flawed theory of reality. Deming’s view of experience is related to Shewhart’s concept. “Data has no meaning apart from its context”.

* You can not expect what you inspect -

  Dr. Deming emphasized the importance of measuring and testing to predict typical results. If a phase consists of inputs plus process plus outputs, all three (3) are inspected to some extent. Problems with inputs are a major source of trouble, but the process using those inputs can also have problems. By inspecting the inputs and the process more, the outputs can be better predicted, and inspected less. Rather than use mass inspection of every output product, the output can be statistically sampled in a cause-effect relationship through the process.

* Special Causes and Common Causes -

  Dr. Deming considered anomalies in quality to be variations outside the control limits of a process. Such variations could be attributed to one-time event called “Special causes” or to repeated events called “Common causes” that hinder quality.

* Acceptable Defects -

  Rather than waste efforts on zero-defect goals, Dr. Deming stressed the importance of establishing a level of variation, or anomalies, acceptable to the recipient (or customer) in the next phase of a process. Often, some defects are

quite acceptable, and efforts to remove all defects would be an excessive waste of time and money.

* The Deming Cycle (or Shewhart Cycle) -

As a repetitive process to determine the next action, the Deming Cycle describes a simple method to test information before making a major decision. The four (4) steps in Deming Cycle are-: Plan-Do-Check-Act (PDCA), also known as Plan-Do-Study-Act or PDSA. Dr. Deming called the cycle the Shewhart Cycle, after Walter A. Shewhart. The cycle can be used in various ways such as running an experiment: PLAN (design) the experiment; DO the experiment by performing the steps; CHECK the results by testing information; and ACT on the decisions based on those results.

* Semi-Automated, not fully automated -

Dr. Deming lamented the problem of automation gone awry ("robots painting robots"): instead, he advocated human- assisted semi-automation, which allows people to change the semi-automated or computer-assisted processes, based on new knowledge. Compare to Japanese term 'jidoka' (which can be loosely translated as "automation with a human touch").

* The problem is at the top; management is the problem -

Dr. Deming emphasized that the top-level management had to change to produce significant differences, in a long-term, continuous manner. As a consultant, Deming would offer advice to top-level managers, if asked repeatedly, in a continuous manner.

* What is a system?

A system is a network of interdependent components that work together to try to accomplish the aim of the system. A system must have an aim. Without an aim, there is no system. The aim of the system must be clear to everyone in the system. The aim must include plans for the future.

The aim is a value judgment. (We are of course talking here about a man-made system).

* A system must be managed. It will not manage itself. Left to themselves in the Western world, components become selfish, competitive. We cannot afford the destructive effect of competition.

* To successfully respond to the myriad of the changes that shake the world, transformation into a new style of management is required; the route to take is what is call profound knowledge – knowledge for leadership of transformation.

* The worker is not the problem. The problem is at the top management – Management's job. It is management's job to direct the efforts of all components toward the aim of the system. The first step is clarification: everyone in the organization must understand the aim of the system, and how to direct his efforts toward it. Everyone must understand the damaged and loss to the whole organization from a team that seeks to become a selfish, independent, profit centre.

* Dr. Deming on Quality Circles -
He argued that, that's all window dressing. That's not fundamental. That's not getting at change and the transformation that must take place. Sure we have to solve problems. Certainly stamp out the fires. Stamp out the fire and get nowhere. Stamp out the fires puts us back to where we were in the first place. Taking action on the basis of results without theory of knowledge, without theory of variation, without knowledge about a system. Anything goes wrong, do something about it, over reacting, acting without knowledge; the effect is to make things worse. With the best of intentions and best efforts, managing by results is, in effect, exactly the same, as Dr. Myron Tribus put it, while driving your automobile, keeping your eye on the rear view mirror, what would happen? And that is what management by results is, keeping your eye on results.

* Knowledge is theory -

We should be thankful if action of management is based on theory. Knowledge has temporal spread. Information is not knowledge. The world is drowning in information but is slow in acquisition of knowledge. There is no substitute for knowledge. This statement emphasizes the need for theory of knowledge (Epistemology, Shewhart Cycle, C. I. Lewis).

* Experience by itself teaches nothing. Without theory, experience has no meaning. Without theory, one has no questions to ask. Hence, without theory, there is no learning. These statements emphasize the need to interpret information using a theory or framework of concepts for learning to take place, theory of knowledge. Deming's view of experience is related to Shewhart's concept "Data has no meaning apart from its context" (Walter A. Shewhart, "Later Work").

* The most important figures that one needs for management are unknown or unknowable (Lloyd S. Nelson, Director of statistical methods for the Nashua Corporation), but successful management must nevertheless take account of them-

Dr. Deming realized that many important things that must be managed could not be measured. Both points are important. One, not everything of importance to management can be measured, and two, you must still manage those important things. Spend $ 20,000 training ten (10) people in a special skill. What's the benefit? "You will never know," answered Deming. "You will never be able to measure it. Why did you do it? Because you believe it would pay off.

Dr. Deming is often incorrectly quoted as saying, "You cannot manage what you cannot measure." In fact, he stated that one of seven (7) deadly diseases of management is running a company on visible figures alone.

* By what method? -

  When information is obtained, or data is measured, the method, or process used to gather information, affects the results. Dr. Deming warned that basing judgments on customer complaints alone ignored the general population of other opinions, which should be judged together, such as in a statistical sample of the whole. Changing the method changes the results. Aim and method are essential. An aim without a method is useless. A method without an aim is dangerous.

It leads to action without direction and without constancy of purpose. Deming used an illustration of washing a table to teach a lesson about the relationship between purpose and method. If you tell someone to wash a table, but not the reason for washing it, they cannot do the job properly (will the table be used for chopping food or potting plants)? That does not mean just giving the explanation without an operational definition. The information about why the table needs to be washed, and what is to be done with it, makes it possible to do the job intelligently.

Industrial and manufacturing enterprises have applied the use of best practices, via Six Sigma and other quality programs, to many different aspects of their various lines of business for many years. The process of mimicking a competitor's operations is recognized method to reduce costs, improve efficiencies, and expand product lines without expending much in the way of resources to do so because the company being benchmarked has committed the necessary capital and resources to do so (Smith & Blakeslee, 2002). The actual methodology employed in implementing best practices is often referred to as business process reengineering where in the processes behind a particular activity are adjusted to reflect the new objectives. The procedure followed in reengineering a process according to an industry best practice is fairly straightforward and follows a pre-described regimen culminating in a gap analysis with the predictive results following its production. These are processes that are common with most quality management programs and are

devices that must be mastered if a competitor intends to truly approach quality as a strategic imperative within the company. As Avery and Zabel (1996) describe, this improvement process to achieve the results based on a competitor's best practice, consists of four primary stages:

- Monitoring: prior to any process reengineering procedure the need for baseline data is paramount. In order to perform a gap analysis, which is the examination of the difference between the "as is" and the "to be" flowcharts, accurate data must be gathered that gives a current snapshot of the operation and how it is performing.
- Benchmarking: by examining the best practices of other departments, competitors, and like processes, an achievable but higher standard can be identified upon which to base the objectives of the "to be" flowchart.
- Data Analysis: this is the actual examination of the gap between the "as is" and the "to be" flowcharts. This stage answers the question of, "where are we now, where do we want to be, and how do we get there?"
- Prediction: based on the results of the data analysis in the gap analysis process, an accurate prediction can be made of the results that should be achieved through the reengineering process.

These stages in reengineering a process or activity to conform to an established best practice ensure that greater results will be achieved regardless of the extent to which the best practice is applied. Most widely recognized quality management programs such as Six Sigma, Total Quality Management (TQM), the ISO 9000 family of programs, TPS, and a host of other such programs, have these mechanisms as part of their core solutions to achieve higher quality metrics.

The Quality Control Tools

There are seven (7) quality tools which are more statistical methods used throughout business, industry and also science. These tools are basically used to collect, tabulate and analyze data for quality decisions to be taken.

The tools are as follows:

* *Data Tables* -

  Data tables or data arrays provide a systematic method for collecting and displaying data. In most cases, data tables are forms designed for the purpose of collecting specific data. These tables are used most frequently where data are available from automated media.

  They provide a consistent, effective, and economical approach to gathering data, organizing them for analysis, and displaying them for preliminary review. Data tables sometimes take the form of manual check sheets where automated data are not necessary or available. Data figures and check sheets should be designed to minimize the need for complicated entries. Simple-to-understand, straight-forward tables are a key to successful data gathering.

* *Cause-and-Effect Analysis* -

  After identifying a problem, it is necessary to determine its cause. The cause-and-effect relationship is at times obscure. A considerable amount of analysis often is required to determine the specific cause or causes of the problem.

  Cause-and-effect analysis uses diagramming techniques to identify the relationship between an effect and its causes. Six (6) steps are used to perform a cause-and-effect analysis.

  Step 1. - Identify the problem. This step often involves the use of other

statistical process control tools, such as Pareto analysis, histograms, and control charts, as well as brainstorming. The result is a clear, concise problem statement.

Step 2. - Select interdisciplinary brainstorming team. Select on interdisciplinary team, based on the technical, analytical, and management knowledge required to determine the causes of the problem.

Step 3. - Draw problem box and prime arrow. The problem contains the problem statement being evaluated for cause and effect. The prime arrow functions as the foundation for their major categories.

Step 4. - Specify major categories. Identify the major categories contributing to the problem stated in the problem box. The six basic categories for the primary causes of the problems are most frequently personnel, method, materials, machinery, measurements, and environment.

Step 5. - Identify defect causes. When you have identified the major causes contributing to the problem, you can determine the causes related to each of the major categories. These are three approaches to this analysis: the random method, the systematic method, and the process analysis method.

Random Method. List all major causes contributing to the problem at the same time and identify the possible causes related to each category.

Systematic Method. Focus your analysis on one major category at a time, in descending order of importance. Move to the next most important category only after completing the most important one.

Process Analysis Method. Identify each sequential step in the process and perform cause-and-effect analysis for each step, one at a time.

Step 6. - Identify corrective action. Based on (1) the cause-and-effect analysis of the problem and (2) the determination of causes contributing to each major category, identify corrective action. The corrective action analysis is performed in the same manner as the cause-and-effect analysis.

* *Histogram* -

A histogram is a graphical representation of data as a frequency distribution; this tool is valuable in evaluating both attribute (pass/fail) and variable (measurement) data. Histograms offer a quick look at the data at a single point in time; they do not display variance or trends over time. A histogram displays how the cumulative data look today. It is useful in understanding the relative frequencies (percentages) or frequency (numbers) of the data and how those data are distributed.

* *Pareto Analysis* -

A Pareto diagram is a special type of histogram that helps us to identify and prioritize areas. The construction of a Pareto diagram may involve data collected from data figures, maintenance data, repair data; parts scrap rates, or other sources. By identifying types of nonconformity from any of these data sources, the Pareto diagram directs attention to the most frequently occurring element.

There are three uses and types of Pareto analysis. The basic Pareto analysis identifies the vital few contributors that accounts for most quality problems in any system. The comparative Pareto analysis focuses on any number of program option or action. The weighted Pareto analysis gives a measure of significance to factors that may not appear significant at first – such additional factors as cost, time, and criticality.

The basic Pareto analysis chart provides an evaluation of the most frequent occurrences for any given data set.

Pareto analysis diagrams are used to determine the effect of corrective action, or to analyze the difference between two or more processes and methods.

* *Scatter Diagrams* -

Another pictorial representation of process control data is the scatter plot or scatter diagram. A scatter diagram organizes data using two variables: an independent variable and a dependent variable. These data are then recorded on a simple graph with X an Y coordinates showing the relationship between the variables.

* *Trend Analysis* -

Trend analysis is a statistical method for determining the equation that best fits the data in a scatter plot. Trend analysis quantifies the relationships of data, determines the equation, and measures the fit of the equation to the data. This method is also known as curve fitting or least squares.

Trend analysis can determine optimal operating conditions by providing an equation that describes the relationship between the dependent and independent variables.

The equation of the regression line, or trend line, provides a clear and understandable measure of the change caused in the output variable by every incremental change of the input or independent variable. Using this principle, we can predict the effect of changes in the process.

One of the most important contributions that can be made by trend analysis is forecasting. Forecasting enables us to predict what is likely to occur in the future. Based on the regression line we can forecast what will happen as the independent variable attain values beyond the existing data.

* *Control Charts* -

The use of control charts focuses on the prevention of defects, rather than their detection and rejection. In business, government, and industry, economy and efficiency are always best served by prevention. It costs much more to produce an

unsatisfactory product or service that it does to produce a satisfactory one. There are many costs associated with producing unsatisfactory goods and services. These costs are in labour, materials, facilities, and the loss of customers. The cost of producing a proper product can be reduced significantly by the application of statistical process control charts.

Responsibility for Quality

Everyone in an organization plays an important role in quality management. In order for an organization to become a quality organization, all levels must actively participate, and, accordingly to Dr. Edwards Deming, the key to successful implementation of quality starts at the top.

Top management must drive fear from the workplace and create an environment where cross-functional cooperation can flourish. The ultimate responsibility for quality in the organization lies in the hands of upper management. It is only with their enthusiastic and unwavering support that quality can thrive in an organization.

The project manager is ultimately responsible for the quality of the project. This is true for the same reason the president of the company is ultimately responsibly for the quality in a corporation. The manager selects the procedures and policies for the project and therefore controls the quality. The project manager must create an environment that fosters trust and cooperation among the team members. The project manager must also support the identification and reporting of problems by team members and avoid at all costs a “shoot the messenger” mentality.

The employees must be trained to identify problems, recommend solutions, and implement the solutions. They must also have the authority to limit further processing when a process is outside of specified limits. In other words, they must be able to halt any activity that is outside of the quality limits set for the project and work toward a resolution of the problem at any point in the project.

Global Economy in 2009 and how Ghana will react.

Leading analysts are of the view that the global economic downturn that started in 2007 and came to a boil in 2008 would continue deep into 2009. In fact, the general feeling is that we should not expect any serious economic upturn until, perhaps, the third quarter of 2010.

Analysts expect the measures instituted by the leading industrialized countries in 2008, which included financial package to bail out some companies, to bear significant results in the second quarter of 2010, and by the beginning of the third quarter, there should be a significant improvement in key economic indicators.

The expectation is that consumer spending should improve in 2010 and the credit squeeze should abate, allowing the global economy to experience growth.

The projections look good on paper, but the reality could be far less impressive. This is because the scale of the current financial crisis is something that has not been witnessed for decades. Many analysts agree that the Great Depression of the late 1920s is the only event that can compare, auspiciously, with what is happening now in the global market.

According to Harvard University Professor Kenneth Rogoff a former International Monetary Fund (IMF) chief economist "The global scale and magnitude" of the financial crisis and recession "is much greater than those we have seen before."

The Global Recession

The global credit crisis has dragged the word's largest economies into recession with the U.S economy in particular hardest hit. The massive influence that the U.S economy wields over other countries means that most economies have found themselves in serious mess. For instance, China's exports fell for the first time in seven years in November 2008 following the U.S economic downturn which reduced imports from the country.

The struggle to control the U.S economy in order to address the recessionary pressures has not been easy. Commentators claim that the loss of jobs in the U.S may be

the biggest since the end of the World War II. Also, the decline in stocks and home prices in 2008 in the U.S is deemed the biggest since the Great Depression.

According to Klaus Schmidt-Hebbel, chief economist of the Organization for Economic Co-operation and Development (OECD), many OECD economies are in or are on the verge of a protracted recession of a magnitude not experienced since the early 1980s. "As a result, the number of unemployed in the OECD area could rise by 8 million over the next two years. At the same time, inflation will abate in all OECD countries and some even face a risk, albeit small, of deflation," Schmidt-Hebbel has expressed.

"The financial turmoil that erupted in the United States around mid-2007 has broadened to include non-bank financial institutions and rapidly spread to the rest of the world. Following the collapse of Lehman Brothers in mid-September 2008, a generalized loss confidence between financial institutions triggered reactions akin to a 'blackout' in global financial markets.

"Spreads in credit and bond markets surged to very high levels in 2008, paralyzing credit and money markets. Prompt and massive policy action to restore confidence and provide liquidity appears to have successfully limited the period of panic, but the need for financial institutions to operate with less leverage and to repair their balance sheets remains. This process of adjustment will take time and impair the flow of credit, and is the key factor weighing on activity going forward."

According, the OECD Economic Outlook analysis for 2009 has pinpointed the following:

1. US output declines through the first half of year 2009, and then gradually picks up as the effects of the credit squeeze abate, the housing downturn bottoms out and monetary policy stimulus takes hold. The recovery, however, is likely to be languid, as consumption is held back by the large losses in households' wealth. Inflation eases significantly, as the recent declines in commodity prices filter through the economy and as economic slack exerts downward pressure on prices.

2. Euro area activity also falls over the next six months, as tighter financial conditions, subdued income growth and negative wealth effects from lower equity and house prices damp consumption and investment. Economic activity then gradually recovers as monetary easing gains traction and the effects of global financial market turbulence dissipate. Inflation will ease considerably, to reach a level by early next year that is consistent with the European Central Bank's (ECB's) inflation target.

3. Japan has not been at the epicentre of the financial crisis, but after a brief growth spurt in early 2009 due to fiscal stimulus, output is set to stagnate over the second half of 2009, as the global economic downturn and the recent appreciation of the yen curtails external demand. With persistent economic slack and anemic wage growth, deflation may return by mid-2009.

4. Other OECD countries where the economic downturn will be severe include Hungary, Iceland, Ireland, Luxembourg, Spain, Turkey and the United Kingdom. These economies are most directly affected by financial crisis, which in some cases has exposed other vulnerabilities, or by severe housing downturn.

Ghana's Policy

Response to the crisis.

So far there has not been any noticeable direct impact of the global recession of Ghana. But indirectly, there has been severe downturn in key economic sectors due to the crisis from the recession. For instance, some mining companies in the country have had to put several expansion and improvement projects on hold because of their inability to raise funds from the international capital market. Because of the capital intensive nature of mining projects, most of the companies that operate in the country are international conglomerates that raise funds from international banks. Therefore, the credit crunch, which has severely affected the banks in terms of their ability to lend to businesses, has led to funding problems for the mining companies.

Other associated problems from the global recession would be the inflow of foreign capita and remittances into the country.

By the nature of the Ghanaian economy, it appears that the options available to the government to address the situation are limited. As the economy is largely dependent on the export of primary commodities, it cannot really command higher prices on the international market.

What is significantly worrying is that high commodity prices in 2008 helped forestall the harsh effects of the global economic downturn. In fact, the resilience of the economy was largely due to the high prices of commodities on the international market.

But in 2009, analysts are of the view that commodity prices would reduce significantly, having severe adverse effects on developing countries with Ghana included.

There is therefore bound to be income losses due to lower commodity prices in 2009, and a weaker demand for commodities from industrialized countries due to the recession.

According to the World Bank, commodity markets have seen spectacular savings over the past 24 months as enormous tensions first built up and were then released. "The extended and sharp rise in commodity prices prompted concerns that the world was transitioning into a new phase of commodity scarcity – a concern that the recent dramatic drop in commodity prices has only partially alleviated," the world bank has noted in its economic prospects report. The response from the government should be the tightening of policies to ensure that the key fundamentals are strong enough to absorb the spill-over effects from the global recession. For instance, since it is clear that there is bound to be credit squeeze and slow in foreign assistance especially aid to support the national budget, the government must look at mopping up domestic revenue generation avenues. This should not be only through increase in taxes, but it must widen the tax net to include those who are currently not paying tax but are supposed to do so.

The other aspect is to do with support for the local currency, the cedi, to ensure that it does not fall significantly against that of the country's trading partners. This will make imports more expensive and cause increase in domestic prices, creating inflationary pressures. Controlling the currency can be achieved if controls are placed on capital flight

and activities of some multinationals that prefer to secure foreign currency from the black market, instead of the banks. There are other several initiatives the government can undertake in order to tighten the economy, making it strong enough to go through the difficult period of 2009 and beyond.

Financial Crisis. The Liquidity Crunch of August 2007

Firms are said to be liquid when they are able to meet current obligations or short-term demand for funds. A firm is said to be solvent but illiquid when its assets exceed its liabilities but it is unable to liquidate assets rapidly enough to meet current obligations. Markets are said to be a liquid when a large volume of financial securities can be traded without price distortions because there is a ready and willing supply of buyers and sellers. Liquid markets are a sign of normalcy.

In August 2007, liquidity abruptly dried up for many firms and securities markets. Suddenly some firms were able to borrow and investors were able to sell certain securities only at prohibitive rates and prices, if at all. The liquidity crunch was most extreme for firms and securities with links to subprime mortgages, but it also spread rapidly into seemingly unrelated areas. The stock market experienced unusual volatility and investors rushed to buy the safest of all investments. U.S. Treasury securities. On August 31, Federal Reserve Chairman, Ben Bernanke noted that "although this episode appears to have been triggered largely by heightened concerns about subprime mortgages, global financial losses have for exceeded even most pessimistic projections of credit losses on those loans."

The spread of disruptions from housing into other debt markets is an example of financial contagion, or systemic risk. Contagion spread among non-bank institutions: mortgage lenders, hedge funds, and issuers of various types of securities, including commercial paper, asset-backed securities, structured products, and debt supporting leveraged buyouts and takeovers. As fear of risk has increased, these institutions saw sources of credit vanish and struggled to meet existing financing commitments, to post additional collateral, and to cope with portfolio losses. Some financial institutions, primarily mortgage lenders and hedge funds, have been unable to resolve liquidity problems and have closed. In the months ahead, there may be more failures.

Central banks, including the Federal Reserve, have responded by providing liquidity – injecting cash into the banking system and lowering interest rates – in order to prevent financial disruptions from slowing real economic growth. While financial "paper losses" have no direct effect on output or employment, there are channels through which changes in financial conditions may be transmitted to the real economy: for example, tight credit and equity markets restrain business investment in plant and equipment.

In the wake of the liquidity crunch, policymaker may consider several areas for reform. Could regulation have prevented current problems in the mortgage market? Should credit rating agencies, like Moody's and Standard and Poor's, be subject to more oversight by the Securities and Exchanged Commission? Should the non-bank institutions that have been central to this episode be subject to greater regulatory supervision or information disclosure requirements? This report analyzes the causes, progress, and board policy issues rose by recent liquidity problems, but do not address proposals to alleviate distress in the housing sector.

Financial markets suffered significant disruption in August 2007.

Certain financial instruments, especially mortgage-backed collateralized debt obligations (CDO's), became illiquid, that is, they became difficult to sell at any price. Liquidity problems then spread across other credit markets as investors feared that losses linked to hosing securities might affect a broad range of market participants. There was a "flight to quality" as investors shifted funds into the least risky securities, such as U.S. Treasury securities. As a result, many types of corporate and financial borrowers – even some with few or no links to mortgage markets – had trouble obtaining credit, whether to fund new projects or transactions, or to refinance existing debt. The stock market experienced unusual volatility, although the Dow Jones Industrial Average actually gained 156 points during August.

The financial volatility observed in August 2007 is particularly significant because it illustrates how stress in one financial market – in this case, housing – may spread to other markets, causing losses to investors and intermediaries not directly involved in the market where the trouble originated. These events raise questions about the ability of policymakers

to respond to financial crises since an increasing share of credit market activity now occurs outside the banking system, in unregulated institutions such as nonbank mortgage lenders and hedge funds.

This report describes the preceding events that instigated the August 2007 liquidity crunch, followed by the major events that occurred during the crunch. It then analyzes the structure of financial markets today to identify underlying causes for the crunch. It ends by analyzing policy issues raised by the liquidity crunch relating to macroeconomic stabilization policy and financial regulation.

Policy Issues

The liquidity crunch of August 2007 raises a number of policy issues. The fundamental question underlying them is whether the crunch and the current policy approach to its resolution has exposed the economy to an acceptable level of risk. If the liquidity crunch leaves no lasting harm, and the policy response (mainly, the Fed's attempt to replenish the financial system's lost liquidity) is effective and has no negative side effects, then some would argue that the natural ups and downs of financial markets are a useful and necessary way to ensure that capital is allocated efficiently.

In the famous words of Joseph Schumpeter, the credit crunch may represent capitalism's "creative destruction." But the 2007 credit crunch has raised issues in a number of policy areas where economists have questioned whether policy changes would have averted the crunch, or at least tempered its more destructive side effects, without undermining market efficiency.

The first part of this section evaluates the macroeconomic response, namely the efficacy of the Fed's current approach to provide liquidity to financial markets when it dries up. The rest of the section focuses on regulatory issues that have been raised by August's events – the fear of financial contagion, finding the proper degree of regulation for modern financial markets, and potential short comings with rating agencies and the regulation of mortgage markets – with an eye on preventing their reoccurrence. Finally, to understand why a liquidity crunch merits policymakers' attention, the report links financial unrest to its ultimate effect on the real economy.

1.2 Objective of the Study

The purpose of this study is to evaluate Unilever Ghana quality systems, policies, procedures and activities within the company. In other words, finding out whether the company has a well-documented and comprehensive policy on quality performance systems, and if it does, whether this policy meets international standards. The supposition is that since Unilever Ghana is a majority holding of Unilever that is has access to as well as the inclination to utilize, leading quality management practices that are commonly in use throughout the globe. If these quality management policies on quality performance systems meet international standards, then this study would discover whether the policy is being implemented according to industry best practices and also whether the implementation is yielding the expected or desired results. This last is critical because while any competitor can conceivably deploy the best and most expensive quality management program, failure to effectively implement the quality management program would nullify any benefit or, conceivably, even adversely affect existing quality metrics because the ensuring chaos would disturb production and manufacturing practices currently in place. All these will help the researchers to identify areas where the organization fails to effectively implement its own quality practices and policies and to make recommendations regarding other options (in terms of policy document, implementation and evaluation) that should be put ion place to ensure adequate quality systems to improve quality in the organization are in fact effectively deployed.

The present research study is highly relevant to the contemporary global environment, to which Ghana now belongs because it is certain that environmental factors affect operations and, for that matter, strategy development related to quality affects competitors differently in different regions of Ghana. Insight from Unilever should therefore, be worthwhile not only to local competitors but also as a reference for similar emerging markets where MNCs with partial ownership in local enterprises can exert influence to introduce more effect quality management programs. One of the contributions of this present research study is to discover if the general theories proposed by the quality experts are applicable in an emerging economy (Juran, 1951). The generalizability of the theories can be enhanced if it can be shown that such theories apply in an economic environment similar to that found in Ghana. For example, organizations such as GE have instituted quality management programs such as Six Sigma and its quality practices in a variety of markets across the globe. It has done so at every level of management in every business unit from executive decision making to the smallest production process gaining operational savings because of Six Sigma's process improvement and quality control characteristics. Quality programs such as Six Sigma produce definitive and measurable results that improve a business' operating margins through a process of elimination of unnecessary or wasteful practices and a continual, forced innovation (Eckes, 2001). Such quality management programs tend to reduce every act, every process, and every decision into a series of quantifiable metrics allowing them to be effectively measured making both the decision and the implementation of strategic and production/process designs a simple matter of comparative analysis. At the core of this process are identifiable and structured methodologies that can be easily documented such as the Six Sigma concept of DMAIC, or: design, measure, analyze, improve and control (Smith & Blakeslee, 2002, para.20). DMAIC and processes similar to it define the essence of what quality management

programs can do for an organization and specifically for a process within a given organization. It is clear from even a cursory overview of Unilever Ghana that the company not only could benefit from such a quality management program but likely finds such a program to be requisite for market success in the mid to long-term. Another reason why this and similar research projects are important is that, such studies are needed in order to build the necessary foundation for the development of theory on quality management strategy across organizations. This is certainly true for organizations involved in manufacturing and production where even small, incremental improvements in operations can lead to sizeable gains in revenue and increases in margins. Therefore, studies such as the present one assist in extending the knowledge base and the understanding of quality systems management strategy needed to advance theoretical development. Such theoretical application in emerging markets is especially important in view of the expanding influence of the global market and the increasing reliance on more obscure markets by the world's economic forces. It is also expected that this study will be a source of reference for students undertaking research in quality systems in the universities and other tertiary institutions for the enhancement of quality management education and practical application in a market's local and regional competitors.

Quality management has become a ubiquitous practice in modern industry. In addition, it is becoming increasingly common in both the public and private service sectors where, regardless of the LOB or overall mission of the organization, more efficient use of resources is required if not demanded by various shareholders or stakeholders. Research has shown the value of quality management presents itself in more than simple gains in revenue or in margins (Anderson et al, 1998). Quality management tends to manifest itself in many aspects of an organization when deployed correctly. It can result in widespread improvements in employee morale and employees are involved more deeply in the actual

processes of the organization, it can result in greater customer satisfaction metrics which in turn can lead to greater referrals and more repeat business that do directly impact revenues, and, finally, a quality management program can allow management to focus more on strategy development rather than be consumed by organizational minutia. This research will be focused on ascertaining quality management's existence and relevance in practice within market competitors and particularly those within Ghana and specifically within Unilever Ghana. As such, this project attempts to investigate many initiatives on quality management systems implementation and why they fail (Sitkin et al, 1994). Often, quality management is merely seen as a number of techniques or methods that can be pulled out of a box and implemented haphazardly. However, there are more profound aspects to quality management, which need to be taken into account if quality management is to be employed successfully within an organization. Flynn et al (1994) argues that the fundamentals of quality management are based both on western management thought and on ancient eastern philosophies that combine to make an organization more efficient while instilling a sense of self-direction and responsibility in the employees within the organization.

This study is essentially a case study employing qualitative tools in the data collection and analysis sphere relevant to quality management and focusing on a single organization; in this case, Unilever Ghana. Because of the explorative nature of this research, a case study approach is a suitable methodology for the examination of such a diverse topic as quality management (Ahire et al; 1996). The contemporary business environment is very dynamic and therefore quality is a moving target and one in which an organization can never cease taking aim at, at risk of becoming uncompetitive or irrelevant. If an organization such as Unilever therefore, wishes to prosper, every employee must work for continuous quality improvement which is why every employee in the organization must by in to not only the necessity of implementing a quality program but the choice of quality

program as well. This is because quality is the best assurance of customer allegiance, the strongest defence against competition and the only path to sustained growth and earnings over the mid and long-term. Therefore, an organization that does not learn the language of quality systems management and improvement will soon become obsolete.

Thus, it is important for management to recognize the different methods that the quality of a firm's products or services can affect the organization and to take into account developing and maintaining quality assurance programs to maintain such integrity throughout the organization. Some of the major ways by which quality affects an organization are typically associated with a loss of business for example. Poor designs or defective products or services can result in loss of business while failure to devote adequate attention to quality can damage an organization's image and lead to a decreased market-share or it can lead to increased criticism:

A potentially devastating consequence is the reaction of the consumer who receives a defective or otherwise unsatisfactory product or service. A recent study shows that, while a satisfied customer will tell a few people about his or her experience, a dissatisfied person will tell (bad mouth) an average of 19 others. Unfortunately, the company is the last to know of dissatisfaction. A more common response (by a dissatisfied consumer) is simply to switch to a competing product or service"' Ernst and Young (1990)

Organizations must pay attention to potential liability due to damages or injuries from either faulty design or poor workmanship as these developments typically reach into the enterprise's customer base. This scenario applies to both products and services and since Unilever Ghana maintains both products and services within its operations, it is particularly susceptible to the negative ramifications of poor quality. Liability for poor quality has been well established in courts. An organization's liability cost can often be

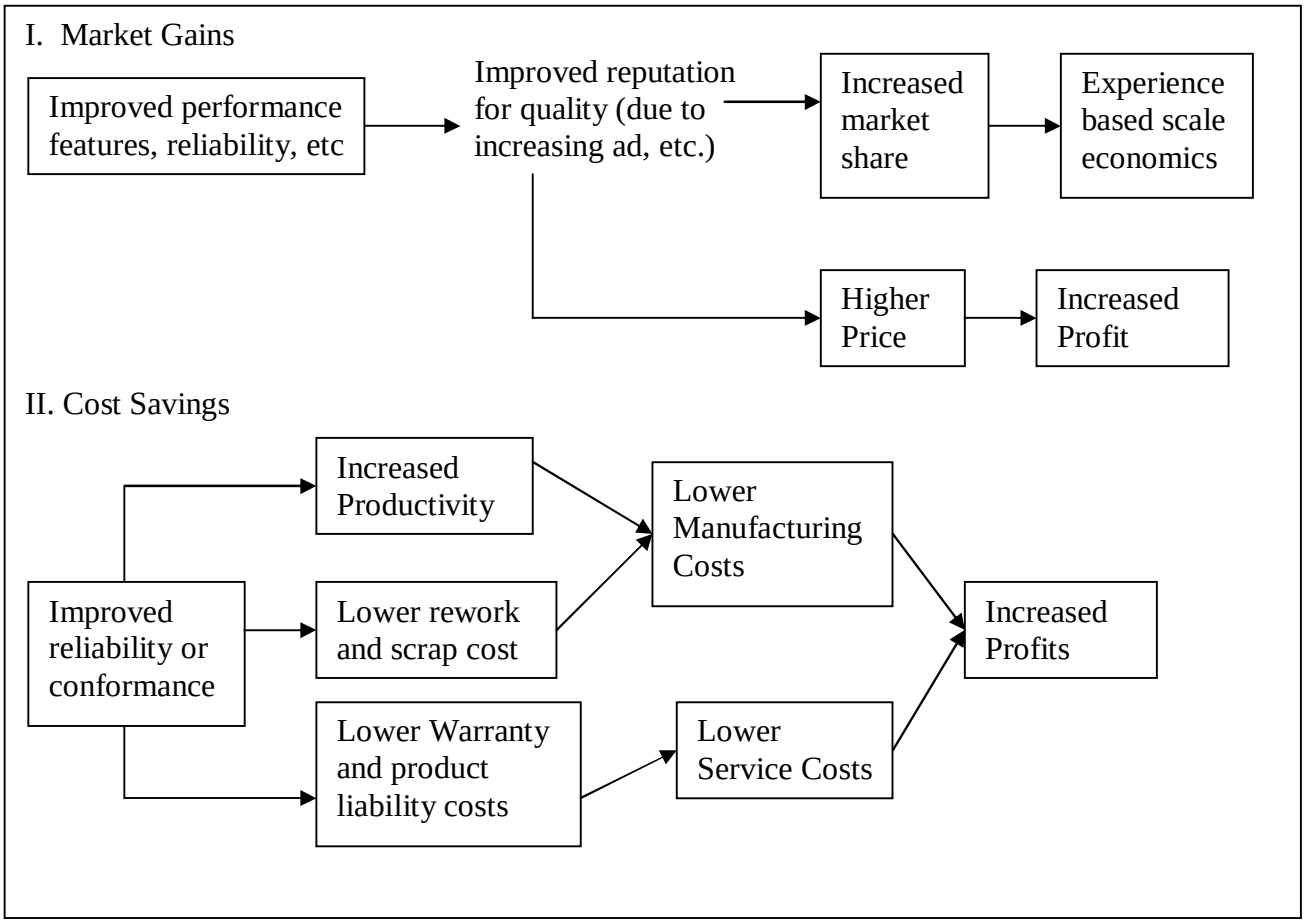
substantial, especially if large numbers of items are involved, or if potentially widespread injury or damage is involved, as in the gas industry.

Additionally, productivity and quality are often closely related and this is certainly true in Unilever Ghana's case. Poor quality can adversely affect productivity during the manufacturing process if parts are defective and have to be reworked or if an assembler has tried a number of parts before finding one that fits properly. The waste that such scenarios engender can be long lasting and difficult to remove from the manufacturing process once employees become used to have the benefit of extra parts and time to work in an environment of trial and error rather than through precision and accuracy. Poor quality increases certain costs incurred by the organization and are often only determined after customers are lost. One essential aspect of quality that resounds through all its various definitions is that quality at its most basic level is defined by the customer or the consumer (Kuratko, Goodale & Hornsby, 2001). Therefore, poor quality consists of faulty systems, does not meet performance requirements, and fails to meet customer expectations. The effects of poor quality ultimately have a negative impact on an enterprise's revenues if it is a sales oriented organization and a negative effect on an organization's service delivery if it is a non-sales, such as a non-profit enterprise, organization. Poor quality results can have several direct and indirect effects on an organization. The loss in revenue or in service delivery performance directly impacts its return on investment for shareholders and/or stakeholders while the indirect impact is usually poor employee morale and high turnover in the workforce.

Hence improving reliability and conformance to standards means fewer defects and lower service costs for the organization. No national market in the current business environment, even with abundant resources, can survive without imports and exports and thus these markets require efficient practices to remain competitive but to also be

established in the first place. In this technological age, quality is an international as well as a corporate concern because technology is often a solution for poor quality. For both a company and a national economy to compete effectively in a global economy, its products must meet quality and price expectations across a variety of markets that often have extremely high expectations of what quality is and how its should be priced. Inferior products harm firms both at home and abroad, and can have severe implications for balance of payment issues at a national level as well as profitability issues at the firm level. The diagram below offers a more complete model of why quality is important to organizations:

Figure 1-1 Quality and Profitability



Quality should be perceived as the lifeblood of every profit oriented organization because without it profit is the first financial component to suffer and most shareholders will quickly

abandon a company that is not profitable. For that matter, anything (such as poor quality) that takes business away or decreases profitability must be of great concern to such an organization regardless of external shareholders or not. These are some of the primary reasons why quality is of great importance to contemporary business organizations and especially to Unilever Ghana as the country and the company attempt to solidify their presence within the globalize economy.

Finally, quality management must be recognized for what it actually is, which is a system of processes and procedures. As such, systems theory is often utilized to explain and develop a theoretical foundation for many quality management programs. Systems theory, at times, can be an obtuse and difficult proposition relative to quality management if one obsesses about its more esoteric nuances, such as its extended association with the Gaia Hypothesis that stipulates the earth itself is a living organism (Beck ford, 2002). While on the surface such esoteric concepts may seem to have nothing to do with quality management, in fact, the concept of a living organism is very much related to quality management. The essential precepts of systems theory state that nothing, no component in a product or function in an organization, can be examined in isolation because they are all part of a greater whole(Beckford, 2002). Quality managers and general managers simply concerned with quality properly understand that an organization is nothing more than a mixed bag of processes all being carried out simultaneously. To improve quality individual processes must be examined and re-examined in an endless cycle of minute improvements (Kuratko, Goodale & Hornsby, 2001). Yet, each improved process must positively effect the entire organization or system or the net result, no matter how good for the process, will negatively impact the organization as a whole. An example of this importance of systems theory in quality can be seen in a simple production line. If the production process is dramatically improved thereby greatly enhancing productivity, this is normally a good

thing. However, in the same instance, if the logistics and distribution processes, as well as the sales and marketing processes, are not considered in the context of systems theory in that they must also be able to handle the increased productivity, then a build-up of inventory and a subsequent reduction in cash flows will be the result.

1.3 Research Problem

The underlying rationale for this research project is based on the observation that there have been very few studies aimed at understanding quality management issues in developing countries. Of these, most have been devoted to delineating difficulties and/or problems that are likely to surface with the implementation of quality management practices. One of the earliest known studies was the work of Skinner (1967) in which he

discussed the procurement issues that international manufacturing plants face in developing countries. Procurement is always an issue in developing markets for a variety of reasons such as transportation issues, access to suppliers or vendors, and remoteness from customers, for example. Other researchers such as Ebrahimpour and Schonberger (1984) described problems encountered by manufacturing firms in developing countries and made an attempt to show the potential of practices such as just-in-time and total quality control in helping to ease these problems. Caddick and Dale (1987) pointed out that sourcing from developing countries is more complex than from domestic markets where regional locality facilitates supply and delivery issues that cannot be as easily resolve in developing markets.

Similarly, there have been a number of studies that have examined existing practices in several developing countries and others have compared practiced between developing and developed countries. Several of these studies can be found in the work of Whybark and Vastag who examined just these types of concerns in the manufacturing environment and ecosystem (1993). This relatively small body of empirical research leaves many gaping holes in the available knowledge base for current quality management researchers to fill.

However, even among the studies that have been done in developing countries, very few have been devoted to countries in Africa and for that matter Ghana to be specific. This apparent lack of interest might be due to the perception that African countries do not present a viable source for information and analysis with regard to understanding quality management although a more likely supposition is that the African continent has been traditionally too remote in relation to the world's most developed consumer markets such as the US for example. Yet, unlike the economies of the Caribbean countries and Latin American countries, African countries are gradually moving from agrarian economies to

industry and service-oriented economies, which have been systematically improving their manufacturing and production standing in the context of the global ecosystem.

Structural Adjustment Programs (SAPs) prescribed by international financial agencies such as the World Bank and the IMF have accompanied some of this movement towards greater economic integration and these types of SAP programs are designed to force these emerging countries into a mode of development that has been found to work for developing countries. Thus, Africa, and by association Ghana, is slowly recognizing that it must elevate not only its physical infrastructure but also its internal business practices in order to attract further foreign direct investment (FDI) as well as to make its own organically developed industries more competitive. The examination and development of more effective quality management programs is an ideal target to begin this procedural elevation within its corporate hierarchy.

As discussed in detail in later sections of this research project, in the case of Ghana, these previously mentioned SAP programs often require among other things, privatization of government agencies, removal of price controls, removal of government subsidies to local produce (to encourage operational efficiencies) and the reduction of tariffs on imports. In fact, the emphasis is on the private sector as the engine of growth. All these measures tend to have a more significant impact on the manufacturing sector than any other sector of the economy within these countries and therefore, Unilever Ghana is directly affected by such programs. However, macro-economic data suggest that manufacturing continues to survive despite some the harsh economic outcomes of such programs.

The contributions of manufacturing to GDP for some of the countries in Africa that have implemented IMF/World Bank reforms have remained steady over time and this indicates that further development related to enterprise efficiency and quality could only assist with the country's economic growth. Thus, studies on strategic quality development

that have allowed the manufacturing sector to maintain stabile in the face of structural changes would be instructive to the other sectors of the economy (such as service) that are being challenged by the IMF/World Bank reforms. In other words, the findings of this study can be easily generalized for firms in the other sectors of the Ghanaian economy as well as for enterprises in similarly emerging economies.

1.4 Working Hypothesis

Hypothesis consists either of a suggested explanation for an observable phenomenon or of a reasoned proposal predicting a possible causal correlation among multiple phenomena.

Even though the words "hypothesis" and "theory" are often used synonymously in common and informal usage, a scientific hypothesis is not the same as a scientific theory. A hypothesis is never to be stated as a question, but always as a statement with an explanation following it. It is not to be a question because it states what he/she thinks or believes will occur.

In common usage in the 21st century, a hypothesis refers to a provisional idea whose merit requires evaluation. For proper evaluation, the framer of a hypothesis needs to define specifics in operational terms. A hypothesis requires more work by the researcher in order to either confirm or disprove it. In due course, a confirmed hypothesis may become part of a theory or occasionally may grow to become a theory itself. Normally, scientific hypothesis have the form of a mathematical model. Sometimes, but not always, one can also formulate them as existential statements, stating that some particular instance of the phenomenon under examination has some characteristic, and causal explanations, which have the general form of universal statements, stating that every instance of the phenomenon has a particular characteristic.

Any useful hypothesis will enable predictions by reasoning, including deductive reasoning. It might predict the outcome of an experiment in a laboratory setting or the observation of a phenomenon in nature. The prediction may also invoke statistics and only talk about probabilities. **Karl Popper**, following others, has argued that a hypothesis must be falsifiable, and that one cannot regard a proposition or theory as scientific if it does not admit the possibility of being shown false. Other philosophers of science have rejected the criterion of falsifiability or supplemented it with other criteria, such as verifiability (e.g., verificationism) or coherence (e.g., confirmation holism). The scientific method involves experimentation on the basis of hypothesis in order to answer questions and explore observations.

In framing a hypothesis, the investigator must not currently know the outcome of a test or that it remains reasonable under continuing investigation. Only in such cases does the experiment, test or study potentially increase the probability of showing the truth of a hypothesis. If the researcher already knows the outcome, it counts as a "consequence" - and the researcher should have already considered this while formulating the hypothesis. (http://www.answers.com/topic/hypothesis).

To achieve the objectives of the study, the following working hypothesis have been formulated:

(i) Quality is perceived as the lifeblood of profit oriented organization.

(ii) Quality is the best assurance of customer allegiance.

(iii) High productivity and quality are often closely related in a successful organization.

(iv) The relationship between good succession planning and quality management in an organization.

The existence of an organization depends upon its customers. Satisfying their requirements must be the organization's main aim. This can only be achieved by putting quality in everything the company does.

Customers expect quality because -:

- they want a product or service that is reliable.
- they want a product that meets their requirements.
- they want value for money.
- they do not want any hassle.

Quality matters to the Manager of an organization because-:

- the manager/worker wants job satisfaction.
- the manager want to be respected
- the manager want to enjoy work
- the manager wants to do a good job.
- the manager needs to get rid of hassle and stress.
- the manager wants to secure job.
- the manager wants to be proud to work for the organization.

The organization itself needs quality because -:

- Customers demand it.
- The future of the workers depends on it.
- Reputation and image depends on it.
- Operatives can be held liable for faulty design or poor workmanship.
- Poor quality increases the Company's cost of production or service delivery.

- The Company's productivity is dependent on quality.

It must be noted also that a business exists because of its customers. If the needs of customers are not met they are likely to take their orders elsewhere to the detriment of the organization. Total quality management (TQM) demands customer focus which means:

- Understanding customer expectations plus discovering and fulfilling latent customer needs through customer surveys and partnership with suppliers.
- Supplying products, services and knowledge which consistently exceed customer expectations, i.e. delighting the customer.
- Providing benefits of unique value to customers which yield competitive edge.

An excellent supplier/customer relationship is a useful starting point for meeting customer expectations.

For an organization to be truly effective, each part of it must work properly together, recognize that every person and every activity affects and in turn, is affected by others. The supplier /customer relationship applies as well within the organization. Everyone in the organization should see him or herself as either a supplier or customer at any stage in the organization's activities. Everybody is thus involved in quality.

If every person (or department /unit) is meeting his or her obligations to others whilst ensuing that his or her requirements are being met, then there is a much greater chance that the final product or service will meet customers' expectations.

The necessary conditions must be created for all employees to become fully involved in contributing to company objectives and maximizing organizational productivity through team problem solving and break through culture.

Sectional and departmental barriers must be removed so as to promote working together across functional boundaries to understand each other's needs.

To facilitate participation and team work, there must be continuous interchange of ideas and free flow of information in all stages of the quality loop.

Genuine participation can be expected only if employees are given full opportunity to express constructive criticism and suggest methods of improvement.

For TQM to thrive, management must build into the quality system appropriate incentives and motivation to make people continue to give their best to the growth and profitability of the organization. Motivation also affect moral. Effective human relations create a harmonious work environment.

In order to ensure good succession planning, an organization like Unilever Ghana which does not joke with quality management see education and training of its employees as crucial and therefore, enforces it in all levels of its structure.

One of management's most important responsibilities in TQM is to orient employees towards quality and to create the right environment for quality system implementation. Therefore, TQM is greatly enhanced if staffs at all levels are given adequate training and

education to enable them upgrade knowledge, change attitudes and develop skills to improve upon performance.

The under listed elements in the development of personnel are included in Unilever Ghana's programme.

- Executive management training in quality management, including evaluation of the effectiveness of the quality system.

- Education of all personnel on the organization's quality policies, objectives and concept of customer satisfaction. A quality awareness programme which may include induction and training course for new entrants and periodic refresher courses for longer serving staff.

TQM involves changes in organizational structure, positions, responsibilities and attitudes. Unilever therefore, trains top management in the concept of managing change so that employees would want to be associated with the change process.

The Dimensions or Characteristic of product Quality

David A. Garvin, (1980) summarizes the basic elements of quality in what he calls the eight (8) dimensions of quality. The eight critical dimensions of quality that can serve as a framework for strategic analysis are:

1 Performance –

The primary or main operating characteristics of a product or service, i.e., how well does a product perform its core functions? For an automobile, these would include acceleration, handling smoothness of ride, gas mileage, etc.

2. Conformance –

This is how well a product or service corresponds to the customers expectations. I have to go along with Philip Crosby in defining quality as conformance to requirements.

3. *Aesthetic* -

This is the appearance of a product, i.e., how a product looks, smells, or tastes. Does the product's design look and feel like that of a high quality product?

4. *Special Features–*

This is the extra characteristic if a service, i.e., the "bells and whistles" that supplement the product's basic functions. Examples include CD players and digital clock on cars and the free drinks offered by airlines. Does the product have adequate auxiliary dimensions that provide secondary benefits?

5. *Reliability –*

This reflects the probability that the product will operate within a given period of time, i.e., consistency of performance – does the product ever fail to work?

6. *Durability –*

This refers to the useful or economic life of a product or service – how long will products last? If repair is possible, durability relates to the length of time a product can used before replacement is judged to be preferable to continued repair.

7. *Serviceability –*

The ease of repair, speed of repair, and competence and courtesy of the repair staff – is the service system efficient, competent and convenient? That is, handling of complaints or checking on customer satisfaction.

8. *Perceived Quality* -

This is the perception that influences judgments of quality, i.e., indirect evaluation of quality. Examples include factors such as a firm's reputation and the images of the firm and its products that are created through advertising.

Cost of Quality

Any serious attempt to deal with quality issues must take into account the costs associated with quality. Because the main language of "corporate management" was money, there emerged the concept of studying quality-related costs as a means of communication between the quality staff departments and the company managers (Gryna et al, 1988).

Juran (1974), one of the world's leading quality theorists, has been advocating the analysis of quality–related costs since 1951, when he published the first edition of his quality control handbook.

Feigenbaum (1991) made it one of the core ideas underlying the total quality management (TQM) movement. It is a tremendously powerful tool for product quality, including gas quality.

1.5 The Research Scope and Methodology

The methodology employed within this research project is primarily qualitative. The qualitative approach ensures that the researchers will be given great latitude insofar as interpreting the data produced during the course of this research project. The specific qualitative methodology employed is the case study method, which allows the researchers to focus directly on a single market competitor: Unilever Ghana. In so doing, the practical application of quality management within an organization can be better examined in terms of execution and strategic development as well as policy development. Since this research study also relies on existing literature related to the field of quality management, this qualitative approach is particularly grounded in the literature itself.

However, several sources of primary data are employed in order to develop a better understanding of the organization in question. Data are therefore collected from both primary and secondary sources. Data from primary sources are collected using interviews supported by questionnaires from key informants and experts within and outside the company under study. Unilever Ghana provided access to its employees and management corps in order to facilitate this research project with the understanding that it would have access to the results as well.

Information from secondary sources was culled from published and unpublished books, scholarly journals, the stock exchange, key informants in the industry, as well as reliable Internet based sources such as government databases and similar sites. The firm's financial reports, organogram, corporate plans are also being used as part of the secondary sources and much of this information is publicly available as well.

This study is necessarily limited in scope due to a series of resource limitations as well as practical research limitations. The series of resource and practical limitations that constrain the scope of this research project are listed below:

- This project work is limited to Unilever, although reference was made to other manufacturing companies, because this company is locally situated but internationally recognized
- This study is also limited to the knowledge and experience in quality management of the researchers involved
- Furthermore, this study is limited to the information gathered or provided by the company itself , which is presented within the context of the case study methodology employed
- Finally, although the study has been conducted in Ghana, it is limited to Accra and Tema, because these two cities hold about 70% of the Ghanaian market. Accra being the national capital and the most popular city, with Tema as the most industrialized city with a modern harbour

These limitations affect the scope of the research project. Some limitations are obvious and are defined by access to appropriate funding sources, while others are related to logistical issues wherein extensive foreign travel to other markets is not only impractical but effectively impossible.

1.6 Preview of Subsequent Chapters

The Study comprises five (5) chapter and the details are as follows:

(i) Chapter one discusses the general background to the study, the research problems analyzed and the study objectives. It also provides an overview of the relevant concepts used, methodology, research questions, rationale and scope of the study as well as the outline of the study. Finally, it offers a working

definition of some of the dominate concepts and themes discussed throughout the research project.

(ii) Chapter two develops a thorough discussion and review of relevant and existing literature and research relevant to quality management in general and how such quality management issues might be better applied within emerging markets and specifically that of Ghana. This chapter also seeks to build a theoretical foundation on which the remainder of the study relies.

(iii) Chapter three describes and gives details of the research methods and techniques used for the study. It provides rationale for choosing a specific method and/or technique and a detailed outline of the data collection and presentation for the research. Greater explication of the qualitative methodology is offered and offers insight into how the primary data is employed to address the research questions.

(iv) Chapter four presents the analysis of the data and test of hypothesis and an analysis of the findings relevant to the research issues raised. Furthermore, the summary tables of statistical data, charts and figures of results are presented so that readers can easily see patterns in the mass of data presented.

(v) Chapter five gives a summary of the findings, conclusion and possible recommendations of the research and the contributions to knowledge based on findings and recommendations. This is a significant section of the research project as it provides the working models that are of most interest to actual industry competitors as well as to governments of emerging economies that might want to employ them in order to spur further development.

1.7 Definition of Terms

Quality: Quality is a concept based on several basic assumptions. Researchers in the field of quality management have variously approached these basic assumptions regarding the nature of quality, and by extension, poor quality. Authors such as Deming have defined quality as non-faulty systems while others approach it from a motivational perspective and insist that quality is merely conformance to requirements, whatever they may be (Avery & Zabel, 1996). One essential aspect of quality that resounds through all its various definitions is that quality at its most basic level is defined by the customer or the consumer. Broadly defined, quality refers to the ability of a product or service to consistently meet or exceed customer expectation, i.e. quality means getting what you pay for.

According to Laudon and Laundon (1999), Quality can be defined from both producer and customer perspectives. From the perspective of the producer, quality signifies conformances to specifications (or the absence of variation from those specifications) and

the manner in which such specifications are met. A customer definition of quality is much broader. First, customers are concerned with the quality of the physical product – its durability, safety, ease of use, and installation, for example, while customers are concerned with the quality of service, by which they mean, the accuracy and truthfulness of the advertising, responsiveness to warranties and ongoing product support emanating from the company itself.

A more workable definition of quality that can be employed throughout this research project is one that takes a holistic view of quality issues. This is a definition that considers the concept of quality as the development of specific competitive strengths based on the operations functions that are aimed at helping an organization achieve its long-term competitive goals.

Quality Management: Quality management is the systematic approach to managing and improving quality within an organization and it can relate to both internal processes as well as to products and services (Chen, 2005). Quality managers and general managers concerned with quality properly understand that an organization is nothing more than a mixed bag of processes all being carried out simultaneously. To improve quality individual processes must be examined and re-examined in an endless cycle of minute improvements over time that result in improved quality metrics within the organization and with respect to its products and services.

Best Practices: Best Practices are the strategies and operating procedures of a competitor in any given industry that are deemed by that industry to be the most effective among the recognized competitors. Best practices are identified through a series of devices such as financial performance, quality metrics, and employee retention, to name but a few.

Benchmarking: Benchmarking is strategy in which the best practices of a competitor are identified by an organization and then integrated into that organization (Chen, 2005). Industry competitors first benchmark another competitor's practices to ascertain if it is producing results consistently better than their own. Such benchmarking leads to the establishment of a best practice and then quality management systems, such as Six Sigma, utilize established best practices to redesign internal processes.

Six Sigma: Six Sigma is a widely employed quality management program within the manufacturing and production sector. Six Sigma seeks as its goal the achievement of a defect rate of 3.4 defects per 1 million business transactions or operations (Smith & Blakeslee, 2002, para.17). Industry competitors implement Six Sigma processes through a six stepped process outlined below:

1) Critical to Quality: Attributes most important to the customer

2) Defect: Failing to deliver what the customer wants

3) Process Capability: What your process can deliver

4) Variation: What the customer sees and feels

5) Stable Operations: Ensuring consistent, predictable processes to improve what the customer sees and feels

6) Design for Six Sigma: Designing to meet customer needs and process capability

DMAIC: At the core of the Six Sigma quality management process is the Six Sigma concept of DMAIC, or: design, measure, analyze, improve and control (Smith & Blakeslee, 2002). DMAIC defines the essence of what Six Sigma does for an organization and specifically for a process.

ISO 9000: ISO 9000 is not an organized quality management body, per se but rather a standards organization around which quality management programs can be organized

(Avery & Zabel, 1996). ISO stands for International Standards Organization and it is segmented into various classes indicated by variations of the 9000 figure such as 9001 and these are used for different industries. ISO 9000 simply provides accepted standards in a given industry that an organization can implement in order to assure that it is operating according to the most optimal specifications.

Total Quality Management: Total quality, or also variously referred to as total quality management (TQM) is a philosophical shift in management perspective that refocuses strategic impetus on the internal attributes of an organization (Beckford, 2002). Total is meant to imply that the entire organization has a commitment to improvement, while quality implies that a conformance to stipulated standards, usually customer driven is the intent, and management infers that this is a process and not a project that is an essential function of management.

Toyota Production System: TPS consists of a variety of lean elements that have made Toyota's manufacturing environment the envy of global manufacturers for decades and TPS is continually being used as a benchmark for other competitors both in and without the company's industry. TPS is designed to eliminate all manner of waste, reduce inventories, and increase efficiencies throughout any production system or process. TPS is based on three simple objectives which drive all its lean processes which are: 1) to design out stress in the system, 2) eliminate all forms of waste, and 3) make production form efficient (Beckford, 2002). These objectives within TPS have led to the development of several widely known manufacturing strategies and processes which are well known in their own right but are often not recognized as originating with Toyota's TPS.

Lean Manufacturing: Toyota Motor Corporation is one of the pioneers of lean production but the lean production environment is now widely recognized as its own operating methodology. Lean manufacturing consists of a variety of lean elements that have

made the leading manufacturing competitors the envy of global manufacturers for decades. At the core of lean manufacturing is the just-in-time (JIT) manufacturing environment where inventories are kept at a minimum reducing the need to keep unnecessary capital tied up in such inventories.

Kanban: Kanban is an inventory and production system that is based on a pull methodology rather than the antiquated push methodology (Avery & Zabel, 1996). In a Kanban production and inventory system parts or components are retrieved as they are demanded (pulled) rather than the traditional model where supply drives production in that products or services are produced as long as parts or components are forced down the production line (pushed).

Kaizen: Kaizen has been independently employed by countless manufacturers and it simply means in Japanese to change for improvement or continuous improvement (Avery & Zabel, 1996). The basic concept behind kaizen as it is generally applied is that all manufacturing processes are subject to continual revision no matter how small the change and improvement. The idea is that these countless small improvements lead to dramatic benefits over the long-term and generally manifest themselves as extreme cost-savings and improvements in quality of products.

Poka-Yoke: Another important component of the lean manufacturing system is known as poka-yoke which is used to introduce a system of fail safe measures to prevent errors. Poka-yoke means to fail safe or mistake proof and it is a methodology applied on the production line to limit the variations of how an operation or act can be performed by line employees (Avery & Zabel, 1996). This system of fail-safes or constraints on production activities ensures that manufacturing employees follow guidelines and standard operating procedures. In summary, lean environments, have as their overarching goal the objectives to reduce waste, decrease inventories, and improve quality.

Just-in-Time (JIT): In a just-in-time (JIT) manufacturing environment the objective is to minimize inventories throughout the supply chain (Avery & Zabel, 1996). However, contingencies must be accounted for and breakdown of equipment is always a threat. In a JIT environment it is critical to ensure that the needs of the customer are always met. Most JIT manufacturing environments typically operate with some buffer inventory as well as a small percentage of excess capacity that can be met either through extended operating hours or simply through increasing the production rate. Therefore, if there is a delivery interruption the manufacturer can still meet its obligation to its customer.

Chapter II: Review of Relevant Literature

2.1 Introduction

Strategic management and especially as it relates to quality initiatives, is largely associated with making and in possessing the ability to make decisions. Predominantly the character and type of decisions which a manager makes during the course of his or her duties are aligned with the four functions of management. Management has been many things to many people but one constant remains consistent among all schools of managerial theory and that is that managers guide functions and processes within an organization. Yet, how individual managers actually execute this guidance is almost completely based on their unique mix of skills and talents, or lack thereof, as they relate to decision making. The

theory behind managerial studies differs only on the approach to or style of that primary guidance that is related to skill or talent and the percentage a manager has of each: the necessity for managing arises whenever work is specialized and undertaken by two or more persons...the specialized work must be coordinated, creating the necessary managerial work...managerial work is to coordinate the work of individuals, groups, and organizations by...four management functions: *planning, organizing, leading,* and *controlling*. (Sims, 2000, p.9)

The end result is that managing, as a science and a business function, results in the accomplishment of these four primary functions: planning, organizing, leading, and controlling in equal proportion to the skills that provide the ability plan and control within the nexus of decision making judgment related to leading and organizing.

a. The Functions as Decision Nexuses

The roles of a manager have been the topic for much academic debate throughout modern business studies and they are just as relevant for Unilever Ghana as for any other international industry competitor. However, generally these roles have been categorized into four broad divisions of activities. Sims (2000, p.9) relates that while many other functions do exist for which management is expected to accomplish, either directly or indirectly, these four primary functional areas of responsibility, remain pivotal in the role of the manager because they form the primary nexus within which almost all of managerial decision making takes place. Yet, since it is recognized that the role of the manager is expanding beyond pure functional purposes to involve facilitative type roles that are symbiotic to globalism and the trend towards an economically flat environment, management is now seen as a process as well as a function: “Managers of organizations should be influenced by research that shows that organizational effectiveness can be

increased by allowing complete employee involvement in decision making" (Mudacumura, 2000, para.7).

How managers manage themselves in integrating processes within functional responsibilities defines their effectiveness within their organization and quality operations depend on this process integration achieved by management. These functional areas require daily assessments based upon performance related criteria which lead to ever more refined decisions.

Planning. This functional area of managerial authority involves defining and setting goals as well as determining boundaries and constraints and is purely a decision making process. Sims notes that developing proper contingencies is also part and parcel of the planning function (2000, p.8). The planning function of management is the other half of project management that together with certain aspects of organizing forms the majority of that distinct discipline.

Organizing. The organizing function of management involves movement and assignment of resources within a framework of structured tasks and defined authority parameters (Sims, 2000, p.10). Quality management is partly within this functional domain and has become a managerial discipline in its own right. However, in all cases, the ability to appropriately organize resources and into the most optimum structure is critical considering the speed at which modern business processes occur within any given corporation.

Leading. Leading is the most soft-skill oriented of the four primary managerial functions and perhaps one of the most difficult for Unilever Ghana to capitalize on or develop because it lacks a wide diversity of internationally trained and experienced manager that could be developed or brought to lead its quality drive. Leading is largely accepted to be a quality that is either present or not present but cannot be created. In this sense one either has "it" or does not have "it" and academia is left to define the precise

nature of “it”. This is not to say that leadership skills cannot be honed and sharpened; they can, but they cannot necessarily be created in an individual who does not have the necessary leadership qualities in the first place: honesty, integrity, ethical authority, and a degree of empathy. Additionally, people skills figure highly in this functional area: “Leading involves dozens of interpersonal processes: motivating, communicating, coaching, and showing employees how they can reach their goals” (Sims, 2000, p.10). That is to say an anti-social introvert may be selected and placed in a position of authority but his or her sphere of influence will likely be limited thereby limiting such a manager’s effectiveness.

Coordinating (controlling). Coordinating ensures that results vector with the planned outcomes of activities undertaken within the other functional areas. Sims notes that this particular functional area of management involves a high degree of technical complexity and that managers are now required to either attain this skill level or hire for it (2000, p.11). Of course, the preference is to attain the technical skill-sets necessary to accomplish the functional responsibilities. Coordinating, or controlling as it is also referred to, involves some revisionist capacity since a manager must also recognize during the process of managing when plans and objectives need adjustment, change, or complete removal based on his or her best judgment. Unilever Ghana’s quality initiatives require this managerial function to be held at a premium because quality and quality processes demand verification and effective follow-up activity. Often, such decision making related to this particular function requires an ability to assume and accept risk.

b. Operations Management Theory

Management theory, as it relates to managerial decision making and related issues such as quality initiatives, can be approached from various perspectives. It is often viewed as a systems approach to management because of the inter-related set of activities that must

be managed within the context of business operations and how such operations are dispensed with. The systems approach to management is unique not only for its novelty but also for its efficiency. While many of the underlying principles for establishing and building metrics in an organization are universal, the approaches to management decision making have taken many different tangents in the late 20th and early 21st century in order to raise productivity, to improve motivational response, and create organizational culture.

In some respects McGregor and Barrett are able to point out how the quest for integrated innovation processes as a managerial role is a result of or a reaction to these earlier systemic strategies: “A thirst for internal growth across Corporate America has made innovation a critical management mandate” (2006, para.4). In this sense, the quest for differentiation and competitive advantage has evolved into sub-sets of systems management such as situational management techniques where it is recognized that innovation must be fostered through strategic management not of statistical analysis necessarily but also of individuals because the statistical aspect of most quality programs is only the first step in the implementation of a quality management program. Once quality metrics are established and measured and upper and lower tolerance levels set, managerial processes must ensure that such metrics are adhered to in practice.

As most business analysts recognize, organizations are comprised of people as well as business processes and technology. Some theorists have proposed that managerial decision making is not based purely on metrics but with an equal degree of relationship with employees and an understanding of the organization: “the amount of guidance and direction a leader gives, the amount or depth of relationship support or behaviour a leader provides, the readiness level that followers exhibit in performing a specific task or achieving an objective” (Lowell, 2003, para.4). While employees still must be held accountable for performance, the operations systems manager is concerned about the

cultural effectiveness of the organization in ways that McGregor and Barrett would relate to innovation and the fostering of innovative environments.

Quality managers, in respect to their various roles and activities related to the four functions, must be able to place their duties and responsibilities within each specific category. In this sense, where scientific managers call management a science, operations oriented managers call management and leadership an art where the four functions of planning, coordinating, leading and controlling are all equally balanced: “The art of leadership, however, is more difficult to learn and comes about from keen perception, excellent listening skills and plain old experience” (Peck, 2003, para.3). McGregor and Barrett refer to this soft side of management, characterized as the ability to make decisions and assessments, not as operationally oriented per se but in a manner that could also be termed as operationally visionary: “establishing a more disciplined way to evaluate and execute ideas, meeting with operations about innovative manufacturing processes, and scouting global markets for new devices” (McGregor & Barrett, 2006, para.11).

Since managers are still concerned with increasing productivity and establishing cutting edge efficiencies, they realize that within the contemporary systems model maintaining such effectiveness long-term requires establishing an equitable work environment. Such a work environment is one in which the employee is fulfilled in terms of professional accomplishment and recognition as well offered a structured environment where control is readily visible in the work structures and leadership; that is, decision making, is always front and centre.

Both management and leadership, in respect to quality management programs, speak to the same ability to make decisions. An inability to make decisions in either role is unacceptable since all employees in any given organization look to management and leadership to provide guidance. Managing, by definition, is ensuring that others, or other

functions and processes, perform according to plan and expectation based on the decisions that the manager has made: “A manager turns one person's talents into performance. A manager acts as a facilitator to speed up the reaction between the talents of the person and the goals of the organization. A manager's focus is on the success of each individual” (Vosburgh, 2005, para.8).

Managers who manage tend to operate outside of the limelight because they are concerned with smooth and appropriate functioning of the organization most often accomplished by careful organization that is nothing more than conscientious application of resources. Additionally, of the five top reasons that businesses fail, three of them are specifically related to managing competencies or skills with respect to decision making: 1) business knowledge, management skills, and adequate planning (Rao, 2001). The role of managing as a functional role based on decision making is essential to an organization’s strong economic performance and consistency. Decision making within the contemporary business environment is perhaps the most critical but intangible skill a manager must possess.

2.2 Literature Review

Quality, customers or constituent satisfaction, and leadership are all integrally related within organizations and can determine an organization’s long-term success or failure in its market. Through the examination of three separate organizations within three distinct sectors: manufacturing, service, and government, the integrated relationship that quality, customer satisfaction, and leadership have within a progressive organization leads to a more definitive conceptual paradigm of how these principles are acted upon. This degree of integrated purposes of three seemingly disparate strategic thrusts that together account for the nexus of most quality systems has its roots in the work of Deming who was instrumental in facilitating Japan’s rise to the top of the quality chain and his methods have influenced

every quality management program in existence to one extent or another: “His teachings were encapsulated in his 14 points, his 7 deadly diseases and...His system of profound knowledge. Deming challenged us...to reconsider both our fundamental roles and our technical teachings...” (Hahn, 2002, paras.5-7). Deming was the first managerial export who realized that quality and the pursuit of quality were uniquely related to what customers or constituents required and were dependent upon executive leadership and guidance.

Total Quality Management (TQM) is management strategy that focuses on producing quality-centric products or services, concentrating on customer needs, striving to provide a data-driven decision process, and a management environment that stresses continuous improvement (Beckford, 2002). Total, as utilized in TQM’s title implies that everyone in an organization or enterprise is required to be included and an active participant in the quality improvement process. Quality implies that it is the customers’ needs that define the mission of the organization and not simply fulfilling a need in the marketplace. In other words, quality must have a purpose beyond simply building functionally adequate products or providing a basic service to minimum standards. The management component in TQM infers that TQM is an on-going process that is a function within the organization requiring its own resources and oversight of which everyone and each department contributes to. It is important to note that TQM is not a simple managerial task that is culled from textbooks to be used with other managerial techniques but rather, a process that is integrated into the decision-making and performance measuring activities of a company or enterprise (Hackman & Wageman, 1995). TQM is a managerial style and process not constrained by time or that is completed after simple objectives are met and neither is a project in itself.

TQM has its origins in the work of Dr. Deming who had an academic and professional background in statistics. While American corporations were not interested in

applying the TQM principles he developed he found a much more receptive audience in post World War II Japan where he was recruited among other experts to assist in the rebuilding of Japan (Beckford, 2002). After being exposed to Deming's use of statistical tools embodied within his TQM concepts, corporate Japan began to apply these principles to its manufacturing and production facilities with great success. The testament to TQM's effectiveness has long been recognized by Japan's rapid rise to its unrivalled status as the world's quality leader with such processes as the Toyota Production System (TPS) and such concepts as Kaizen, or long-term, incremental improvements (Beckford, 2002). During the 1970s, after American companies began to be overtaken by their Japanese counterparts, especially the automotive industry, corporate America began applying TQM concepts in order to stay competitive. While other quality systems have gained prominence in recent years, most notably Six Sigma, they all owe their basic structure to the principles of TQM as first proposed by Dr. Deming (Jackson, 2001). Additionally, many of them, such as Six Sigma, can be viewed as a comprehensive extension of TQM and are all quality management programs that can be adopted very readily by Unilever Ghana.

Many might argue that globalization, with its strategic use of quality management strategy and off-shoring, would lead to a breakdown in quality since primary manufacturing and production process are often removed to remote locations. However, the opposite has been the case. Globalization has led to greater emphasis on quality because its primary factor is the introduction of greater competition on a global scale (Madu, 1993). In fact, the very existence of Unilever Ghana is a testament to the pervasive impact of globalization and its relentless push for efficiency and quality. Thus, organizations the world over rather than competing on a national basis where the number and scope of competitors might nominal at best, are suddenly forced to develop products or services that are regularly being outperformed by companies in China, India, or elsewhere. Since these companies in these

foreign markets have a cost-advantage over their counterparts in many developed markets they are able to commit more resources to their production processes resulting in greater quality products or services. The result is obvious—companies in the developed world suddenly must do the same in order to keep relevant and competitive. TQM is an effective managerial process that travels well in a global business environment because it ensures that often far-flung operations retain the same performance metrics and processes as others in more developed markets (Hackman, 1995).

One of the most common managerial styles that are less effective at leading and implementing quality programs is the objective oriented style commonly referred to as the Management by Objectives approach (Eretz, Kleinbeck & Thierry, 2001). While this managerial style can be effective in a smaller organization it does not scale well and creates a harmful competitive environment within the organization department by department. TQM, on the other hand, scales very well and is ideally suited to the multi-functional enterprise that is most common in today's business environment. Another common managerial style is the results driven approach otherwise known as the Management by Results style (Eretz, Kleinbeck & Thierry, 2001). This managerial style does not reinforce long-term strategic planning and inordinately elevates the importance of past results. TQM is primarily focused on current business data and reflects on ways to continually elevate results in comparison to current results.

One especially short-term managerial style that is, unfortunately, quite common is the exception oriented style termed Management by Exception (Eretz, Kleinbeck & Thierry, 2001). In layman's terms this is commonly called putting out fires rather than producing real results. This type of management focuses on problems as they occur rather than in developing strategies to prevent them. TQM develops processes to continually prevent

exceptions in the production and manufacturing processes of the enterprise so that its managers can focus on current and future results.

a. TQM & Six Sigma

Total Quality Management (TQM), Six Sigma, and other quality management systems owe most of their processes and underlying logic to the work of Dr. Deming who was the first researcher to promote the use of statistics as a management device. Dr. Deming was instrumental in facilitating Japan's rise to the top of the quality chain and his methods have influenced every quality management program in existence to one extent or another: "His teachings were encapsulated in his 14 points, his 7 deadly diseases and...His system of profound knowledge. Deming challenged us...to reconsider both our fundamental roles and our technical teachings..." (Hahn, 2002, paras.5-7). It is his fundamental use of statistics and quantitative analysis that allowed Six Sigma to become the force it is today and the program that many major multinational enterprises (MNEs) such as General Electric (GE) has elevated to iconic status as a process reengineering tool.

In this regard, GE, for example, has applied Six Sigma to many different aspects of its various lines of business and experienced much success. Most particularly GE has experienced astounding results on such complicated operations such as its aircraft repair turnaround time. GE utilized Six Sigma's business process reengineering tools to reconfigure its handling and repair for jet engines, among many other high profile activities. The procedure followed in reengineering a process within the Six Sigma framework is fairly straight forward and follows a pre-described regimen culminating in a gap analysis with the predictive results following that step. As Avery and Zabel (1996) describe, this improvement process consists of four primary stages:

- Monitoring: prior to any process reengineering procedure the need for baseline data is paramount. In order to perform a gap analysis, which is the examination of the difference between the "as is" and the "to be" flowcharts, accurate data must be gathered that gives a current snapshot of the operation and how it is performing.
- Benchmarking: by examining the best practices of other departments, competitors, and like processes, an achievable but higher standard can be identified upon which to base the objectives of the "to be" flowchart.
- Data Analysis: this is the actual examination of the gap between the "as is" and the "to be" flowcharts. This stage answers the question of, "where are we now, where do we want to be, and how do we get there?"
- Prediction: based on the results of the data analysis in the gap analysis process, an accurate prediction can be made of the results that should be achieved through the reengineering process.

These stages in the business process reengineering activity ensure that greater results will be achieved through gap analysis performed on the previous analysis represented by the "as is" and "to be" flowcharts.

Six Sigma has perfected this analytical reengineering process and GE specifically applied it to its aircraft repair business. Six Sigma seeks as its goal the achievement of a defect rate of 3.4 defects per 1 million business transactions or operations (Smith & Blakeslee, 2002, para.17). GE has gleaned savings in ways it previously had not imagined through the application of Six Sigma. GE implements Six Sigma through a six staged process it considers mandatory:

1) Critical to Quality: Attributes most important to the customer

2) Defect: Failing to deliver what the customer wants

3) Process Capability: What your process can deliver

4) Variation: What the customer sees and feels

5) Stable Operations: Ensuring consistent, predictable processes to improve what the customer sees and feels

6) Design for Six Sigma: Designing to meet customer needs and process capability ("What")

Through this process of Six Sigma implementation GE established first an "As Is" flowchart of, in this process example, GE jet engine removal, service, and reattachment and its use of SPAN (Simon, 2007, para.1), a Six Sigma measurement, to reduce the process time from 80 days to five. The "As Is" flowchart leads to a "To Be" flowchart which guides the overall process since the goal of Six Sigma is to attain that ideal of 3.4 defects (or variances) per one million and the "To Be" flowchart represents that ideal state. Gap analysis studies the differences between these two states and from there the organization develops a strategy to move from the "as is" to the "to be".

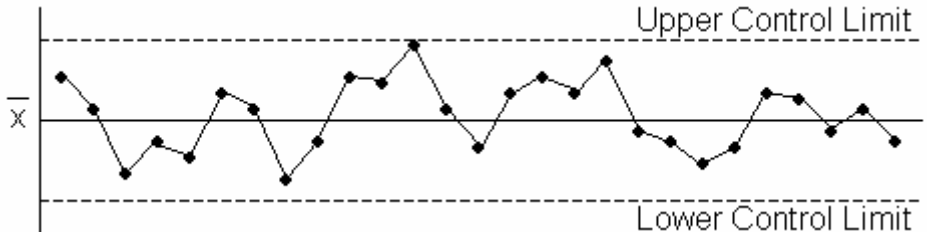
In the engine repair/replacement scenario the quality problems and the issues causing the 80 day turnarounds were, through root cause analysis, found to be due to the non-GE workforce that was charged with removing and reattaching the engines. While most companies would have simply written this scenario off to being beyond its control, GE applied Six Sigma to the process and found that by inserting several key decision points in the process, the options for delaying attachment/reattachment of GE's engines were significantly reduced. And the argument here is that Unilever Ghana can take the same detailed approach to all of its manufacturing processes as GE did to its manufacturing processes regardless of the difference in industry. For example, GE applied the Span principle to the process to identify the most significant problems in the process causing delays rather than concentrating on the outer and more statistically abnormal causes. Span

accomplishes this by measuring only the 95th to the 5th percentile of actions leaving the upper 5th and the lower 5th out of the equation:

$$\text{Span} = P_{95} - P_5$$

(Simon par.4)

After Span has been applied to the metric boundaries of the process, GE applied the principles it established in its Critical to Quality step in Six Sigma to determine the allowable variance boundaries to create the control chart for the process:



(Simon)

Any deviations that fell outside of these upper and lower control limits were deemed out of control and addressed in the "To Be" flowchart. For GE, the magnitude of the problem is apparent by the sheer number of touches it has on its jet engine products throughout the world. According to Six Sigma, for every 100,000 touches there should only be .34 that passes the 5 day range established by GE as the critical to quality parameters for its customers. Unilever Ghana should develop an "as is" and a "to be" flowchart for each one of its manufacturing processes and product lines and then reengineer how it operates and manages each one. This would lead to the development of a gap analysis, which the company could then use to make it a leading benchmark in the Ghanaian market.

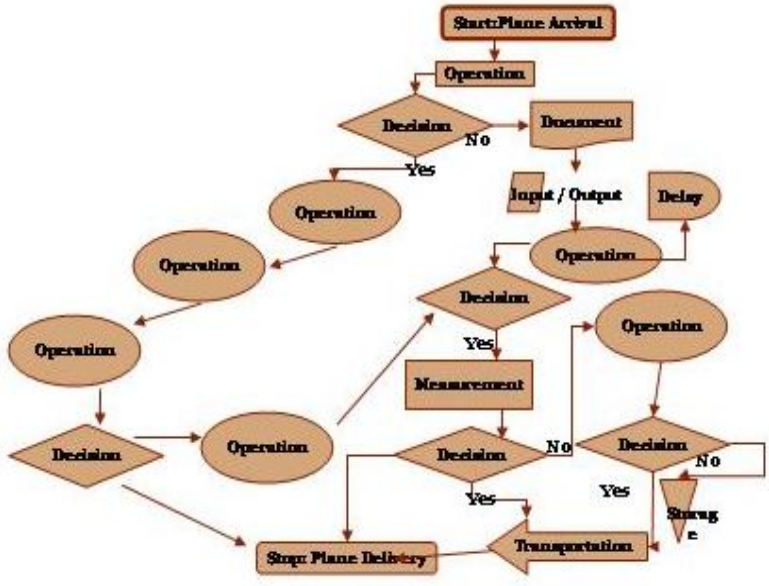
To perform its gap analysis GE identified all the steps in its current process involved in jet engine removal and repair. After identifying each unique step GE reproduced these

steps in an “as is” chart that depicts where all various touches were occurring to the engines. By tabulating the number of times the engines were handled, combined with the number days each engine spent untouched, which equates with not moving or a delay, GE identified the steps in the process where bottlenecks and delays were occurring. These data would have appeared in the following manner although GE has a special software program it has developed to handle all its statistical analysis:

Initial Steps	# of Days	Objective Benchmark
Step 1: Airplane arrival	7	1
Step 2: Teardown	12	1
Step 3: Engine delivery	18	2
Step 4: Engine repair	3	1
Step 5: Engine return	18	1

From this type of table the “as is” and the “to be” flowcharts are built and a gap analysis is performed to identify dead areas that can simply be removed from the process and steps that can be reengineered to be sped up. Follows are the “as is” and the “to be” flowcharts:

“AS IS”



As can be seen, GE simply removed several operational phases from the process which accomplished two immediate benefits: 1) cut several weeks from a process taking as much as 85 days total, and 2) motivated the work crews to perform other operational tasks faster than what was considered normal. Additionally, all the operational phases were reengineered which increased the process by a factor of two and a complete decision point was removed as well thereby removing a bottleneck that had been slowing the entire system down. While obviously airplane delivery and engine removal and repair is still a complex affair and vastly different in character than Unilever Ghana's consumer product good (CPG) manufacturing lines of business, the process is not dramatically different from that of GE's. Essentially, by reengineering the entire process GE was able to design a system that met every need identified in the gap analysis and Unilever Ghana could accomplish this same type of universal makeover.

This quality management system involving business reengineering process facilitated through the tools of Six Sigma has been instrumental in GE's long-term efficiency across many vastly different lines of business. GE's approach, however, is to implement Six Sigma first at the people level and then work it into its production processes: "GE usually encourages its employees to do things in a different way, requiring all employees to attend a 'Six Sigma' training course and use the principles and methods to improve the quality of their daily work" (Chen, 2005, para.13). Once learned, the skills Six Sigma imparted to GE employees and would impart to Unilever Ghana employees, revolutionizes the way work is performed at the most detailed level allowing Unilever Ghana to achieve quantifiable and substantial results reflected by gains in efficiency, profitability, and motivational force.

It should be noted that GE accomplished two strategic goals by implementing its quality management program Six Sigma: 1) to continually spur its management structure and employees to perform at higher levels and, 2) to continually improve quality at every

turn (Beinhocker & Kaplan, 2002, para.21). Quality management is a unique philosophical and a unique pragmatic approach to improve an organization's products, services and processes, and in this case, lies at the centre of not only Unilever Ghana's future quality endeavours perhaps but in its potential ability to achieve consistent strong performance over time moving forward.

Since companies such as GE has been successful at leveraging the Six Sigma process into both strategic approach to management and into its daily execution of its myriad lines of business (LOB): "Former General Electric CEO Jack Welch said that Six Sigma forever "changed the DNA" of how GE operates" (Smith & Blakeslee par.5), companies such as Unilever Ghana should be able to benefit even more. Six Sigma requires a change in the management process before products, services, and processes are examined, yet, once instituted Six Sigma reduces every aspect of management, and thereafter production, to a series of definable and measurable acts that management and production staff become accountable for. While the strategic planning process itself becomes much more defined, as does the execution of the strategic plan for the organization, the ultimate focus of Six Sigma is on the production floor or where the company's product or service is transacted, where deviations are measured in millionths.

GE provides a healthy benchmarking target for Unilever Ghana because GE's business operations and as described in its annual report, reflect operations in everything from: advanced materials, commercial finance, consumer finance, consumer & industrial, energy, equipment & services, healthcare, infrastructure, insurance, entertainment and transportation, just as Unilever Ghana's operations span CPG manufacturing to real estate. GE has instituted Six Sigma practices at every level of management in every business unit from executive decision making to the smallest production process gaining operational savings because of Six Sigma's process improvement and quality control characteristics.

In one example GE utilized Six Sigma throughout the design process and through to production and release to market of a new medical scanner while in another instance it used Six Sigma to increase productivity of plastic by over 1 billion pounds" (Eckes, 2001, p.6). Six Sigma produces definitive and measurable results that improve a business' operating margins through a process of elimination of unnecessary or wasteful practices and a continual, forced innovation. Considering Unilever Ghana's position in Ghana as one of its leading industry competitors, its operations and attention to quality processes should be the best in the market. In so doing the company would establish itself as the benchmark for the entire country, if not the region. By taking such a leading role in the region, Unilever Ghana, and by extension the country as a whole, could develop into a world class manufacturing and production environment that would attract further foreign direct investment (FDI) in the market. Six Sigma reduces every act, every process, and every decision into a series of quantifiable metrics allowing them to be effectively measured making both the decision and the implementation of strategic and production/process designs a simple matter of comparative analysis. Unilever Ghana's current competencies in statistical metrics could be well-suited to the implementation of a TQM program based on Six Sigma principles.

2.3 Highlights of Unilever Background & Quality

Unilever is one the world's largest consumer product goods (CPG) manufacturers. While Unilever's history extends back into the 1930s, its true global expansion began in the late 1960s and 1970s through, as the text describes it, vertical and horizontal integration (Unilever, 2005, p.3). Thus, its growth was really achieved by moving up and down the supply chain activity nodes. First from either purchasing the products it sold or manufacturing products and then selling them to resellers and retailers alike. Such vertical integration across markets allowed it to become the dominant competitor it is today and led, over time, to its investment in companies around the globe, such as Unilever Ghana. Eventually, vertical integration implies that Unilever began to acquire the services and activities of corporate customers that used to be suppliers.

As Unilever moved across markets it entered new markets not by organically developing new products, necessarily, but by buying entire product lines and operations. The result was that by the 1980s Unilever operated a vast and difficult to manage conglomerate of diverse products and services which proved to be a logistical as well as a

strategic drain on resources. Thus, during the 1990s, Unilever had the foresight to narrow its operations down to a few important consumer product goods categories: foods, personal care, home care, and specialty chemicals (Unilever, 2005, p.3). Introducing streamlined logistics and supply chain solutions was central to Unilever's ability to maintain focus on these product categories and its adherence to quality metrics and processes ensured that it kept its liability and risk exposure manageable.

Thus, Unilever's overall success has been largely attributable to its management of its supply chain logistics across a diversity of markets, which includes Ghana's Unilever operations. The most critical measure taken at restructuring its logistics operations was product oriented. Unilever needed to reduce the sheer number of its products which created such a strain on its supply chain operations that much of its operating margins were eaten up by these transportation and distribution costs. Unilever first reduced its product line from 1600 to 400 primary brands and then to reduce the overall number of manufacturing facilities worldwide from 380 to 280, and to fully integrate e-sourcing capabilities (Unilever, 2005, p.5). Critical for this restructuring of the supply chain was the use of a steering team led by management that ensured the supply chain was given the priority within the organization that it merited.

Steering teams and committees are devices that Unilever Ghana could easily integrate into existing managerial structures. Several supply chain management activities were given priority within the new supply chain structure at Unilever leading to its ability to expand internationally in such a manner. Procurement was seen as a strategic differentiator where if costs could be reduced in the sourcing activity, then cost competitiveness could be achieved on the retail side. By integrating global sourcing operations across its various divisions Unilever could leverage better prices on its products and raw materials from suppliers since it would be purchasing items in greater volumes (Unilever, 2005, p.6). The

sourcing and procurement activity was further assisted by the integration of the Internet and related IT infrastructure that created an e-procurement sourcing solution for the company. Since these technologies are now portable across markets, these market differentiators can easily be introduced onto Unilever Ghana's operations without an equal commitment of additional resources. Prior to integrating procurement within a single platform on the web, Unilever's sourcing activities were redundant which resulted in a complete loss of any benefit that could be achieved through economies of scale. By integrating e-procurement strategies Unilever ensured that all procurement officers were coordinating purchases in greater bulk resulting in greater cost savings from suppliers and achieving vast reductions in shipping and transportation costs since these purchases could now be combined in greater bulk.

Great cost savings were achieved by Unilever through its supply chain management restructuring efforts. The text notes that these cost savings were in the area of 1.6b Euros across the board and this is a significant sum even for a company as large and expansive as Unilever (Unilever, 2005, p.12). Unilever also recognized that its supply chain management personnel could be effective in the product research and development operations as well since the type of packaging and overall design of a product has a direct impact on transportation and delivery costs. Transportation and delivery expenses are particularly relevant to Unilever Ghana because of the character of Ghana's overall civil infrastructure, which can be problematic. Transportation and shipping costs can be significantly reduced if the amount of packaging is reduced even slightly per item or unit because of the vast distributive nature that these reductions have over the sheer number of like products being moved.

Unilever, because of the nature of its business as a consumer product goods manufacturer does not really have the option to fully outsource all aspects of its supply

chain. Therefore, by implementing industry best practices within its supply chain management infrastructure Unilever could achieve even greater cost savings in the future. These best practices include such things as the use of radio frequency identification (RFID) tags on all products at the case and pallet level that assist in more accurate product tracking, real-time product inventories anywhere along the supply chain, and almost complete reduction of loss and theft. All of which can be implemented at Unilever Ghana just as easily as elsewhere.

Unilever does make use of and deploy supply chain industry best practices in many areas of its supply chain operations. Some of its best practices consist of its use and integration of e-procurement strategies which allow the company to leverage economies of scale in product and raw material sourcing, and its use of enterprise resource planning (ERP) software solutions which provide great savings by reducing data redundancies in the system. One final industry best practice that Unilever has leveraged to its advantage within its supply chain operations is its integration of supply chain personnel in the product design and research activities which allow it to develop greater efficiencies in terms of cost at ever more points further up the supply chain. This last is certainly a quality effort that Unilever Ghana could implement of its own accord. By introducing its own in-house design team members into its product design and research processes, Unilever Ghana could ensure that its products become far more relevant to the local market than those of other national and international competitors.

a. Unilever Ghana Manufacturing Environment

Other quality practices and processes that Unilever Ghana should or could consider are those associated with lean manufacturing principles such as just-in-time and other

practices that Japanese companies have been deploying for many years. In a just-in-time (JIT) manufacturing environment the objective is to minimize inventories throughout the supply chain (Tsutsui, 1998, p.88). However, contingencies must be accounted for and breakdown of equipment is always a threat. In the event that a truck breaks down there are certain contingency plans that can address this concern. Additionally, in a JIT environment it is critical to ensure that the needs of the customer are always met and, in fact, this is the case regardless of the quality program implemented or the manufacturing process employed. Most JIT manufacturing environments typically operate with some buffer inventory as well as a small percentage of excess capacity that can be met either through extended operating hours or simply through increasing the production rate (Tsutsui, 1998, p.112).

Therefore, if there is a delivery interruption the manufacturer can still meet its obligation to its customer. Thus, lean manufacturing environments do not necessarily imply zero inventory environments. Should a manufacturer be forced to shut operations down for a period of several hours, for example, this is typically handled by extending the production run into overtime. Usually, volunteers would be sought to work an extra shift and the regular delivery of raw material or supplies would simply be held until production runs restarted.

In a manufacturing environment such as Unilever Ghana's various operations in Ghana, part of the training should include the knowledge that the company is obligated to meet its contracted deliveries to its customers regardless of difficulties with its production line. Line employees usually understand this requirement and most would welcome the opportunity to work overtime. In such a situation honesty and forthrightness is almost always the best approach by management and the situation should be fully explained to

employees in a group setting while the problem is being addressed so that employees will be ready to pick up production when the production process comes back on line.

In order to implement a lean manufacturing environment, Unilever Ghana must understand how the system developed. Toyota Motor Corporation (Toyota) is one of the pioneers of lean production. However, at Toyota the lean production environment is known as the Toyota Production System or TPS (Sato & Hoshino, 1984, p.34). TPS consists of a variety of lean elements that have made Toyota's manufacturing environment the envy of global manufacturers for decades and TPS is continually being used as a benchmark for other competitors both in and without the company's industry. TPS is designed to eliminate all manner of waste, reduce inventories, and increase efficiencies throughout any production system or process. TPS is based on three simple objectives which drive all its lean processes which are: 1) to design out stress in the system, 2) eliminate all forms of waste, and 3) make production form efficient (Sato & Hoshino, 1984, p.37). These objectives within TPS have led to the development of several widely known manufacturing strategies and processes which are well known in their own right but are often not recognized as originating with Toyota's TPS.

In fact, the JIT concept originated within the context of Toyota's TPS manufacturing processes because of the company's need to become competitive in international markets during the company's expansion period during the 1970s and 1980s. JIT reduces inventories all along an organization's supply chain and within the actual manufacturing process it relies on a signalling process known as Kanban (Sato & Hoshino, 1984, p.43). Kanban is part of TPS and is at once an inventory process that utilizes bins and is based on a push rationale rather than a pull based system. That is, parts are pushed through the assembly line rather than pulled when needed.

Another important component of Toyota's TPS is known as kaizen. Kaizen has been independently employed by countless manufacturers and it simply means in Japanese to change for improvement or continuous improvement (Sato & Hoshino, 1984, p.45). The basic concept behind kaizen as it is generally applied is that all manufacturing processes are subject to continual revision no matter how small the change and improvement. The idea is that these countless small improvements lead to dramatic benefits over the long-term and generally manifest themselves as extreme cost-savings and improvements in quality of products.

Another important component of Toyota's TPS is known as poka-yoke which in general is used to introduce a system of fail safe measures to prevent errors. Poka-yoke means to fail safe or mistake proof and it is a methodology applied on the production line to limit the variations of how an operation or act can be performed by line employees (Tsutsui, 1998, p.112). This system of fail safes or constraints on production activities ensures that manufacturing employees follow guidelines and standard operating procedures. In summary, Toyota's TPS as are all lean environments, have as their overarching goal the objectives to reduce waste, decrease inventories, and improve quality. These kinds of overarching goals within Unilever Ghana's operations should also be applied because the company faces periodic limited resources or even limited supplier relationships.

b. The Cultural/Quality Quotient at Unilever Ghana

For many national competitors the move into international markets has become not one so much of choice as of necessity. In order to remain competitive and preserve revenue streams in the face of stiff international competition in home markets, national markets such as Ghana have turned to opening up their own national markets to foreign competitors in order to remain solvent. In so doing, the enterprise becomes exposed to a whole slew of

cultural and communication issues that global MNEs have been developing competencies to address for many years. These competencies are centred around inter-cultural communication, the organization's impact on the local economy of the new market, and the organization's position within the local community (Sheer & Chin, 2003).

When a Ghanaian enterprise decides to enter a partnership with a foreign competitor as Unilever Ghana did in order to form the company, a host of issues must be decided on in advance and a market entry strategy identified and adhered to that includes how the organization will be incorporated into the local market. These issues include choice of management as either being host-country national or foreign national, establish a joint venture or be wholly foreign owned, and significant cultural training and exposure to the host country culture (Nikolarea, 2003). These types of international market specific issues can all be addressed through developing unique competencies to address them before they become a significant negative issue and the organization is accused of predatorily attacking its host market rather than significantly contributing to the local economy. This was the strategy that Unilever Ghana's parent corporation, Unilever, decided to adopt upon entering the Ghanaian market since it only holds a 66.6% stake in the overall enterprise.

When entering a foreign market being slow to recognize emerging problems leads one to think that management is lethargic, incompetent, or culturally insensitive and that controls have not been established to provide prompt feedback at strategic control points. Unilever recognized these were important issues, which is why Unilever Ghana is largely a self-managed Ghanaian enterprise. Often this state of affairs is directly related to the development of core competencies within leadership's body of experience and knowledge. Core competencies are characterized by Drejer as being a compendium of understanding of strategic responsibilities, execution and management of those responsibilities and the ability to assess a plethora of data sets related to entering a foreign market: "...defined

competencies as a system of human beings, using (hard) technology in an organized way and under the influence of a culture to create an output that yields a competitive advantage for the firm..." (2002, p.104). While different core competencies arise in different industries there are core competencies that should be exhibited within every firm with respect to universal business and management practices on an international basis; one of these being the ability to establish controls over business processes that result in useful and actionable feedback.

These competencies, developed for the organization but instituted and executed by individual managers are vital to the development of an agile and responsive business that has entered a quickly internationalizing market such as Ghana and finds it vital to be able to communicate its brand effectively to the local culture. The consequence to not developing these competencies is having an organization that: 1) cannot adequately respond to market forces and events, and 2) cannot anticipate these market forces and events in order to establish a market leading position in local foreign market (Jameson, 2001). Organizational research hypothesizes that strategic trends in the development of control processes in internationalizing organizations generally follow one of two paradigms: 1) a synoptic paradigm that develops broad procedural themes upon which strategy is developed in highly analytic patterns and 2) an incremental type paradigm whereby strategy is developed based on the political realities and cultural norms of the organization and its surrounding community (Fiegener, 1997). These two paradigms are quite effective at maintaining the forward momentum of an organization and certainly in delivering relatively stable performance figures.

Yet, they must be more dynamically responsive and made even more suitable to a global economy and local markets therein that increasingly are exposed to product life cycles reduced to months rather than years and decision horizons brought down to quarters

rather than annual dimensions. It is within these strategic paradigms that most organizations functionally manage their strategic control points as mediated through various core competencies in a manner either general or specific to the enterprise. These strategic paradigms need a stronger cultural component to ensure that the organization's strategic decisions do not adversely affect the local economy of a given market. Failure to account for this particular dimension may mean greater revenues for the enterprise in the short-term but, conversely, might signal a massive business failure in the mid to long-term. Other researchers tend to categorize international strategy and the management of international market strategies as levels of engagement: Strategy content can be conceptualized at two levels. First, it can be seen as a general approach that describes the organization's position and how it interacts with its environment...this level of strategy is relatively enduring and unlikely to change substantially in the short term...The second level of strategy involves the specific steps that an organization takes to operationalize its stance. We refer to these as "strategic actions," which are more likely to change in the short term... (Boyne & Walker, 2004, para.4)

By layering the conceptual understanding of strategy and creating strata of strategic action, organizations can better affect the implementation and execution of their global strategic plans in the context of local cultures and communities.

One problem with this approach however, is that many employees and some levels of management are not brought up to speed or made aware of the overall strategic vision of the organization as it relates to new markets. This creates divisions among the various departments who are essentially granted different levels of access to knowledge, resources and feedback from leadership on down to direct superiors and as Unilever Ghana implements its quality management program it must ensure that these developments do not occur. Access to cultural data, local economic data, and communication concerns is

extremely important for all departments whether directly involved in the foreign initiative or not because the entire organization is committed to its products and services (Demars, 2004). This disjunctive environment is not conducive to market agility or in developing responses to competitive pressures, which Unilever Ghana is increasingly subject to in the global economy.

Some methods for introducing a cohesive strategic approach to the international or global market and to manage organizational responsiveness to cultural and communicative issues in them have been proposed by McLagan who has outlined some steps to ensure complete unity of strategic global management: 1) be sure any change due to strategy or strategic effort adds value, 2) define the challenge or issue and develop a process to match it without merely adapting a pre-existing response to completely new issue; i.e. new host culture or market, 3) build adequate support mechanisms into management to ensure executive leadership supports management and that management supports the employees charged with executing strategic directives in the host country context, 4) implement proper awareness training and education measures to ensure staff and systems are prepared to accept the changes brought on by strategic initiatives in the local community and 5) all employees must align with the organization strategy or risk failure at the task level and the overall unresponsiveness or lethargy of the organization (2002). These are the kinds of underlying strategic structures that must be in place in order to allow the organization or corporation to respond thoroughly, and even more importantly, accurately, to international market exigencies.

This graduated approach to strategic international market management ensures the organization at every level is capable of integrating a pervasive system of checks and balances that spot moments of unresponsiveness in other areas. Feigener frames such departmentally endemic structures in this way: "...most strategic controls are embedded

within other management activities that perform different organizational functions...The systems that scan internal and external environments...are other examples of strategic control..."(1997, para.6). Strategic responsiveness must be pervasive and not confined only to a single department that is uniquely charged with strategy. Such a structure implies a compartmentalization that would limit thematic movement necessary for short term strategic responses to market developments; especially within the context of an emerging market.

Some researchers have envisioned organizations structured around entrepreneurial structures in order to build agility and improved quality management processes into the organization no matter the size or its new markets. These types of entrepreneurial organizations are characterized as: "...organically structured venture teams are an effective way to institutionalize entrepreneurial activities...and... and an entrepreneurial strategic posture is associated with higher levels of performance..." (Russell, 1999, para.5). Russell believes that by building entrepreneurial systems into the strategic management of the organization, a more effective response mechanism as well as a more dynamic vision can be engendered into the organization which must now incorporate culture management, quality management, as well as communication management imperatives. Entrepreneurial systems are often market leaders in terms of innovation, service and product design. While most firms have relied on Porter's generic strategies to carry them through strategic planning: "Porter...proposed three generic strategies that can yield competitive advantage, namely cost leadership, product differentiation, and focus...the firm must make a choice...rather than end up being "stuck in the middle"(Allen & Helms, 2002, para.6), many are beginning to realize that in order to stay competitive in an increasingly flattened competitive market, international or not, these monolithic strategies are no longer sufficient by themselves.

Organizations are discovering that strategic vision, direction and control processes to ensure they are being carried out, require different mechanisms in contemporary business enterprises that have moved into foreign markets such as Unilever did by establishing Unilever Ghana:

Businesses in the 21st century face a wide array of complex opportunities including...expanding into global markets, developing internal and external innovative products and practices to remain competitive, and attracting and retaining the most talented workforce possible. (Ulijn, O'Hair, Weggeman, Ledlow & Hall, 2000, para.3)

It is this character of the global economy that has brought about a greater need for, and attention to, strategic control points, because the operations of even small organizations are now often far flung across the globe separated by time and space. These business units, by virtue of their distance and time-based separation from parent organizations must be able to act in unison with the parent organization while accounting for local market needs.

It is this ability to integrate far flung operations into seamless strategic plans that has made MNEs the model organization of today's emerging market enterprises such as Unilever Ghana, whether national or international in focus. How an MNE does business is important because in dealing with such strategic issues as currency controls, international law, cultural and inter-cultural concerns and a host of other concerns, they have developed cutting edge strategy and quality practices that effectively handle seemingly contradictory needs: "...the global organization of MNEs are frequently presented as oppositions. ...global vs. local, centralize vs. decentralize, standardization vs. adaptation and efficiency vs. responsiveness" (Buckley & Ghauri, 2004, para.22). Often there are no pre-existing solutions to how to rectify some of these contrasting issues and MNE management has had to develop processes to incorporate these needs into the overarching strategy while

accounting for various local market needs. Many of the MNE's solutions to these issues have been integrated into a concept known as knowledge transfer:

MNCs are...seen...as instruments whereby knowledge is transferred across subsidiaries, contributing to knowledge development...MNCs can develop knowledge in one location but exploit it in other locations...the competitive advantage that MNCs enjoy is contingent upon their ability to facilitate and manage intersubsidiary transfer of knowledge...(Minbaeva, Pederson, Bjorkman, Fey & Park, 20033, para.4)

Strategic and quality management in MNEs is as much about transferring intelligence and knowledge from one location to another in a timely fashion as it is about building a coherent strategic plan to guide decision making.

The feedback from regional offices is vital as a control mechanism to ensure that all departments, no matter their location, make decisions, whether locally based or not, within the same structural framework as all other departments in all other regions. Rugman and Verbeke argue that ensuring a system of centralized intelligence is not the same as a centralized management structure which can be a negative construct in today's economy(2003, paras.8-10). Instead, they argue for an integrated system of intelligence but allowing for decentralized units to be able to take advantage of local market fluctuations in supplies, services and demand to maximize revenues. In other words, the controls are built into the intelligence flows from one unit to another, not into the permission and approval processes unit to unit. Discovering and integrating the appropriate strategic controls into an organization's overseas operations is vital for the longevity and viability of an enterprise. Essentially, without the adequate controls: operational, financial and material, there is no accountability in an organization and thus a distinct inability to move strategically. Organizations can learn much from MNEs and bench mark off their internal processes to

create a set of strategic compasses from which to guide the direction of the organization as it moves for the first time into new overseas markets.

2.4 Chapter Conclusion

One of the most effective quality trends that an enterprise can adopt in terms of resource commitment and process control is to implement a value chain analysis and to align the operations of the company along the results of this analysis. The value chain can be described as, "...the sequence of major business activities that add utility (usefulness) to the products or services provided by an organization to its customers" (Hwang, 1999, p.95). With that in mind any organization can be subdivided into the components that add value to each process comprising the production and delivery of its product or service. The reasons for examining an organization in this respect are many, but put succinctly, being aware of one's value chain and its components, "...will yield the greatest competitive advantage..." (Value, 1996, para.2). Establishing competitive advantage in the local market, much less in the global marketplace has taken on proportions of mythic importance given that today's competitors may arise from any region and in many forms.

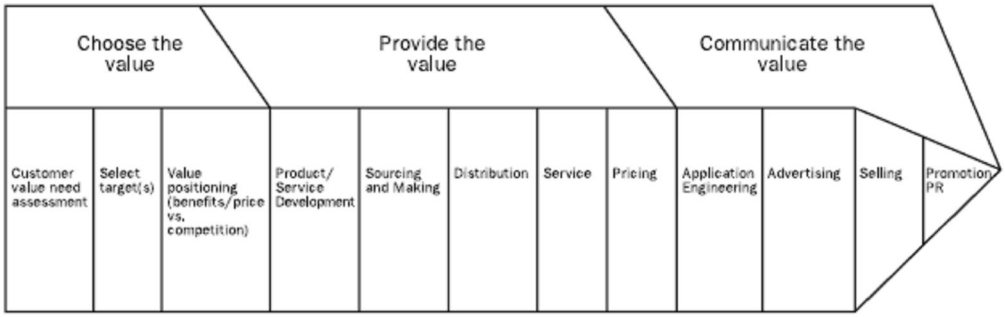
Thus, for any organization, dissecting its value chain is not an exercise in futility, but rather, an exercise of necessity. The progressive organization must more fully understand its components in terms of how they contribute value to the overall product: intelligence. Even further, value chain analysis is to business management what Gestalt Theory is to

psychology, and in this respect, by dissecting the interoperability of its departments in terms of value-added benefits, a given organization can, in the end, determine that some parts of the whole are not as useful or necessary as previously thought. One of the primary benefits of value chain analysis is it highlights a company's core competencies, or those areas that are deemed the company's primary strengths.

By delineating such core competencies from the body of activities normally found in an organization, the more routine and, often, mundane tasks can be conceptually segmented out of all the processes. These mundane, routine and process oriented tasks are referred to as back office functions and are prime candidates for removal or separation from the system:

When analyzed from an activity-based-costing perspective, back office functions clearly present an extremely logical and persuasive footprint for quality management strategy. As an enterprise business strategy, quality management strategy now presents...a legitimate mainstream choice that will affect how companies are build and perform well into the future. (Anschutz, 2005, p.83)

Identifying particular segments of a business enterprise process that can be reengineered or removed, either through efficiency measures or quality management strategy, is one of the main reasons to implement value chain analysis. Within organizations and enterprises, a value chain analysis reveals several functional areas that are candidates for removal through reengineering and several that are candidates for quality management strategy. The structure of a value chain indicates that the various links in the analytical chain are not necessarily the same divisions one would find in an organizational chart. A general value chain chart is included below:



(Walters & Lancaster, 1999, p.645)

This particular value chain represents a marketing enterprise value chain and is very appropriate for determining the initial value chain models of basic organizational structures.

This and other models are excellent at identifying the value, which for service companies and for marketing firms the value is often an intangible service or creative piece. Next, the specific functional and procedural areas within the company providing that value, individually or as a group, are identified. Finally, how customers, client or consumers are made aware of this value is illustrated. Linking each value with its production channel and its subsequent delivery channel allows an organization's management team to assemble a very succinct and focused strategy in regards to the company's product or service and its ultimate delivery to the marketplace.

Many times, value chains demonstrate that teams, departments or functional areas of a company have somehow become involved with one of the company's chief values when, in the final analysis, they shouldn't have anything to do with it at all. In other words, they do nothing to contribute to the value proposition, which is, "...a statement of how value is delivered to customers" (Walters & Lancaster, 1999, p.644). If, as Winter and McIntosh propose, core competencies are rare skills and capabilities leading to superior competitive

advantage for the holder of the competencies (2003, p.451), then the rare skills and capabilities that most enterprises possess can be considered to be in a mixture of their functional departments. All other links in their value chain can be considered expendable in the sense that if deemed appropriate, these links could be outsourced to 3rd party contractors at a substantial cost savings.

Though core competencies may also be outsourced, these areas are usually considered business critical and are the company's primary line of business and reason for being, so to speak. A company, by quality management strategy such business critical competencies, risks losing one of the main points behind implementing a value chain analysis: its competitive advantage and Unilever Ghana should focus solely on those activities and processes that given it competitive advantage through improved quality performance. Considering the direction that many industries have taken over the past decade or so of not only quality management strategy but of quality management strategy to international locations and markets in the way Unilever Ghana's parent corporation, Unilever, did, they have effectively joined the global community, and by extension, the global value chain. Globally oriented value chains provide competitive advantages to firms that might not otherwise be able to develop them: "...global production networks are becoming increasingly complex and arms-length trade is increasingly being confined to commodities...Access to high-income yielding activities...requires participating in global value chains..."(Kaplinsky, 2004, p.107). Essentially, because of business models that have shifted primarily to IT related competencies organizations need to extend their value chains conceptually rather than by any physical relocation or effort. Though the services they may seek to outsource would indeed be located in an offsite location, the operational framework would actually change very little for a given company.

Some researchers have begun to combine the benefits and advantages of activity based costing (ABC) to value chain analysis and the combination thereof has become a formidable tool in managerial strategy. The basic concept of ABC is that it makes profit, pricing and process cost much more accurate (Tinkler & Dube, 2002, p.14), which, when increased accuracy in these key financial ratios are assigned to value links in a chain, create a much more accurate picture of the company as a whole—as the gestalt concept does in psychology. The pharmaceutical industry is infamous at applying such ABC principles in determining its value chain because of the nature of its industry, which is extremely price-driven:...seven price-sensitive value-added factors for each pill. In effect...constructed a "pill gram" for each medication. The pill gram was an instant snapshot of each medication's cost history. The intent was to discover...just how much revenue the client manufacturer had earned. (Brookstone, 2002, p.6)

By utilizing ABC as an integral part of constructing its value chain, the pharmaceutical companies come to market much better prepared in terms of market strategy than competitors who haven't incorporated these principles, or than agencies that are supposed to be regulating this industry. This is a quality and competitive strategy that Unilever Ghana could implement. Pharmaceuticals are aware of exactly how much each pill or dosage costs in relation to its price structure and have built in a market cushion to compensate for market fluctuations due to regulatory activity and generic manufacturer competition. For the average enterprise, such ABC techniques are beneficial because of the intangible nature of many of many products and services which may be nothing more than a PDF file or a simple Access database for example.

The competitive edge such comprehensive analysis gives of how one's company conceptually fits within a marketplace is invaluable in today's business climate where markets change rapidly. Unilever Ghana could gain such a strong control over its spending

across all its departments that it could then reallocate those savings to profit centres that would result in increased revenues for the company. Furthermore, gains in quality are a form of self-fulfilling prophecy relative to revenue gains as well because as quality gains become apparent to the consumer, this reputation is quickly relayed to new consumers. One other overlooked application of building out a value chain for organizations is that such value chains, many times, will open up or make available, new and alternate value chains that can either be positioned independently in the company or simply linked up with a pre-existing one: "...a new value chain can be associated with an existing chain, thereby creating a new... opportunity" (A, 2003, p.10). For most enterprises this is apparent in attempts to reposition support functions in remote locations while concentrating more resources on core competencies.

By repositioning these support functions and perhaps some sales and marketing functions, an organization opens up other avenues within which to market its products and services. Unilever Ghana could potentially be able to reinvest cost savings through a variety of these strategies discussed here into its research and development (R&D) efforts towards new products. By placing some of its value links in what are effectively different markets such organizations not only have the opportunity to sell and market themselves in new regions, but have the tacit obligation of the quality management strategy party to assist in this endeavour. The Indian market is a strong example of this phenomenon. Since many service functions from various sectors of the North American market are outsourced to India because of the lack of a language barrier and that market's highly regarded IT infrastructure, these Indian companies can actually be integrated into these organizations' value chains. This is an ever-evolving cycle and an ever-expanding value chain that, if taken advantage of, can extend the strategic presence of a given organization far beyond what its original founders might have envisioned.

Some researchers have proposed that the traditional manner of building a value chain model is begun from the strategically wrong end; that is, with a company's core competencies. The argument is that starting with one's own internal core competencies tends to reveal the obvious and substantiate the known. These researchers state that a truly effective value chain is begun from the final link—the customers or consumers:

The ability to concentrate on customers and understand their changing needs is the first step in focusing the organization on a winning vision. The required steps of aligning skill and talent and then continuously inspiring the organization to serve...customers' evolving needs are quite a challenge. (Webb & Gile, 2001, p.15)

These authors refer to this customer first concept in the value chain as reversing the value chain because it forces the company to essentially change the direction of its strategic planning from in-to-out to out-to-in. Unilever Ghana can employ this strategy by surveying its customers for constructive feedback regarding its products and services prior to implementing any sort of quality management program.

While many people might consider this fundamental change purely semantic in nature, it effectively serves to refocus the strategic goals and objectives of the organization on what should always be the first consideration: its customers. During the analysis process of establishing an organizational value chain, the responsible parties must realize the value chain cannot be accurately constructed without additional input from the customers who are constantly changing their own needs and standards. This realization can have a profound effect on an organization in assigning statistical and financial weight to some of the links of its value chain. One final conclusion related to establishing a value chain is that while a value is assigned to each link in the chain, strategically, the value chain itself proves to be invaluable as a device for illustrating continuous improvement or Kaizen which leads to

ever expanding improvements in efficiencies. All of these efforts have some potential application with the Ghanaian market and certainly for Unilever Ghana specifically.

Chapter III: Data Collection and Presentation

3.1 Introduction

Quality management has become a ubiquitous practice in modern industry and many industry competitors rely on it to create competitive separation. In addition, it is becoming increasingly common in both the public and private service sectors. Research has shown the value of quality management extends beyond simple financial benefits in terms of increased margins and fewer returns but also creates long-term revenue increases and brand equity (Anderson et al, 1998). This research is focused on ascertaining quality management's existence and relevance in practice within the setting of a modern multinational enterprise and specifically within the confines of Unilever Ghana. Furthermore, this research project investigates many initiatives on quality management systems implementation failures (Sitkin et al, 1994). Often, quality management is merely seen as a number of techniques or methods rather than a unique managerial philosophy and school of thought.

However, there are more profound aspects which need to be taken into account if quality management is to be employed successfully across all industries. Flynn and others (1994) argue that the fundamentals of quality management are based both on western managerial thought and on ancient eastern philosophies such as the Golden Mean and others. This study employs the case study methodology employing qualitative tools in the data collection and analysis. Because of the explorative nature of this research, a case study approach is a suitable methodology (Ahire, 1996). The qualitative approach affords the researcher the opportunity to make deductive assumptions that, while subjective, are clearly based on the facts produced during the research phase of the project. Thus, the conclusions

and recommendations that arise from this research project or both grounded in the literature as well as practice and this is an important distinction for business related research.

a. Setting

Unilever Ghana is the largest manufacturing and marketing company in Ghana and is a public Company listed on the Ghana Stock Exchange (GSE). Unilever Plc owns 66.6% of the shares in Unilever Ghana Limited Overseas Holding Limited and CWA Holding Limited. The remaining 33.4% shares belong to portfolio investors and some average Ghanaian citizens. The Company came into being on July 14, 1992, when 2 significant and complimentary Ghana Subsidiaries of Unilever Plc, UAC of Ghana and Lever Brothers Ghana Limited merged to form Unilever Ghana Limited. The newly formed subsidiary of Unilever Plc forms a substantial strategic pillar of Unilever's global expansion and regional market development. Currently, Unilever Ghana is made up of Lever Brothers with Swanzy Real Estate Limited as wholly owned subsidiary. The Company has majority shares in BOPP and 40% shares in TOPP. Unilever Ghana is an efficient firm with market power in Ghana as well as the surrounding region. The company is a multi-product consumer product goods (CPG) manufacturer.

It markets a wide variety of products and operates a variety of services throughout the region. These are segmented into 6 broad CPG categories:

(i) Home Care Products, e.g. Key Soap;

(ii) Personal Care Products, e.g. Pepsodent;

(iii) Food Products, e.g. Frytol;

(iv) Real Estate Development;

(v) Plantation Firms

(vi) Diversey Lever, which functions as a small business unit (SBU) offering house keeping services as well as kitchen care to large hotels, factories, guest houses, and the like, in Ghana.

From the above, it can be said that Unilever Ghana operates as an oligopolistic firm, since it is one of the few firms in that market with differentiated products across a variety of product categories. It enjoys economies of scale and scope in its operations and has become a target for competitive benchmarking on the part of both local and regional competitors.

Broadly speaking, the purpose of the study is to accomplish the following research objectives:

(i) evaluate Unilever Ghana's quality systems, policies, procedures and activities;

(ii) discovering whether the company has a policy document on quality performance

systems, and if they do, whether it meets international standards;

(iii) this study should then discover whether the policy is being implemented according to plan;

(iv) to determine whether the implementation is yielding the expected or desired results.

Thus, for Unilever Ghana it must be understood that total quality, or also variously referred to as total quality management (TQM) is a philosophical shift in management perspective that refocuses strategic impetus on the internal attributes of an organization (Beckford, 2002). Total is meant to imply that the entire organization has a commitment to improvement, while quality implies that a conformance to stipulated standards, usually customer driven is the intent, and management infers that this is a process and not a project that is an essential function of management (Beckford, 2002). Some components of a TQM

program are universally applicable in all organizations: 1) process mapping, develop quality metrics, and establish training methodologies (Kuratko, Goodale & Hornsby, 2001). These components can be integrated into any organization regardless of its orientation; profit or non-profit, product or service.

The most important aspect, as seen in the systems theory approach, is that the TQM program must be applied to the entire organization simultaneously or havoc will ensue. One other very important aspect to TQM and a component that is vital to its success is that top executive management must lead the change and implementation of the program or the organization will not achieve “buy-in” and thereby experience failure (Beckford, 2002). Therefore, one of the observations that had to be made during this research project was to determine if Unilever Ghana was mistakenly applying its quality management program only to various divisions or sections rather than integrating total quality management throughout the entire organization.

3.2 Methods of Data Collection

Data has been collected from both primary and secondary sources. Data from primary sources was collected using interviews supported by questionnaires from key informants and experts within and outside the company. The primary data collected is employed to both support the observations gained from the existing literature as they apply to Unilever Ghana as well as to produce and support strategic recommendations that culminate at the conclusion of this research project. Information from secondary sources has emanated from published and unpublished books, scholarly journals, the stock exchange, key informants in the industry, the internet search engines (e.g. emeraldinsight.com). The firm's financial reports, organogram, corporate plans and other magazines are also used as part of the secondary sources within the context of this research project.

However, as mentioned in the limitations section, the availability of financial reports as well as the willingness of the company to release certain data relative to firm performance also presents some issues as much of this data that is not publicly available is considered competitively sensitive and is not released by the company. Data collection was

accomplished through distribution of questionnaires and conducting of interviews of selected respondents and respondents were comprised of the following groups;

- Past and Present CEO's
- Directors
- Brand Managers
- Quality Managers
- Department Heads (Internal Auditors, etc.)

Also, data was collected through quality implementation documents and other research documentation that might go a long way to inform the study in relation to its hypothesis and research objectives. Personal observations of activities has also been useful since the researcher was able to make consistent observations over time regarding company activities as well as extensive reviews of the company's internal and external performance metrics.

In the data collection phase of an evaluation, evaluators compile information needed to answer the evaluation study questions that have been identified in the earlier design phase. In the design effort, evaluators reviewed the evaluation questions, nothing what data would need to be collected from whom in order to answer the questions. Next, evaluators decided what approaches or techniques would best provide them with those data.

Many correctly think of evaluation as an investigative process and data collection as "gathering credible evidence" to indicate how the program is performing or has performed. The evaluator, with involvement from the client and stakeholders, selects those approaches and techniques that are feasible within the time and budget constraints of the project to answer the evaluation study questions (Kellogg, W. K., 1998 pp .48). The intent is to collect information that stakeholders perceive as trustworthy and relevant. Evaluators consider respondent burden,

collecting only the type and quantity of data needed to answer the study questions. Evaluators strive to collect data in a systematic, comparable, uniform, precise, clear, and unbiased way so that data are correct, complete, valid, and unbiased.

There are many ways to collect data, such as: surveys, document analysis, observation, interviews, focus groups, etc. Evaluators must choose the best approach or combination of approaches that best answer the evaluation questions. **Quantitative** (data in the form of numbers) and **qualitative** (data in the form of words) data both have their advantages and disadvantages. A good option is to consider using both, as they can complement each other. Usually, evaluators collect qualitative data to add depth and a fuller understanding of the complexities of a program to the quantitative information that straightforwardly defines the program. Therefore, careful consideration will be given to data collection during the evaluation design phase.

(g) Approaches to collect data

(i) **Document** is very handy in program evaluation. Existing (archival) records often provide insights that cannot be observed or noted in another way, if the documents are accessible and accurate. Examining records requires that the data collector have a very clear idea of what information is needed, because there will likely be plenty of other interesting information to distract the unorganized reviewer.

(ii) **Surveys** used data collection instruments, like questionnaires, to collect data from a sample of the relevant population, or from the entire population (a census). Surveys are used extensively in evaluation – perhaps overused – because of their flexibility to gather data on almost any issue. When done correctly, surveys are an efficient and accurate means of collecting data, but they can be difficult to construct, and may yield low participation (response rate). A low response rate hinders the reliability and validity of the information. The evaluator does not know if the non-respondents would have

answered differently, so including a non-respondent analysis is often important to see who actually responded or not.

(iii) **Observations** can be useful in determining how the program is implemented and provides opportunities for identifying unanticipated outcomes. Observations can answer questions on whether or not the program is being delivered and operated as planned. By directly observing operations and activities, the evaluator can enter into and understand the situation and context. However, observation (obtrusive and unobtrusive) can be expensive and time consuming. Depending on the situation, the observer may need to be a content expert to accurately interpret the observations.

(iv) **Interviews** are essentially conversations between the evaluators and their respondents. An interview is selected when interpersonal contact is important, when opportunities for follow-up of interesting comments are desired, when the topic is complex and requires explanation and interaction, or when cultural, educational, or language barriers are present. The use of interviews as a data collection method assumes that the participants' perspectives are meaningful and knowable. The quality of information obtained is largely dependent on the interviewer's skills and personality (Patton, M. Q 1990).

(v) **Groups** (such as focus groups) combine elements of both observation and interviewing. A focus group is an interview with a gathering of 8 to 12 people, but uses group interaction to generate data and insights that would be unlikely to emerge in individual interviews. The technique includes observation of group dynamics, and insights into the respondents' behaviours and attitudes. Originally used as a market research tool to learn the appeal of various products, the focus group method has been adopted by other fields as a way to gather data on a given topic.

(h) Resource Management

"Collect only the information you are going to use, and use all the information you collect." The possibilities for gathering evidence for an evaluation are endless, but unfortunately, resources are not. Without a coherent plan to answer study questions, people often tend to collect too much data. By collecting everything from everybody, they hope they will find something they can use. This wastes resources and is cumbersome to manage. By focusing the data collection, the evaluator can balance the breadth and depth of the information obtained and achieve results that are practical and within the budget constraints of the project. Since all types of data have limitations, evaluators will often select multiple methods to obtain information that conveys a well-rounded picture of the program. Multiple approaches and techniques that "triangulate" data from several sources in several ways can improve overall accuracy and are often seen by the evaluation's clients as more credible than data from one source (Kellogg. W. K. 1998, pp 69).

(i) Experimental Treatments

Experimental designs are the basis of statistical significance. An example of the fundamentals of an experimental design is as follows.

A researcher is interested in the effect of an outdoor recreation program (an independent variable, experimental treatment, or intervention variable) on behaviours (dependent or outcome variables) of youth-at-risk.

In this example, the independent variable is expected to effect a change in the dependent variable. Even with a well designed study, the question remains, how can the researcher be confident that the changes in behaviour, if any, were caused by the outdoor recreation program, and not some other, intervening or extraneous variable? An experimental design does not eliminate intervening or extraneous variables; but, it attempts to account for their effects.

(j) Experimental Control

Experimental control is associated with four primary factors (Huck, Cormier, and Bounds, 1974).

1. The random assignment of individual subjects to comparison groups;
2. The extent to which the independent variable can be manipulated by the researcher;
3. The time when the observations or measurements of the dependent variable occur; and
4. Which groups are measured and how.

Treatment Group:

The portion of a sample or population that is exposed to a manipulation of the independent variable is known as the treatment group. For example, youth who enrol and participate in recreation programs are the treatment group, and the group to which no recreation services are provided constitutes the control group.

Validity Issues

There are two primary criteria for evaluating the validity of an experimental design.

* **Internal Validity**

  Determines whether the independent variable made a difference in the study. Can cause-and-effect relationship be observed? To achieve internal validity, the researcher must design and conduct the study so that only the independent variable can be the cause of the results (Cozby, 1993).

* **External Validity**

  Refers to the extent to which findings can be generalized or be considered representative of the population.

Confounding Errors

Errors are conditions that may confuse the effect of the independent variable with that of some other variables.

1. Premeasurement and interaction errors;
2. Maturation errors;
3. History errors;
4. Instrumentation errors;
5. Selection bias errors;
6. Mortality errors.

(k) Experimental Designs

These include the following;

1. True Designs
2. Quasi Designs
3. Ex post facto Designs

True Design – Five basic steps to Experimental Research Design

1. Survey the literature for current research related to the study.
2. Define the problem, formulate a hypothesis, define basic terms and variables, and operationalize variables.
3. Develop a research plan:

(a) Identify confounding / mediating variables that may contaminate the experiment, and develop methods to control or minimize them.
(b) Select a research design.
(c) Randomly select subjects and randomly assign them to groups.
(d) Validate all instruments used.
(e) Develop data collection procedures, conduct a pilot study, and refine the instrument.

(f) State the will and alternative hypothesis and set the statistical significance level of the study.

4. Conduct the research experiment(s).
5. Analyse all data, conduct appropriate statistical tests and report results.

Quasi Design

The primary difference between true designs and quasi designs is that quasi designs do not use random assignment into treatment or control groups since this design is used in existing naturally occurring settings.

Groups are given protests, then one group is given a treatment and then both groups are given a post-test. This creates a continuous question of internal and external validity, since the subjects are self-selected. The steps used in a quasi design are the same as true designs.

Ex Post Facto Designs

An ex post facto design will determine which variables discriminate between subject groups.

Steps in an Ex Post Facto Design

1. Formulate the research problem including identification of factors that may influence dependent variable(s).
2. Identify alternate hypothesis that may explain the relationships.
3. Identify and select subject groups.
4. Collect and analyse data.

Ex post facto studies cannot prove causation, but may provide insight into understanding of phenomenon.

(L) Other field Methods/Group Techniques

(i) (Nominal Group Techniques (NGT)

The NGT is a group discussion structuring technique. It is useful for providing a focused effort on topics. The NGT provides a method to identify issues of concern to special interest groups or the public at large. Ewert (1990) noted that the NGT is a collective decision-making technique for us in park and recreation planning and management. The NGT is used to obtain insight into group issues, behaviours and future research needs.

Mitra and Lankford, 1999 provided five steps of the NGT as follows:

1. Members of the group identify their individual ideas in writing, without any group discussion;
2 Each member lists his/her own ideas and then rank-orders them, again without any group discussion;
3. A factilator gives each participant an opportunity to state his/her ideas (one item per person at a time, in round-robin fashion) until all ideas are exhausted;
4. As a group, participants discuss and consolidate ideas into a list; and
5. Finally, members vote to select priority ideas. The final list of ideas becomes the focus of further research and discussion. These ideas can also be used to generated a work plan for a formal strategic planning process, a basis for a survey or interview, or the development of a scale

(ii) Delphi Method

The delphi method was developed to structure discussions and summarized options from selected groups to:

* avoid meetings,

* collect information/expertise from individuals spread out over a large geographic area, and
* save time through the elimination of direct contact

Although the data may prove to be valuable, the collection process is very time consuming. When time is available and respondents are willing to be queried over a period of time, the technique can be very powerful in identifying trends and predicting future events.

The technique requires a series of questionnaires and feedback reports to a group of individuals. Each series is analyzed and the instrument/statements are revised to reflect the responses of the group. A new questionnaire is prepared that includes the new material, and the process is repeated until a consensus is reached.

(iii) Focus Groups

Richard Krueger (1988), describe the focus group as a special type of group in terms of purpose, size, composition, and procedures. A focus group is typically composed of seven to twelve participants who are unfamiliar with each other and conducted by a trained interviewer. These participants are selected because they have certain characteristics in common that relate to the topic of the focus group.

The researcher creates a permissive environment in the focus group that matures different perceptions and points of view, without pressuring participants to vote, plan, or reach consensus. The group discussion is conducted several times with similar types of participants to identify trends and patterns in perceptions. Careful and systematic analysis of the discussions provides clues and insights as to how a product, service, or opportunity is perceived.

A focus group can be defined as a carefully planned discussion designed to obtain perceptions on a defined area of interest in a permissive, non threatening environment. It is conducted with approximately seven to twelve people by a skilled interviewer. The discussion is relaxed, comfortable, and often enjoyable for participants as they share their ideas and perceptions. Group members influence each other by responding to ideas and comments in the discussion.

Characteristics of focus groups

Focus group interviews typically have five characteristics:

1. Identify the target market (people who possess certain characteristics);
2. Provide a short introduction and background on the issue to be discussed;
3. Have focus group members write their responses to the issue(s);
4. Facilitate group discussion;
5. Provide a summary of the focus group issues at the end of the meeting.

Other types of group processes used in human services (delphic, nominal, planning, therapeutic, sensitivity, or advisory) may have one or more of these features, but not in the same combination as those of focus group interviews.

(iv) Contents analysis

Content analysis systematically describes the form or content of written and/or spoken material. It is used to quantitatively studying mass media. The technique uses secondary data and is considered unobtrusive research.

The first step is to select the media to be studied and the research topic. Then develop a classification system to record the information. The techniques can use trained judges or a computer program can be used to sort the data to increase the reliability of the process.

Content analysis is a tedious process due to the requirement that each data source be analyzed along a number of dimensions. It may also be inductive (identified themes and patterns) or deductive (quantifies frequencies of data). The results are descriptive, but will also indicate trends or issues of interest.

(v) Meta –Analysis

Meta-analysis combines the results of studies being reviewed. It utilizes statistical techniques to estimate the strength of a given set of findings across many different studies. This allows the creation of a context from which future research can emerge and determine the reliability of a finding by examining results from many different studies. Researchers analyze the methods used in previous studies, and collectively quantify the findings of the studies. Meta-analysis finding's form a basis for establishing new theories, models and concepts.

Thomas and Nelson (1990) detail the steps to meta-analysis.

1. Identification of the research problem.
2. Conduct of a literature review of identified studies to determine inclusion or exclusion.
3. A careful reading and evaluation to identify and code important study characteristics.
4. Calculation of effect size. Effect size is the mean of the experimental group minus the mean of the control group, divided by the standard deviation of the control group. The notion is to calculate the effect size across a number of studies to determine the relevance of the rest, treatment, or method.
5. Reporting of the findings and conclusions.

(vi) Historical Research

Historical research is referred to as analytical research. Common methodological characteristics include a research topic that addresses past events, review of primary and secondary data, techniques of criticism for historical searches and evaluation of the information, and synthesis and explanation of findings. Historical studies attempt to provide information and understanding of past historical, legal, and policy events.

Five basic procedures common to the conduct of historical research were identified by McMillan and Schumacher (1984). They provide a systematic approach to the process of historical research.

1. Define the problem, asking pertinent questions such as: Is the historical method appropriate? Are pertinent data available?
2. Develop the research hypothesis (if necessary) and research objectives to provide a framework for the conduct of the research. Research questions focus on events (who, what, when, where), how an event occurred (descriptive), and why the event happened (interpretive). This contrasts with quantitative studies, in which the researcher is testing hypothesis and trying to determine the significance between scores for experimental and control groups or the relationships between variable X and variable Y.
3. Collect the data, which consists of taking copious notes and organizing the data. The researcher should cod topics and subtopics in order to arrange and file the data. The kinds of data analysis employed in historical research include (based on McMillan and Schumacher, 1984):
    (a) Analysis of concepts. Concepts are clarified by describing the essential and core concepts beginning from the early developmental stages. Clarification allows other researchers to explore the topic in other fashions.
    (b) Editing or compilation of documents, to preserve documents in chronological order to explain events.

(c) Descriptive narration tells the story from beginning to end in chronological order, utilizing limited generalizations and synthesized facts.

(d) Interpretative analysis relates one event to another event. The event is studied and described within a broader context to add meaning and credibility to the data.

(e) Comparative analysis examines similarities and differences in events during different time periods.

(f) Theoretical and philosophical analysis utilizes historical parallels, past trends, and sequences of events to suggest the past, present, and future of the topic being researched. Findings would be used to develop a theory or philosophy under studies.

4. Utilizing external and internal criticism, the research should evaluate the data. Sources of data include documents (letters, diaries, bills, receipts, newspapers, journals / magazines, films, pictures, recordings, personal and institutional records, and budgets), oral testimonies of participants in the events, and relics (textbooks, buildings, maps, equipment, furniture, and other objects).

5 Reporting of the findings which include a statement of the problem, review of source material, assumptions, research questions and methods used to obtain findings, the interpretations and conclusions, and a thorough bibliographic referencing system.

(vii) Multimethod Approach

The multimethod approach encourages collecting, analyzing and integrating data from several sources and the use of a variety of different types of research methods.

3.3 Descriptive Data

The collective database of the study consists of a series of research components that relate to collecting data, research design, and research analysis and collation. This collective database provided the empirical foundation for this research project and forms a critical component of project in determining its real-world applicability to industry both in and without Ghana. Initially, the database of the study is comprised of the observations and commonalities of quality systems as they are revealed in the review of the relevant literature. Some of the quality and quality management systems theory reviewed consisted on the Toyota Production System as well as its litany of internal concepts and devices such as JIT and lean systems.

The Toyota Production System (TPS) is much more than a statistical quality program. Rather, TPS is a philosophical approach to production of a product or service that dramatically shifts the organization's concept of its product or service from a simple activity based production line to an organic system of processes that are all inter-related (Kono, 2001). TPS is based on several manufacturing and production principles such as lean manufacturing which reduces the amount of time, effort, and inventory required to produce a given product or service. Central to this concept of lean manufacturing is just-in-time (JIT) which stipulates that supplies and components requisite for production of a product or service arrive to where they are required in the process just prior to their use (Lawson, 2002). The benefit to this is that inventory levels all along the production line and, indeed, the supply chain, are reduced to minimal levels making the resource commitment

needed to carry such inventory levels substantially less in terms of financial commitment and physical spaced dedication. Kaizen is another TPS concept that drives the mentality of management as well as line employs in the production process (Kono, 2001). Kaizen is a concept that stresses the importance of even minute improvements in a process that on the surface appear almost meaningless.

The importance to these minute improvements, as stressed by Kaizen, is that over the long-term these small improvements result in significant improvement and cost-savings. Another key component in TPS is the inventory and supply system known as Kanban (Kono, 2001). Kanban is an inventory and production system that is based on a pull methodology rather than the antiquated push methodology. In a Kanban production and inventory system parts or components are retrieved as they are demanded (pulled) rather than the traditional model where supply drives production in that products or services are produced as long as parts or components are forced down the production line (pushed). Six Sigma complements TPS in several strategic ways in that it emphasizes measurable results that are reproducible. Additionally, Six Sigma's focus on process improvement is directly relevant to TPS' emphasis on Kaizen as an ongoing process improvement effort that never ceases. Finally, Six Sigma institutes a highly refined goal to reduce variance in a production system to an extremely low incidence rate which directly equates with increases in quality.

TPS is centred on the concept of removal of variance within upper and lower control limits at every point in the production process.

a. Sampling

Sampling is the process of selecting a number of units from a population for a study in such a way that the units represent the larger group or greater population from which they were selected. The sample that was used consists of the staff of Unilever, both present and some past employees and representatives of the company. Additionally, this research project also employed some directors when necessary.

b. Population

The population that was studied is made up of senior managers and decision makers in Unilever Ghana as well as key stakeholders that have a direct relationship with quality management at the organization. It also covered some past managers and internal floor employees. This representative study population ensured that the empirical evidence taken from the field was founded on real-world applicability and insight making the conclusions within this research project all the more relevant.

c. Sample Frame

The sampling frame was determined after an in-depth analysis of Unilever in terms of existing research and this was accomplished within the literature review. This involved ascertaining the categories and departments which are related to the quality management within the enterprise as well as its managers and how they are integrated into the actual quality management system. Appropriate sample frames were then determined and then used for the study. The researcher stratified and randomly selected respondents for participation in the study. A high-level division manager, corporate quality staff manager, and the head of a particular section were contacted to request participation. The participants assessed the degree or extent of quality management practice in his or her business unit by

rating each instrument item using the five-point scale that has been employed by other related research (Saraph, 1989).

To empirically test the hypothesis that quality management systems is positively related to the success of organizations, a case study of a leading organization, which has been achieving rates of success that are considered exemplary, were selected for the research. The success factors were based on many criteria which were also discussed in the literature review section of this present research project. Essentially, Unilever Ghana's employee and managerial corps as well as some members of its executive leadership have provided the overall sample frame for this research project. Without the company's active support and participation in this research project, gathering the requisite data would have proven overly difficult if not logistically impossible.

d. Research Instruments

Three research instruments have been employed for the data collection. All the instrument packages contained a cover letter that briefly explained the purpose of the study and the mechanisms to maintain the confidentiality of each respondent that elected to participate in the study. Further explanations of the variables were given when requested by the study participants. Data was then primarily collected through personal interviews using the interview guides and use of questionnaires of employees of the selected organization which, in this case, was Unilever Ghana.

e. Internal Interview Guide

The guide is intended to focus on managers within the organization which would be primarily focused on quality management processes within the organization. This research examines specific quality management policies adopted as well as their implementation

processes and their roles in achieving overall quality metrics and results. It also considers managerial and employee perception about how such processes impact their operations and the firm's overall performance.

f. External Interview Guide

The second guide is one that is geared towards the stakeholders of the organization in question and some experts related to quality management systems from across the industry. The main focus of the stakeholders were the suppliers and clients of the organization, and these interview guides were intended to solicit their views on the ideas about quality management, if it existed in the organization's operations and how it affected their interaction as well as their success. Thus, the external interview guide forms an important component of this research project's data validity and relevance since these external interviews essentially function as a control group in an experimental sense.

g. Quality Management Systems Questionnaire

A self-administrated questionnaire would be used to assess the level of Quality Management System effects on the overall success of the organization. Items that would help in assessing of information have been compiled out of the rigorous interviews that have been conducted. The Likert Scale measure was also considered in the preparation of the questionnaires. (Saraph, 1989). By incorporating the Likert Scale into the questionnaire formulation, the actual analysis of the interview results becomes much more structured and manageable removing the high degree of researcher subjectivity from the process that would otherwise be present.

h. Pre-Testing

In all the instruments pre-testing of the tools has been executed to test the suitability of the questions and their ability to return the required data needed to arrive at the research project's primary conclusions. After that, corrections were made to prepare the final questionnaire for the data collection process. This process is also part of the research validity function since it ensures that the questionnaires are actually collecting the data desired rather than something else that might be entirely irrelevant to the analysis and conclusions within the project.

i. Interview Process

All interviews have been conducted by the researcher and kept entirely framed within the context of the research project itself. The interviews done with respondents within the organization have all been focused on activities within Unilever Ghana or concerning the divisions within the organization that are concerned with the various quality processes that the company employs. This study involves those managers who have been in their positions related to quality management over a period of three years or longer.

The interviews with the external stakeholders and experts in the field of quality control focused on the changes that have taken place in the way the relationship between them and the organization has contributed to their success, as well as quality perceptions that they have and those that are related to the organization. In so doing, the interviewees, whether internal or external to the company, are all vetted in relation to their relevance to the topic of this research project and are certain to be able to provide meaningful input regarding quality management and quality management systems. Each interview proceeding was recorded by the research assistants or the researcher himself.

Also permission has been obtained in advance relative to the use of aids such as recorders in the recording of the interviews. These measures are believed to enable the

researcher to capture all issues discussed without adversely affecting the anonymity of the research participants. Based on the write-up and the recorded proceedings, a final write-up of the interview process has also been produced. Out of these write-ups the most important quality management issues and developments have been identified by means of discussions between the researcher and the observations of quality experts as noted within the review of the relevant literature. The identified issues and developments are then presented back to the interviewees through a discussion meeting in which the managers have been allowed to express their perceptions and opinions.

j. Instrument Administration

Executive leadership and management are so critical to the quality management process and guidance that much of this research project's primary research targets these stakeholders' input and insights. The top quality manager and the general manager of a business unit are likely to be considered the "thought" leaders in respect to quality management in their business unit. Therefore they have been specifically targeted to participate in this study. Managers were chosen from service and manufacturing sections of Unilever Ghana because both of these business units are seen as central to that organization's business activities and success.

k. Background of Interviewees

In order to obtain more information regarding the implementation of quality management systems and quality measurements in the selected company, in-depth interviews have been carried out with the leadership of the company, both past and present, which has been investigated further. These investigations have led to the conclusion that this type of feedback is necessary to have had any quality management implementation

activity at the company. Also, experts in quality management have been interviewed to also inform the researcher of quality management procedures in the country from a general perspective. The interviewees' positions that have been considered include the following,

- Past CEO of the Organization
- Current CEO
- Production Managers
- Divisional Heads
- Quality Departments Heads
- Supply Chain Manager
- Human Resource Manager
- Logistics Manager
- Chief Engineer
- Operations Manager
- Key Stakeholders in the Organization
- Ghana Standards Board
- Foods and Drugs Board

However, this research also benefits greatly from the inclusion of a variety of perspectives and input from employees at all levels of the organization. For example, the sample of the lower levels of employees of the organization was administered with questionnaires, hoping to derive a relational analysis of quality implementations and performance and in this regard the research is deemed to have been highly successful at

developing just the comprehensive analysis of Unilever Ghana's quality management program as well as an effective set of recommendations and strategies.

Presenting the Data

In general, most evaluations conducted by local programs would lend themselves to descriptive analysis of data. Descriptive analysis is a way of summarizing and aggregating results from groups. If an evaluation has been conducted which employs a control group, or measures changes in program participants over time, then it might be appropriate to employ inferential analysis in which a decision is made about whether the particular results of the study are "real."

(a) Verbal Descriptive of Data

Many reports rely on narrative information to present most, if not all, of the necessary information. Narrative information may be presented in three ways: standard writing style; tables; and/or, figures, diagrams, maps, and charts.

(i) Standard writing style

That is, use of sentences and paragraphs, is often the best way to present information, especially to audiences that are not accustomed to working with charts, graphs, tables, numbers, etc. It is the only way to present information such as examples and explanations. If standard writing style is used to summarize the results to open ended questions ("What do you like most about the program?"), it is often useful to give some indication of how often a particular response was given.

(ii) Tables

Represents narrative or numerical information in tabular fashion, a table arranges information in rows or columns, so that data elements may be referred to easily. They provide a clear and succinct way to present data, and

are often more simple and understandable than standard writing style. They also facilitate the interpretation of data.

(iii) Figures, diagrams, maps and charts

Present verbal information visually. They often describe information more clearly than several paragraphs of description. Common forms of figures are: flow charts; organization charts; GANT charts; and/or maps

* **Flow charts** are particularly useful for presenting relationships and /or describing the sequence of events and the location and result of decisions.

* **Organization charts** are useful for presenting the chain of responsibility in a program.

* **GANT charts** list a set of tasks. They indicate the time each task is to be performed and by whom.

* **Maps** visually describe certain geographical areas. They are useful in describing different conditions for individual geographical areas.

(b) Numerical Descriptive of Data

Data are not only described in narrative. They are often described numerically. Three of the mot basic types of summarization are:

* Frequency distribution;
* Percent; and
* Average.

Each of these types of summarization may be presented as part of the text or arranged in tables or figures (graphs). Inclusion as part of text ("the average age for children served was 19 months") is an obvious way to report data.

(i) Frequency distribution

Determines the number of units (e.g. people) which fall into each of a series of specified categories. In order to do a frequency distribution on must have categories. Reporting on age, for example, requires that you group the data first before constructing a frequency distribution (e.g. "birth to 2 years." Or "3 to 5 years"). The evaluation might look to see how many parents were members of particular racial or ethnic categories, how many were known to protective services, or how many were referred from a range of referral sources.

Frequency distributions are not limited to descriptions of consumer characteristics. Program activity can also be presented categorically. The frequency distributions can be presented as tables or graphs (usually bar graphs).

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(ii) **Percent** is another useful way of describing data. A frequency count can be converted to percent by dividing the number of units for a particular category by the total number of units and multiplying by 100.

Percents are often more easily understood than the corresponding frequency counts. Percents can be represented in the same manner as frequency counts. In addition, a pie chart is useful in breaking the total group of people into percentage of the total represented by each category.

(iii) **An average** is a way of summarizing all the information into one number. It can be used with data which is non-categorical numerical data. You cannot have a numerical average for gender or race. For example. Using a numerical average is very powerful, but it can also be misleading. A few data points

which are very different from the others could substantially change the numerical average. For example, if the ages of children you serve are generally between 1 and 3 years, but you get one child who is 18, the average may be thrown off. Averages can be represented in tables or graphs.

Sampling

Most firms would find it either impractical or too expensive to survey all their customers or to carefully examine every item that flows from their production line. Instead they usually result to selecting a **sample** from the whole group or, as it is often called, the **population**. Of course here the term 'population' can refer to all the items under consideration as much as to all the people.

Briefly consider the types of sample that might be selected, and when each type might be most appropriate. Consideration is also given to the distribution of sample means which, can under certain conditions be regarded as being normally distributed. The central limit theorem is suggesting that even when the 'population' is skewed, a random sampling procedure using large samples can still result in a Normal distribution for the sample means.

Confidence limits are the ranges of values within which we can, with varying degrees of confidence, expect an observation to lie. This is used as the basis for testing various theories or hypothesis. When we use large samples ($n \geq 32$) for such tests, then the Z tables are still appropriate. However, when we use small samples ($n < 32$), then we must use the student t distribution. Finally a number of other distributions used to test hypothesis are introduced such as the chip-squared distribution.

The term statistical inference is often used to refer to the many procedures whereby attributes are ascribed to the 'population' based on the results of sample investigations.

Types of sample

Different types of sample may be used, depending in part on the characteristics or attributes of the 'populations' to be sampled and on the objectives of those undertaking the sample.

(i) Random Sampling

A random sampling is used when the intention is to give each item in the 'population' as much chance of being selected in the sample as every other item. A common way to conduct random sampling is to list all the 'members' or items in the population and then to used random number tables (merely a collection of random digits) or computer generated random numbers to help select the sample. Such procedures avoid various types of 'bias' which might creep into the selection of items to be included in the sample when undertaken by humans. Even the selection of numbers by individuals might be influenced by unconscious preferences for odd, even numbers, etc.

The key objective of random sampling is to obtain a sample that fairly reflects the population as a whole. Random sampling is more likely to be used when the population itself is relatively homogenous, i.e. is composed of items of broadly the same type. Of course there may be considerable practical difficulties in actually locating and interviewing each 'member' of the population that has been randomly selected. For example, if the chosen adult is not at home or otherwise available a researcher may have to return or seek to contact that individual on another occasion – another member of the household, etc. will not be acceptable.

The uderlisted are some characteristics of random sampling.

* Each item selected has an equal chance of being drawn;
* Usually adopted when population is largely homogeneous, i.e. when it is difficult to distinguish between items;
* Implementation often involves the use of computer-generated random numbers;
* Selection is unbiased;

* A major drawback is that a population listing is required and the chosen items need to be located, then questioned or measured.

Random sampling procedure is also important when researchers wish to apply the Central Limit Theorem.

(ii) Stratified Sampling

There will be times when we might prefer a non-random sampling procedure. Such a non-random procedure might, for example, be preferred when the population is segmented or heterogeneous, i.e. when it contains very different sub-sets of items or subjects. If, say, 60 percent of all adults have incomes over £ x and 25 percent have incomes below £y, then we might wish our sample of adults to exactly mirror such proportions, rather than give every adult an equal chance of selection. This is the basis of stratified sampling. Note that the intentions here are still to obtain a representative sample, but one which 'fairly' reflects a population which itself is heterogeneous. We might say that such a sample is free from the 'selective bias', since the proportion of any identified attribute in the sample is merely a reflection of its contribution to the population as a whole.

Below may be some characteristics of stratified sampling:

* used when the population has a number of identifiable attributes;
* Populations stratified in this way are known as heterogeneous;
* The composition of the sample must reflect the attributes present in the population, e.g. the proportion of low-middle-and high-income earners;
* Individuals or items within each stratum may still be selected randomly;
* A stratified sample is free from selective bias, since it reflects the proportions of any given attribute present in the population as a whole.

(iii) Quota Sampling

The use of quota sampling is widespread in market research. Here the intention is often to deliberately introduce selective bias into the samples, in the sense that attributes of the members or items selected will represent the choice of the samples rather than the attributes of the population as a whole. In this sense there is no attempt to seek a representative or unbiased sample from the population. For example, if a firm sells most of its products to those with incomes over £x, then, the sample may contain 80 percent of such adults even if they only comprise, say, 40 percent of the population. Nor is there usually any attempt to use random sampling within the quotas selected, as often happens within the different strata in stratified sampling. It is often left to the discretion of interviewers, etc. to include specified numbers (quotas) of subjects possessing given attributes within the sample. To do so accurately may be costly, requiring highly trained interviewers.

Quota sampling has the under listed characteristics:

* Widely used in market research;
* Sample includes a specified number or quota of subjects with given attributes;
* Interviewers must be highly trained as they are often responsible for identification and selection of respondents;
* A 'biased' sample therefore results, but on which may be useful in representing the customers seen as most likely to purchase the firms products.

(iv) Multi-Stage Sampling

This is another type of non-random sampling with the under listed characteristics:

* Usually involves sampling of subjects with a given attribute;
* Often occurs where there is a wide geographical spread of such subjects which makes sampling expensive;
* Whole geographical area is therefore divided into regions;
* A small number of such regions are then selected randomly;

* Regions selected are further broken down into sub-regions from which a random sample is selected.
* Sub-regions selected are further broken down into units (e.g. town or streets), from which a random sample is again selected;
* Eventually individual households or persons with a given attribute are identified in specific towns or streets;
* Costs of interviewing are then much reduced, though some risks of bias in procedure especially if only small numbers of regions, sub-regions, etc. are selected.

(v) Cluster Sampling

Cluster sampling is another type of non-random sampling and has the following characteristics:

* Items chosen in clusters rather than individually;
* Example, cluster might be all residents in a particular road or group of roads;
* Useful method where the population is widely spread geographically but where the various clusters are broadly representative of that population;
* Similar to above sampling method, except that the cluster itself is the single-stage involved.

(vi) Snowball Sampling

This method allows for the initial subject(s) with the required characteristics to be determined using purposeful sampling technique. These initial identified subjects then lead the researcher on to other similar subjects with the same or similar characteristics. This method is useful when a population is not known or cannot easily be approached; however the few that are identified could help in the identification of others with similar characteristics.

(vii) Accidental /convenient Sampling

Selection of units to be observed is done as and when they are available, hence the name accidental. Representative ness is not key when using this method.

(viii) Purposive Sampling

Here the method allows for units to be observed being purposefully hand picked because they may not be easy to come by or the issue under study could make it such that they can only be picked purposively. Criteria for selecting the units for observation should however be described in detail. In fact, here, you deliberately attempt to use a particular sample because that sample is qualified for the purpose of the work.

3.4 Quantitative Data

After collecting the information needed for designing the study, an analysis has been conducted on the data collected in order to recognise which quality function relates to the success of the organization and to identify if there is any interaction between success factors and each quality function. Achieving quality excellence requires a framework of measurement, data, and analysis (Evans & Lindsay, 1996). This is because any effective quality effort must first establish a baseline of present quality metrics and then utilize this baseline to determine the effect that a subsequent adjustment or change to the quality processes has on an enterprise's quality metrics. Additionally, such measurements and data

related to quality are required in order to effectively benchmark off of other organizations so that improved strategies and industry best practices can be introduced into the enterprise.

a. Validity of Data

Content and face validity has been established through the use of the respondents' experts consisting of management and other external experts. Concerning the importance of a valid measure for quality, Krishnan (1993) has stated that:

Quality management programs often generate more enthusiasm than tangible improvement. This tendency may partly lie in a failure to link programs to results. What is needed is the articulation of quality goals in quantitative, measurable performance targets linked to specific dates.

Additionally, because the research design has involved a multi-step interviewee selection and interviewing process, the reliability of the data has been increased exponentially. These multi-step research processes are an informal method to remove irrelevant data and results from the final project analysis and these acts to secure empirical applicability within the field of research and certainly within the industry being examined.

b. Originality & Limitations

It is essential that the instruments and the questions that they contain are acceptable to the research project's participants in order to obtain high response rates. High response rates thus improve the trial results and make them easier to interpret, more generalized, and less prone to bias that often results from a high degree of non-responses. Acceptability has been assessed in terms of refusal rates, and rates of missing responses. Great has also been taken to ensure that there is a high rate of question completion during the actual filling in of the forms by the respondents. Since incomplete survey questionnaires essentially invalidate the results, this too contributes immensely to the final determination of originality and limitations with respect to this project and its primary conclusions. The research involves

some numerical data, or contains date that could usefully be quantified to help answer the research questions and meet the stated objectives.

(a) Quantitative data

This refers to all such data and can be a product of all three main types of research strategy. It can range from simple counts such as the frequency of occurrences to more complex data such as test scores or prices. To be useful these data need to be analysed and interpreted.

Quantitative analysis techniques assist the above process. These range from creating simple tables or diagrams which show the frequency of occurrence, through establishing statistical relationship between variables to complex statistical modelling.

Until the advent of powerful personal computers data were analysed either by hand or using mainframe computers. The former of these was extremely time consuming and prove to error, the latter expensive. Fortunately the by-hand or calculator number crunching and 'charting' elements of quantitative analysis have been incorporated into relatively in expensive personal computer-based analytical software. These range from spreadsheets such as Excel, Lotus 123 and SuperCalc to more advanced data management and statistical analysis software packages such as Minitab, SAS, SPSS for Windows and Statview.

As a consequence, it is no longer necessary to be able to draw presentation-quality diagrams or calculate statistics by hand as these can be done by computer. Robson, C (1993 p.310) argued that quantitative data analysis is a field where it is not at all difficult to carry out an analysis which is simply wrong, or inappropriate for your purposes. And the negative side of the readily available analytical software is that it becomes that much easier to generate elegantly presented rubbish; Robson also emphasises the need to seek advice regarding statistical analyses.

(b) Preparation of data for analysis

In undertaking quantitative analysis the under listed critical issues were considered.

* the type of data (level of numerical measurement);
* the format in which the data will be input to the analytical software;
* the impact of data coding on subsequent analysis (for different data types);
* the need to weight cases;
* the method intended to use to check data for errors.

Ideally all of the above should be considered before data is obtained. This is equally important for both primary and secondary data analysis, although you obviously have far greater control over the type, format and coding of primary data.

(c) Data

This refers to a collection of facts usually collected as the result of experience, observation or experiment or processes within a computer system, or a set of premises. This may consist of numbers, words, or images, particularly as measurements or observations of a set of variables. Data are often viewed as a lowest level of abstraction from which information and knowledge are derived. In the study of quality management systems, quality information and knowledge are critical for good results.

(d) Meaning of data, information and knowledge

The terms information and knowledge are frequently used for overlapping concepts. The main difference is in the level of abstraction being considered. Data is the lowest level of abstraction, information is the next level, and finally knowledge is the highest level among all three. For example, the height of Mt. Everest is generally considered as “data,” a book on Mt. Everest geological characteristics may

be considered as “information,” and a report containing practical information on the best way to reach Mt. Everest’s peak my be considered as “knowledge.”

Information as a concept bears a diversity of meanings, from everyday usage to technical settings. Generally speaking, the concept of information is closely related to motions of constraint, communication, control, data, form, instruction, knowledge, meaning, mental stimulus, pattern, perception, and representation. Beynon-Davies, P. (2002) uses the concept of a sign to distinguish between data and information. Data are symbols. Information occurs when symbols are used to refer to something.

(e) Uses of data in Science and Computing

Raw data is a collection of numbers, characters, images or other outputs from devices to convert physical quantities into symbols, in a very broad sense. Such data is typical further processed by a human or input into a computer, stored and processed there, or transmitted (output) to another human or computer. Raw data is a relative term; data processing commonly occurs by stages, and the “processed data” from one stage may be considered the “raw data” of the next.

Mechanical computing devices are classified according to the means by which they represent data. An analogue computer represents a datum as a voltage, distance, position, or other physical quantity. A digital computer represents a datum as a sequence of symbols drawn from a fixed alphabet. The most common digital computers use a binary alphabet, that is, an alphabet of two characters, typically denoted “O” and “I”. More familiar representations, such as numbers or letters, are then constructed from the binary alphabet.

Some special forms of data are distinguished. A computer program is a collection of data, which can be interpreted as instructions. Most computer languages make a distinction between programs and the other data on which programs operate, but in some languages, notably Lisp and similar languages,

programs are essentially indistinguishable from other data. It is also useful to distinguish metadata, that is, a description of other data.

A similar yet earlier term for metadata is “ancillary data.” The prototypical example of metadata is the library catalogue, which is a description of the contents of books and scholarly journals.

Experimental data refers to data generated within the context of a scientific investigation by observation and recording.

(f) Data Collection

This is a task in the evaluation process which is usually the most time-consuming and expensive. Collecting the data needed to conduct the evaluation. There are four major steps in this task: (1) Identify the necessary data, (2) determine data availability, (3) collect existing data, and (4) verify the accuracy of the data.

Step 1 - Identifying the data

Identifying the data involves determining what statistics or indicators are required to measure the criteria identified earlier in the evaluation process. In many cases, the criteria themselves will be statistical measures.

Step 2 - Determining Data Availability

Once the analyst has determined what data are necessary, the second step is to determine how much are available. At least a preliminary survey of data availability should have been done during the project selection process to ensure the feasibility of the project. The methodology outlined here for determining data availability is considerably more detailed than that used for preliminary data surveys.

As a matter of practicality, for small evaluations the analyst may well determine data availability and begin collection at the same time. For most evaluations, it will be desirable to keep these steps separate since the absence of required data may cause the analyst to formulate a new strategy for data collection. It is not always necessary to obtain data for every criterion of a multi-criteria objective. Each piece of data would provide an additional indicator of program effectiveness, but even without all of the data, valid conclusions could still be drawn about the program.

The analyst would be well advised to prepare a worksheet to use during data identification and collection. Such a worksheet would have specific program objective at the top of the page, a list of the applicable criteria, and the data required to measure each. Additional information could be added indicating the availability and specific location of the data. There are numerous types of data, but for our purposes only three will be discussed in detail: (1) existing records and statistics, (2) client perception surveys, and (3) special data collection techniques.

1. Existing Records and Statistics

The analyst should begin the data search by examining the existing records of the jurisdiction, starting with those of the program agency. The partially completed data availability worksheets with the data requirements identified should be shown to the program agency liaison person. The agency liaison should be able to determine quickly whether the agency has the required data and help the analyst figure out the best way to collect them.

Some evaluations will require data from several agencies since the program being evaluated involves more than one agency. For example, an evaluation of police effectiveness would probably require

records from the courts. Obtaining the cooperation of several agencies can be quite difficult, especially if the evaluation effort does not affect or benefit them directly. Such situations require experience and skill on the part of the evaluation team leader and underscore the importance of top-level management support for the evaluation. It is the analyst's job to locate the necessary data, but the team leader's help will often be needed to gain access to them.

2. Client Perception Surveys

If the data identification process revealed a need for data on citizen perceptions of service delivery, the analyst will probably have to turn to sources other than existing records. The analyst should determine whether a survey has recently been completed either on a jurisdiction wide basis or in the specific program area of the evaluation. A survey conducted within the past year can be considered current. The analyst should examine the questions and responses to determine if the necessary data can be obtained from the survey. If the survey is too old or none has been conducted, then consideration must be give to initiating a new survey.

The experience of several jurisdictions that have used surveys in program analysis indicates that small, narrowly defined surveys yield the most productive results. For example, a short (3-6 questions) survey on citizen satisfaction with plastic trash bags, or a specific recreation program, yields results that are easy to interpret and involves relatively little effort to prepare and administer. Such surveys are also easier for citizens to respond to than a long survey that asks their perception on a wide range of government programs or issues. The analyst may be able to use statistics on citizen complaints or service requests to gauge citizen perceptions on specific services.

3. Special Data Collection Techniques

Once the data availability worksheet has been completed, the analyst must study it carefully to see if sufficient data are available to make a valid evaluation. This will be a particularly sensitive decision for objectives that can only be measured by one or two criteria. As a rule of thumb, data should be available on more than half of the criteria to ensure the validity of the evaluation. This rule of thumb must be used very cautiously for some criteria can be more vital to an evaluation than others; therefore, it also matters which criteria can be measured. To retain the community impact emphasis of the evaluation, it is necessary to give most weight to those criteria that measure citizen perceptions and direct effects on the program clientele groups.

There will be many instances when additional data will be necessary, and even more instances when additional data can add greatly to the validity and utility of the evaluation. This is a key decision point in an evaluation because, if some of the necessary data are lacking, a determination must be made whether to : (1) continue the evaluation with available data, (2) take the necessary time and effort to gather additional data from scratch, or (3) scrap the evaluation for lack of sufficient data.

If the first decision is reached the analyst may conclude that the lack of data requires limiting the scope of the evaluation. If this limitation is deemed significant by the team leader, then management and /or elected officials should be appraised of the specifics and asked to approve the new scope or to direct that additional data be generated to perform the evaluation as originally planned. If the analyst and team leader decide there is sufficient information and that it is impractical to gather the needed data, they should document their findings and present them to management.

When a reduced evaluation scope will not provide management with the type of information needed for decision making, it is necessary to generate data from scratch. The specific data should already have been identified, so that the first job should be to determine exactly how to go about collecting them. The analyst and team leader should decide whether the data can be collected: (1) by adding one or more data items to records routinely kept by the government, (2) by establishing new records and procedures, or (3) by using a special technique, such as a citizen survey. After this decision is made, the analyst should prepare to work plan that clearly states the specific data needed, the methodology to be employed, the time period to be covered, the calendar time required, the personnel time required, the estimate cost of data collection, and the impact the collection effort will have on the schedule for the evaluation as a whole. Once the impact on the project is known, the new work plan should be submitted to top management and elected officials for their consideration to ensure that all understand and approve the scope of the evaluation.

The main point to keep in mind is that the need to collect data from scratch, whatever the reason, will have a significant impact on the duration and cost of the evaluation.

Step 3 - Physically collecting the data

Once the data requirements have been identified and availability ascertain the team leader, analyst, and agency liaison person should meet to decide the best way actually to collect the data. As mentioned earlier, there are three main sources for evaluation data: (1) existing records and statistics, (2) client perception surveys, and (3) special data collection techniques.

Step 4 - Verifying the Accuracy of the Data

One of the most frequently over looked aspects of program evaluation is verifying the accuracy of the data. While treated here as a separate step for emphasis, the discussion of the previous step correctly suggests that data accuracy should be verified during data collection. In this way, the analyst can take actions to correct or improve the data immediately, rather than initiate a second collection effort later. There are three major types of data inaccuracies – clerical errors, subjective errors, and methodological errors.

1. Clerical Errors

Clerical errors are one of the most common sources of inaccuracy. Such errors (transposed digits recording the wrong figure, etc.) frequently occur when data are transferred from original source documents to summary reports or data collection worksheets. Clerical errors can be detected by checking a sampling of the data collection worksheets against the original source documents. If more than 10 percent of the sample entries are incorrect, the analyst can take one of several remedial actions.

If more than one person has been recording the data in question, the analyst should try to determine whether the high error rate is uniform among all collectors or is found only in the work done by one or more individuals.

If data collection accuracy does not improve, analyst may want to consider collecting data themselves or finding another way to measure the criterion in question. Another remedial course it to postpone the evaluation while improve data collection procedures are developed. This will usually mean postponing the evaluation for one program period (one month to one year). Naturally, the earlier in the evaluation process this determination can be made, the fewer dollar and personnel resources will be wasted on an incomplete effort.

2. Subjective Judgment Errors

Data involving subjective judgments will require more involved accuracy checks than outlined above. When dealing with subjective ratings such as those provided by inspectors or social services counsellors, the analyst must make an effort to determine the accuracy of the rating system. This is accomplished by examining the rating scale to determine how clear and comprehensive the descriptions are of the various rating categories. In addition, the analyst should attempt to determine how much training the field personnel have had in the use of the scale and how often the training is reviewed.

The analyst may also find it useful to examine the turnover rate among field personnel, since high turnover often results in inconsistent ratings over the evaluation of the ratings by getting several people independently to apply the rating scale to the same situation or site at the same time.

3. Methodological Errors

Of the data collection techniques mentioned, surveys are most prone to methodological error. The analyst should review the survey instrument (questionnaire) for possible bias, the sample selection method, the size of the sample, the degree of training given to surveyors, and the methods used to analyze responses. No survey can be 100 percent accurate. What the analyst should watch for are instances in which opinions or results are not clear-cut on a specific question and there is some evidence of significant inaccuracy in the survey.

Another type of methodological error can sometimes be avoided by double-checking of the analyst's thought processes. It is very easy to get so involved in what you are doing that relatively simple errors go unnoticed.

It is generally inadvisable to continue the evaluation with data errors greater than 10 percent. If an evaluation is continued under such

circumstances, the analyst should be sure to identify clearly resulting distortions in the evaluation report.

In summary, five major options can be pursued if key data are discovered to be inaccurate: (1) The evaluation team can seek other, perhaps less direct, ways of getting acceptable data. (2) Improved procedures can be adopted for collecting the data and the evaluation postponed until new, reliable data can be gathered. (3) The evaluation team can seek to improve the quality of the data by such methods as clear supervision of the collection effort, or the use of better collection forms. (4) The evaluation can be continued with the clear warning that management should be cautious in using the data in question for decision making. (5) The evaluation can be cancelled as infeasible. While the most suitable option will depend on the specifics of the situation, analysts will probably feel the most confident with the second option, where practical. The important point is to recognize that inaccurate data can badly undermine the credibility of an evaluation, and the analyst should guard against the problem.

3.5 Chapter Conclusion

This chapter has discussed quality management and quality management systems in the context of the academic research project within which it is couched. It has been observed that quality and quality management form critical components of the contemporary enterprise's core strategies that often decide whether the enterprise will remain a going enterprise or will be relegated to irrelevance and failure. Although a vast survey of relevant literature has been reviewed in order to develop an informed understanding of quality management, this project also employs the qualitative case study methodology in which in depth data and information regarding quality management is derived from a single entity: Unilever Ghana.

This methodology and focused approach on Unilever Ghana is deemed the appropriate methodology because of its explorative nature. Unilever Ghana is found to be the single largest and most significant manufacturing and marketing company currently operating in Ghana. It is a public company that is sold on the Ghana Stock Exchange and is classified as a consumer products company. This chapter reveals the character of the project's primary research objectives which are listed as evaluating Unilever Ghana's quality systems and policies, discovering whether Unilever Ghana maintains the appropriate

documentation for its quality management program, and to observe and characterize how effective Unilever Ghana is at implementing its quality management plan. Data has been gathered from numerous sources, which consist of the existing literature related to quality management, primary research taken from surveys and questionnaires which were both self-administered and research led interviews. The project's sample frame relied on a large percentage of managers and executives because it was felt that these individuals possessed the most relevant insight into the company's quality management program. This series of interviews relied on both an internal interview guide and an external interview guide.

Research Ethics

The ethics of conducting social science research has grown over the years and has to do with the rights and welfare of those being researched as well as the obligation of the researcher. The purpose of research is to contribute to knowledge. Unfortunately, carrying out the research is likely to violate the rights and welfare of those being researched and ethical codes have been developed to protect the interest of these people. Each of the stages in the research process involves some ethical implications.

Balancing costs and benefits in research

Basically social scientists are confronted with two ethical issues; the right to conduct the research in search of new knowledge and the right of the person providing the information. Not to conduct the research for fear of infringing on the right of the research participants will not be fair since it blocks the chances of gaining new knowledge and unethical to the researcher. Conducting the research that abuses the right of the individual being researched could also be unfair. This may be true in research that employs deception because it provides methodological and practical advantages. The above shows that social scientists often find themselves in a conflict of ethical dilemma.

There are no absolute answers to the above conflict but it is important to be aware of it and to guide against it as much as possible, or be able to manage it. Values people attach to the benefits or cost of conducting research are based on so many factors including background, culture, experience, convictions, etc. Some of the costs that the researcher may put the researched into are affronts to dignity to the individual, embarrassment, loss of trust in social relations, loss of self-esteem or self-confidence, etc. For the researcher the gains could be developing more theory about the hidden agenda of people, potential advances of applied knowledge, etc. For the researched, the gains could be the monetary benefits, satisfaction in contributing to knowledge, etc. All ethical decisions have to be made individually.

Informed Consent

It is important to inform people to be researched about the research ahead of time and to seek their concern. This is important especially where those to be research are exposed to risks of all kinds (for example, when it has to do with drugs, theft, sexuality, etc.). It is also important to know that providing responses to a researcher's questions is voluntary. In order words one should not force responses from respondents. The researcher after being unable to convince the researched to provide a response should move to another person.

Competence

It is important to know that it is not everyone who is competent enough to provide informed responses to questions posed by the researcher. It is often assumed that adults are capable of providing response of any kind while children are not. This could be true or untrue depending on the research topic. In some cases children many be more competent in providing responses than adults and vice versa. Ethically, competence must be taken into account in deciding on the respondents. The freedom to decide whether to participant in a research or not is left to those to be researched and so on ethical grounds it is considered as voluntary.

Privacy

Privacy as an ethical issue in research needs safeguarding. It is viewed from three angles:

* The sensitivity of information being given
* The setting being observed
* Dissemination of the information

(a) Sensitivity of information

Sensitivity of information refers to how personal or potential threatening the information is that the researcher is interested in. It must be noted that some information are very sensitive and therefore, very private. The greater the sensitivity of the information, the more the researcher needs to provide privacy to the respondent. People are often sensitive about issues related to religion, income, sexual practices, racism and personal attributes such as honesty, intelligence, etc.

(b) Settings being observed

The setting could vary from the private (e.g. home) to the public place. The extent to which any of the above two places could be intrusion in people's privacy is not certain which could lead to an ethical issue.

(c) Dissemination of the information

It should not be easy to match information with the people who provided it. Being able to do so would mean not protecting the privacy of those who provided the information. It is easy to get that done by not putting names of the questionnaires or research instruments used. Personal names of interviewers are not mentioned in the work proper. Names are however, stated at the back of the work as appendices.

Anonymity and Confidentiality

These are two methods used by researchers to protect those being researched.

(a) Anonymity

This is similar to the information on dissemination or information under privacy. Here researchers avoid collecting information with the identity of the one providing the data. A quick way of ensuring anonymity is to collect information without the names of the respondents and other identities. It is easy to maintain anonymity through a mail survey. Where the identity is provided, the researcher can ensure anonymity by separating the other data from the identity of the one who provided it during the data entry.

(b) Confidentiality

It is common to find that those being researched are told that any information they provide will be taken as confidential. This is often written in the introduction letter that goes with the questionnaire. It is also true that sometimes the researchers are unable to keep their promises due to a number of factors. It could happen that the information provided is unique and therefore stands out among the others. Such information could be used as an example and used to make a case. In such a situation, the confidentiality promise will be broken. Thus it is important to explain to those being researched what exactly is meant by confidentiality and its limits.

Chapter IV: Analysis of Data and Test of Hypothesis

4.1 Introduction

The literature reveals that one often overlooked aspect of quality management as a business strategy is the impact of the changes upon an organization that it incurs. Change can be a positive outcome related to quality management but it must be managed positively. Change just for change's sake typically results in chaos and companies that are considering quality management of some type of business process must take a cautious outlook towards the change that such strategies are certain to introduce within the firm.

Quality management brings clear changes into any organization. These changes are typically those associated with job losses, shareholder or stakeholder oversight issues, as

well as public relations concerns. Also, utilizing some type of business process quality management solution also requires the commitment of different resources that might not have been fully utilized previously. These resources might be related to quality management or oversight over operations within international markets that require some movement of human capital. Failure to assess all the types of potential change that are certain to occur while undertaking a quality management strategy related to business processes or functions can dramatically affect operating margins and profitability of a firm and this is especially true in markets such as Ghana.

The common perception regarding organizational change that results from quality management strategies is that all organizational change is positive and necessary. Generally, this observation might be true in the respect that truly innovative companies or organizations are characterized by change and the willingness to embrace change as seen in firms implementing quality management solutions (Mills, 2003, p.18). However, organizational change in and of itself is not necessarily good unless it is focused and directed with a view towards quality.

Change that occurs just for change's sake is indicative of poor strategic vision on the part of leadership and executive management and tends to result in chaos and employee resentment. The issue is that many enterprises or firms often credit change and change management with improving the many companies that have benefited from change. However, what these companies and similar Ghanaian companies may tend to overlook is that industry best practices relative to quality management are not actually focused on change itself but on innovation. Change and innovation are not interchangeable because all innovation or truly innovative processes beget change but not all change is innovative. Yet, it is clear that quality management is not necessarily all about change and that such change is both conceptual and structural in character.

The result is that organizations and enterprises that focus purely on implementing quality management programs as their strategic focus only serve to disrupt established processes unless they are focused. These business functions and processes are the accepted ways of doing things that do work, to one degree or another, and that are disruptive when they are altered in some respect. Such change interrupts these established processes and procedures and because this change is not accompanied by or introduced within the vehicle of innovation there is not suitable replacement for the processes and procedures that are disrupted. Employees become angry or resentful and management bears the burden of correcting the errors. The net result is an even more inefficient company or organization that just ends up going back to doing things as they were prior to the change implementation. Organizational change brought about through quality management programs should not be focused on change necessarily but rather on innovation and then the change that results should be effectively managed.

The use of quality management programs is an effective strategy to gain access to full-time or part-time employees that are already trained and familiar with a firm's industry or business but which are also obtained at a lower cost. Additionally, the use of quality management programs are also an established method to control costs associated with human resources and human resources management, among other business functions. This is because the full complement of benefits and taxes is not inherited with each quality management consultant or firm associated with quality management programs in the same way it is with in-house production programs. Yet, the use of quality management programs as a strategic option does come with certain downside risks.

One of the most basic risks associated with the use of quality management programs is the fact that these types of business strategies typically realize that their results might be temporary to one degree or another. Because of this somewhat ephemeral nature of the

business strategy they have less of a vested interest in the long-term effectiveness of their output with respect to the success of the quality management program as well as the quality of the manufactured output. Additionally, quality management programs also tend to be concerned with the character of their next application.

The use of quality management programs are generally viewed as valid strategic alternatives by most firms. However, they are also used only for certain business functions or processes within most companies. These are either, most commonly, low end production type positions requiring less training and development or in highly specialized positions or functions that require a great deal of training and development. Yet, while many companies can gain access to rapid productivity resources by simply hiring quality management consulting firms that are ready to step into a production type of relationship, great care should be undertaken in adopting this strategy. The rapid access to highly skilled talent and resources that can have an immediate impact on the company's competitive positions also results in little recourse should these quality management programs' performance become sub par in some respect.

The use of quality management programs of some type related to quality management often requires process improvement as well. Generally, all process improvement is, by definition positive because it is suppose to result in improved operating margins and subsequent increase in quality. However, where process improvement and, primarily, that associated with business process reengineering bears some downside risk is in how such strategies are managed or executed. Process improvement is a necessary part of any enterprise's operations whether in a production environment or a service environment.

Poorly managed business process reengineering initiatives and strategies can result in real financial costs for a firm or company or business entity. These types of costs can be completely unexpected and on top of the costs associated with redesigning the process in

question in the first place. A well-managed business process reengineering exercise employs a series of monitoring techniques that are implemented at the first sign of distress which is usually indicated by a loss in revenue, a drop in productivity or a decline in quality metrics. The execution of the business process reengineering initiative then must be re-examined from one of these perspectives as well as from the perspective of the three project or the process management imperatives which are those related to time, quality and cost.

Process improvement is only implemented if a company is able to ascertain that the result of the business process improvement initiative will result in real gains in efficiency, cost savings, or quality for a company or enterprise. Additionally, much of the downside risk associated with such business process quality management strategy initiatives is not even directly associated with the process improvement itself but rather with the human capital that is associated with the process or processes. Failure to incorporate the input from employees directly affected by the process improvement results in their being alienated and perhaps not effectively utilizing the improved process improvement for the full benefit of the company.

4.2 Quantitative Data Analysis

The descriptive statistics employed in this research study to augment the qualitative examination are illustrated below and the data results are contained within appendix three. The data from the questionnaires and the surveys was collected from a series of 320 distributed instruments of which 286 were returned fully completed. The skew and kurtosis are both within ±2 which implies that the test distributions employed in the research study were both stable and normal in character. The reliability of the data can

be considered within acceptable variances considering the relative small number of tested items:

Summary Statistics of the Survey Results

	Mean	SD	Skew ness	Kurtosis	Minimum	Maximum	Full Mark	α*
Question-naire	4.13	1.13	-0.99	-0.40	2	5	5	.60
Survey	3.00	1.25	-0.25	-1.19	1	5	5	.58
Summary of Responses	3.13	1.46	-1.06	0.03	0	5	5	.71

*α = Cronbach's α for this research

This research project employed MANOVA methods to determine if statistical differences among the various lean method quality manufacturing questions existed among the survey and questionnaires that were administered. The results displayed in the following tables indicate that in fact there have been some statistical variances between some of the given lean practice methodologies for various aspects of the respondents' quality management programs program operations:

Summary Variances

Source	Sum of the Squares	df	The Mean Square	F	Sig.	ω_G^2	Power
Questionnaire & Survey Responses	11.51	2	5.76	3.69	.03	.11	.65
Error	65.47	42	1.56				
Total	76.98	44					

A follow on statistical test which was the Tukey test indicates that statistical variations do exist among the various responses such as those between the questionnaire and survey responses:

Tukey Test

		The Mean differences (I-J)	Std. Error	Sig.	95% Confidence Intervals	
(I) task types	(J) task types				Lower Bound	Upper Bound
Questionnaire		1.13	0.46	.04	0.02	2.24
Survey		1.00	0.46	.08	-0.11	2.11
General		-0.13	0.46	.95	-1.24	0.97

Additionally, the measures of the effect and size of the results indicate that the variance proportion according to the lean typology was a medium figure. Furthermore, the differences in the responses were most apparent between the questionnaire responses and the interview responses.

Additional statistical analysis was undertaken in order to determine where the differences or variances among the results between the questionnaire and the interviews were originating from. The second item seemed to display the most significant variance and the descriptive statistical model is displayed in the following table. The statistical analysis indicates that this relative distribution of the data from the questionnaire and interview results is not necessarily normal which would indicate that MANOVA or the overall effect size is quite adequate:

Data Distribution

	Mean	SD	The Skew	Kurtosis	Minimum	Maximum	Full Mark

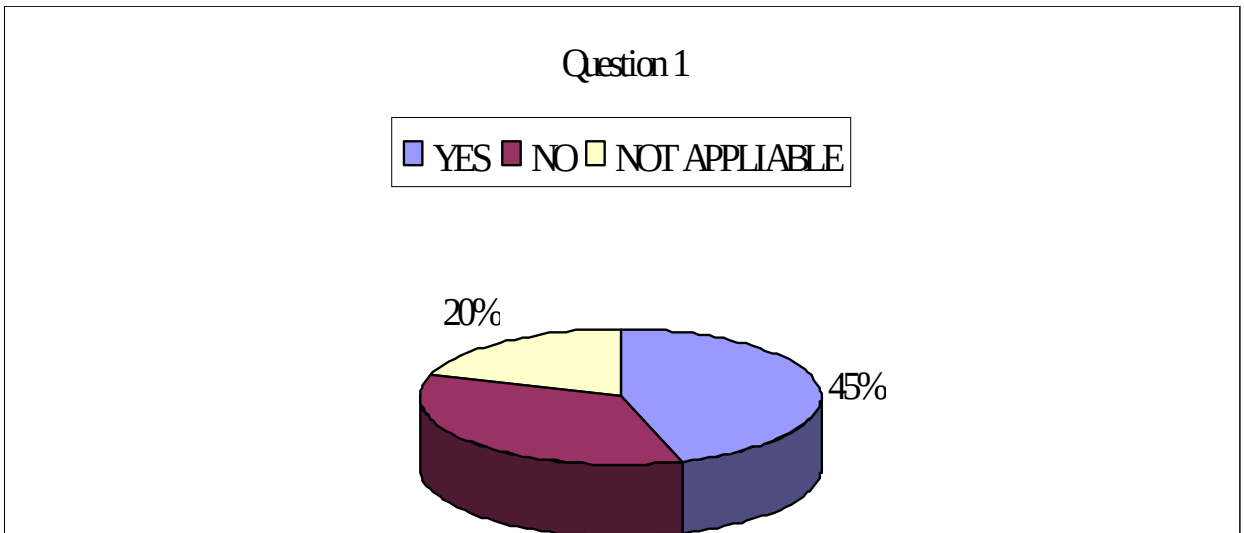
Questionnaire	.67	.49	-0.79	-1.62	0	1	1
Survey	.13	.35	2.41	4.35	0	1	1
Summary of Responses	.13	.36	2.41	4.35	0	1	1

However, in spite of these results, the descriptive statistical model does appear to indicate that the questionnaire results were less complex to some degree that the interview results.

a. Interview Responses

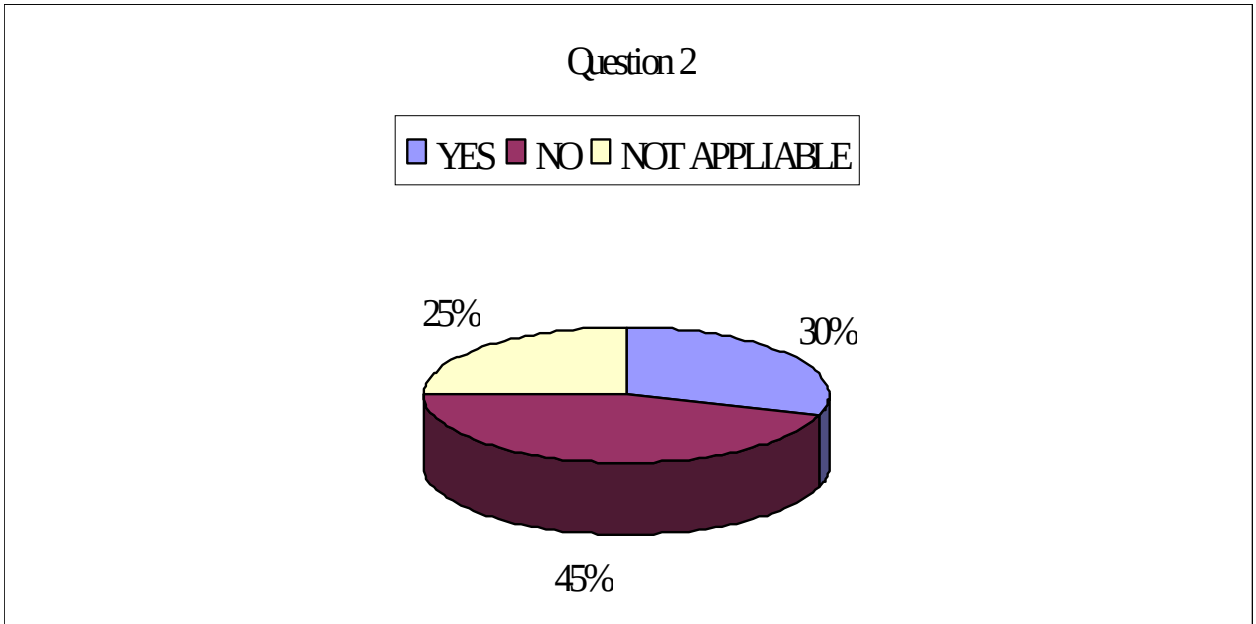
Question One

The responses to question one indicated that while business process quality management strategy is prevalent across industry it is perhaps not quite as prevalent as might be expected. Of the respondent companies only 45 percent indicated that they employed some type of business process quality management strategy while a full 35 percent indicated that none at all was utilized. Yet, a significant percentage of respondents revealed that they either did not understand the question or were somewhat uncertain about whether the firm did or did not engage in some form of business process quality management strategy:



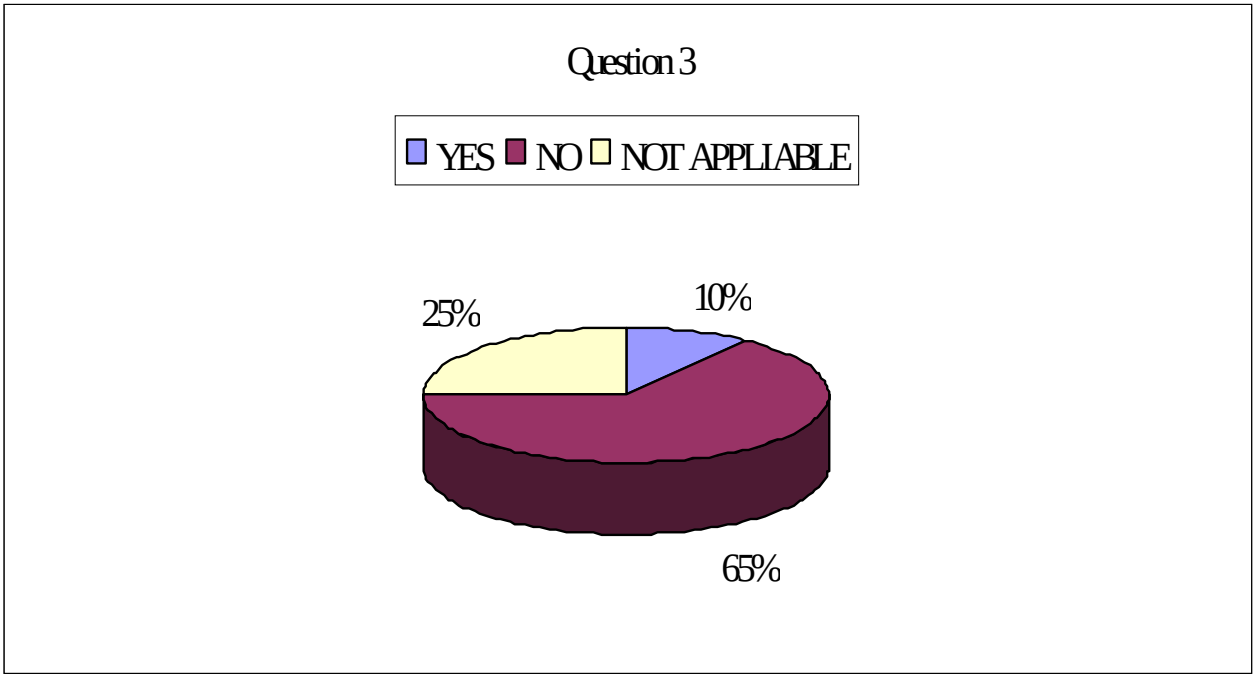
Question Two

Once again, many of the respondents, approximately 30 percent revealed that they simply do not engage in any type or form of quality management strategy as it relates specifically to manufacturing or production. Some of these responses may actually be to the continuing loss of cost-effectiveness of quality management strategy solutions related to manufacturing or production because of the continually rising costs of oversight and implementation. These and other factors are contributing to the erosion of comparative advantages in quality products that many international markets have relied on in order to establish quality management strategy leadership. A longitudinal study would need to be undertaken in order to determine if this is a trend in the manufacturing and product sector or simply an indication that quality management strategy solutions, regardless of cost savings, are not always attractive options:



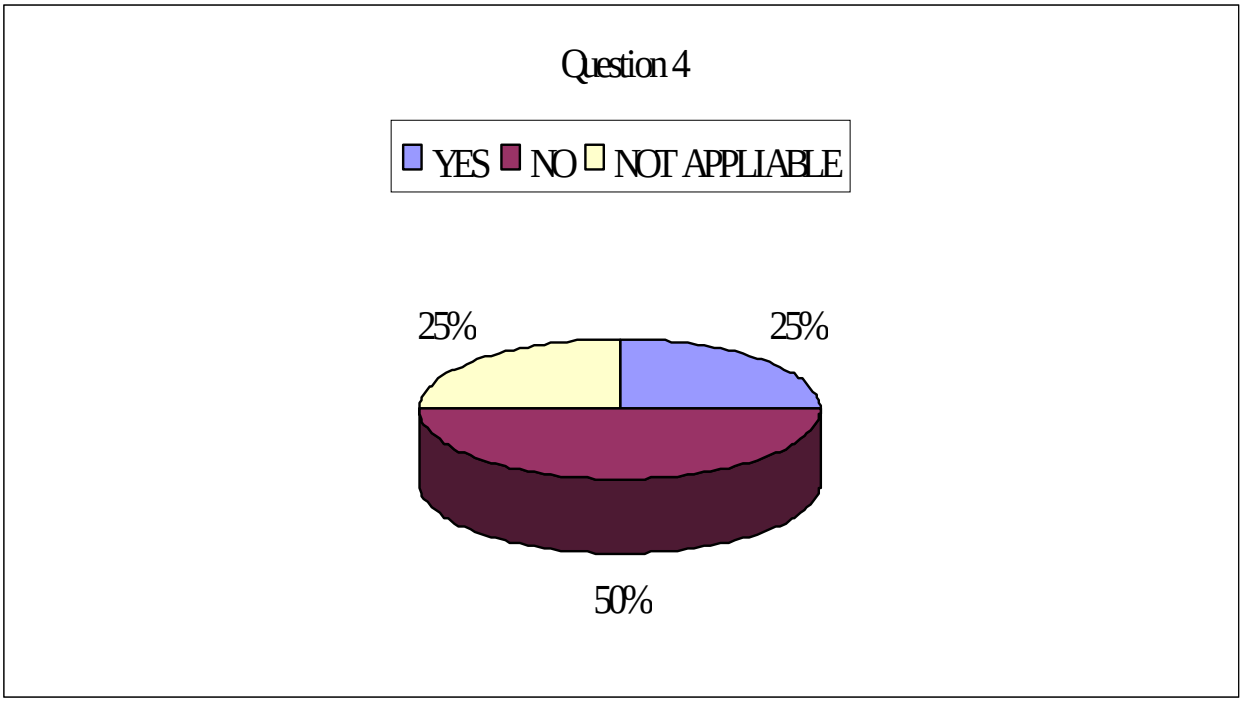
Question Three

Question three also produced some surprising data. In spite of the increased competitive nature of the global markets, many producers or manufacturers still have not developed sophisticated management structures to examine or initiate global quality management strategies. Only 10 percent of the individuals polled indicated that they maintained internal strategic management teams to devise some type of quality management strategy. This outcome is certain to hamper these firms in the future if comparative cost advantages can continue to be maintained by the countries that have excelled at developing such low-cost market initiatives as in Ghana:



Question Four

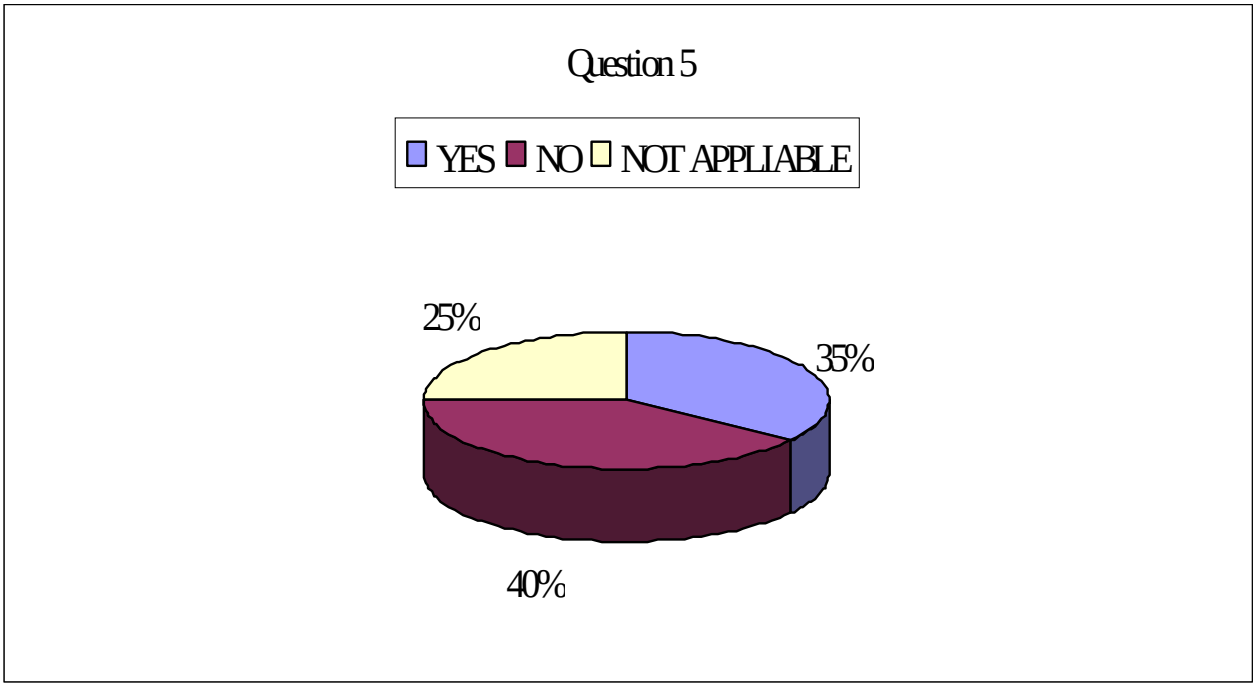
Quality has been an increasing concern for the world's international markets in which manufacturing and production are central portions related industries. These quality concerns often lead to the development of globally oriented business strategies within firms in which issues such as quality management programs are undertaken. With 50 percent of the firms being polled indicating that they do not have any type of quality management strategy program in place, it may be that the trend towards quality management of entire industries has run its course. It would be worthwhile to learn what percentage of the 25 percent of the respondents that responded positively to this question were actually reengineering business functions rather than implementing entire quality management programs:



Question Five

Quality management strategy involves a significant amount of quality management programs and production. Quality management programs are characterized by 3rd party manufacturing and production facilities in international markets that produce goods or

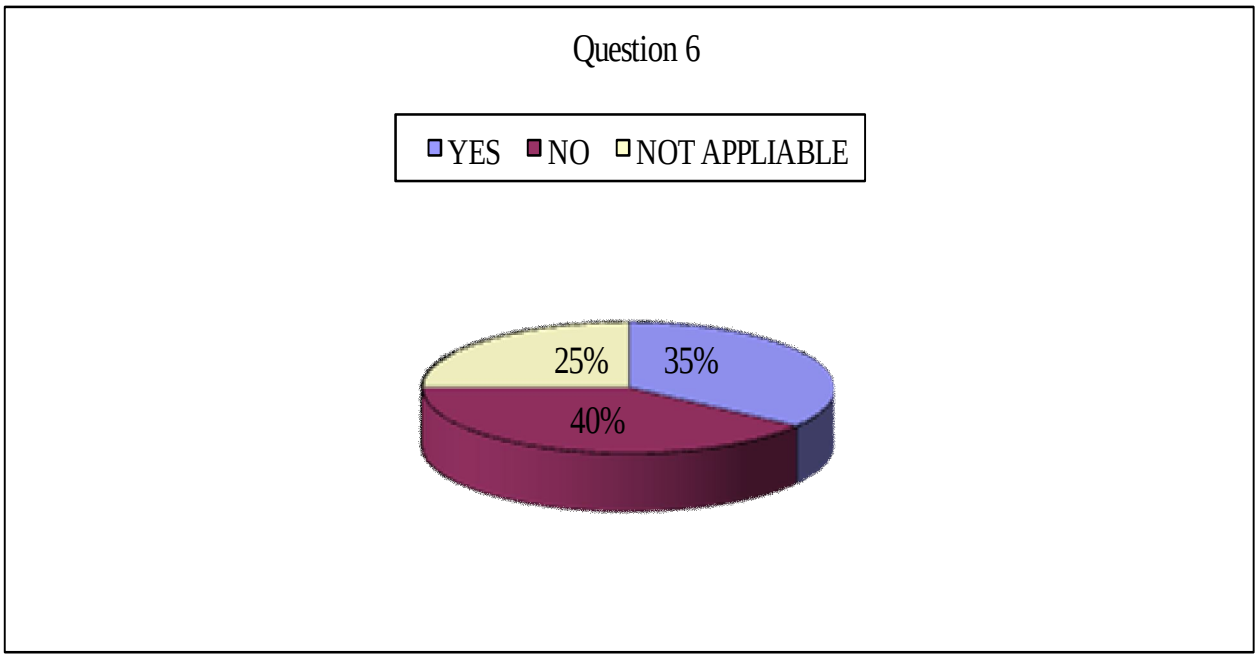
services for other international firms that market these goods or services as their own. Of the respondents within this survey 35 percent revealed they were actively pursuing a quality management strategy that involved quality management programs and 40 percent said that they did not. The issues that arise especially in relation to quality management programs are those related to the final quality of the completed products or the final service delivery in the case of contracted service production. Respondents that indicated that their companies that utilized quality management programs must implement integrated quality management processes that ensure the quality levels of their raw materials:



Question Six

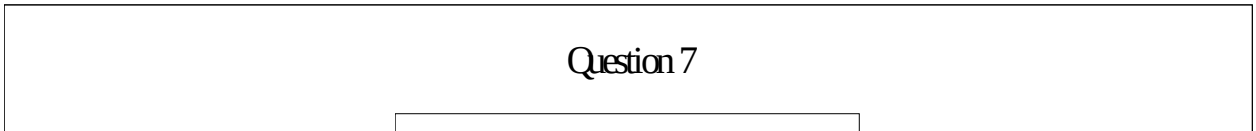
This question was perhaps a strategically sensitive question that might not have been responded to in the fullest. Respondents that revealed that firms that utilize a quality management strategy involving administrative functions may not wish to divulge this strategy since it might be construed as a competitively sensitive strategy. Additionally, in some cases firms might not wish to advertise this strategy for customer relations purposes in which many consumers or customers might not view the fact that a firm is not utilizing a quality management strategy for its administrative and manufacturing processes as a

positive business strategy. Only 35 percent of the respondents indicated that they were utilizing some form of business process quality management strategy related to administrative services while 40 percent simply denied that they were. Considering the sensitive nature of this data this might question's outcome might not fall within the typical plus/minus 5 percent accuracy rating given these types of survey questions:



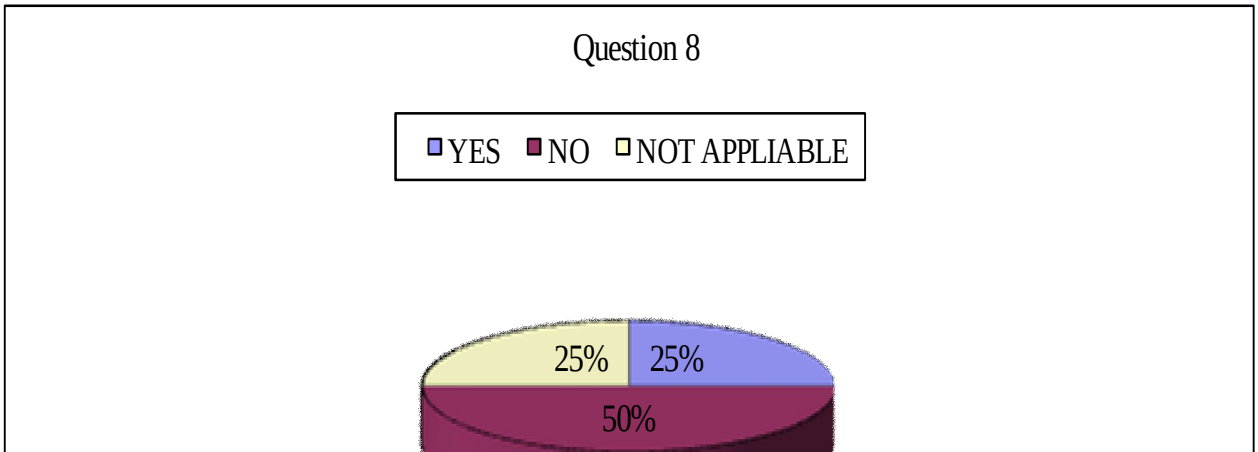
Question Seven

Question seven is similar in context to question six in that it too might be considered strategically or competitively sensitive for the same reasons if not more so. Companies that have outsourced customer service functions to international locations have typically received negative press regarding the move for several reasons not the least of which is the quality of customer service. Only 25 percent of respondents revealed that they had actually outsourced any type of customer related business process and a full 50 percent indicated that they did not with 25 percent not responding positively or negatively. The outcome is somewhat expected considering the volatility associated with this strategy as it relates directly to customer service functions:



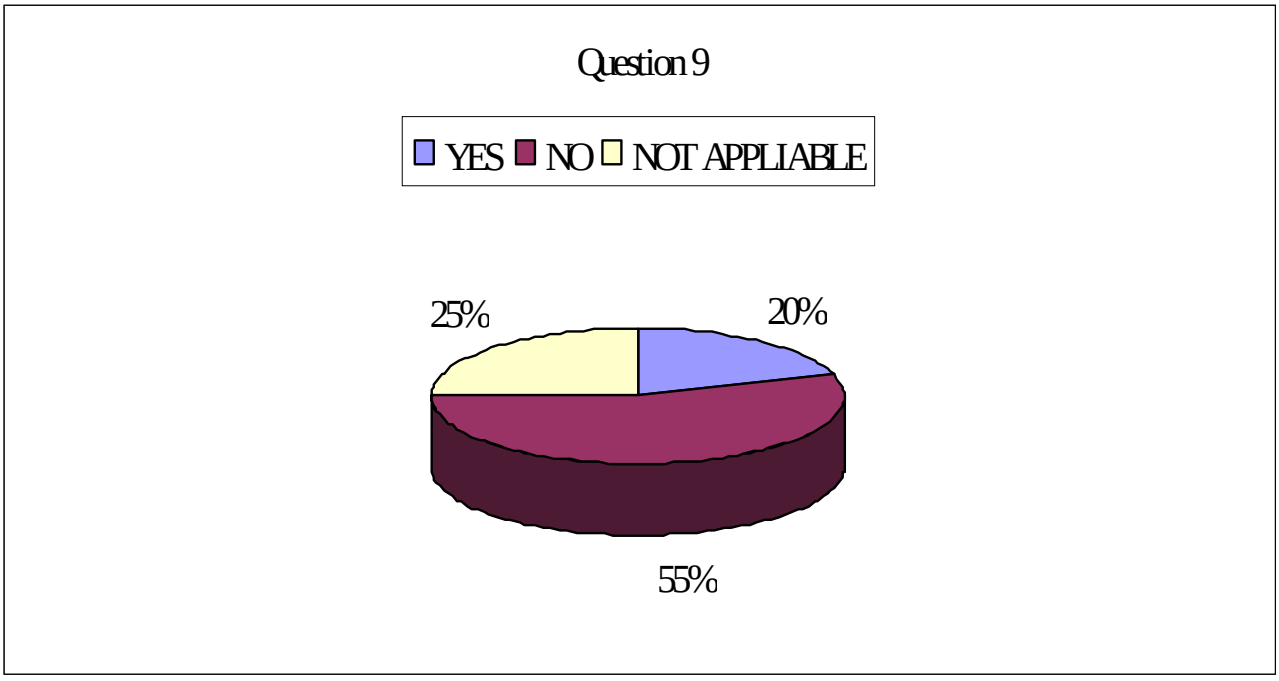
Question Eight

This question seems to reveal that there is a trend of some type developing as it relates to quality management. Only 25 percent of the respondent firms revealed any intent to leverage some type of quality management solution in the future while 50 percent clearly indicated that they were not going to. Considering the rush adopt any form of quality management program in the past, this seems like a rather small percentage of companies that are actively considering the strategy. This also may be related to the increasing oversight costs associated with quality implementation that is undermining the cost advantages associated with quality management:



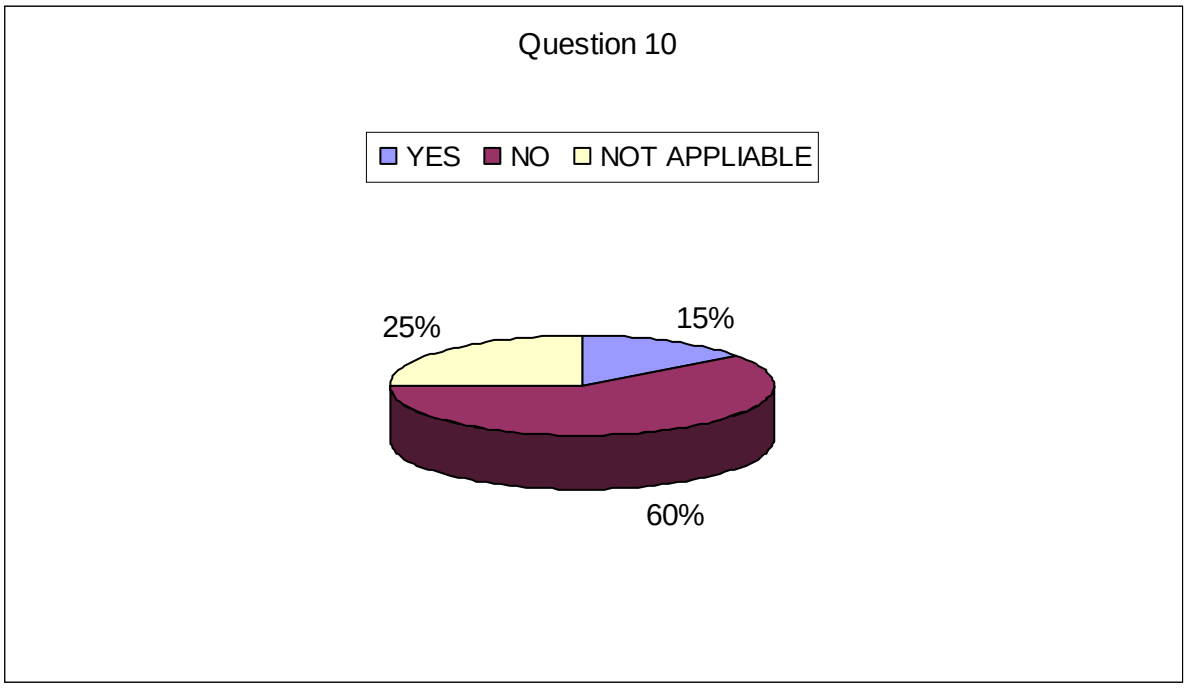
Question Nine

This question specifically inquired whether the respondent firm had actually reengineered a business activity or function in the past. Only 20 percent had indicated that they actually had reengineered some type of previously raw business activity while 55 percent indicated that they had not. Yet, this 20 percent of respondents indicating that they had reengineered such a business function may be significant considering the cost-advantages that have been encouraging firms to move to broad quality management programs in the past. The implication is that there must be some negative aspects to these solutions if 20 percent of surveyed firms have found the strategies to be unsuccessful or, at the least, not producing the expected ROI:



Question Ten

Once again, the individuals that were polled within the context of this research project revealed that they were basically not taking an aggressive stance towards business management in general and towards quality management specifically. Only 15 percent of the responding firms said that they employed some type of aggressive management and manufacturing practices related to quality management activities. This outcome also seems to run counter to the popular conception of quality management as powerful business strategies that defined globalization itself. There seems to be some subtle shift occurring away from these business strategies related to quality management or some type of new conservative approach to the strategies:

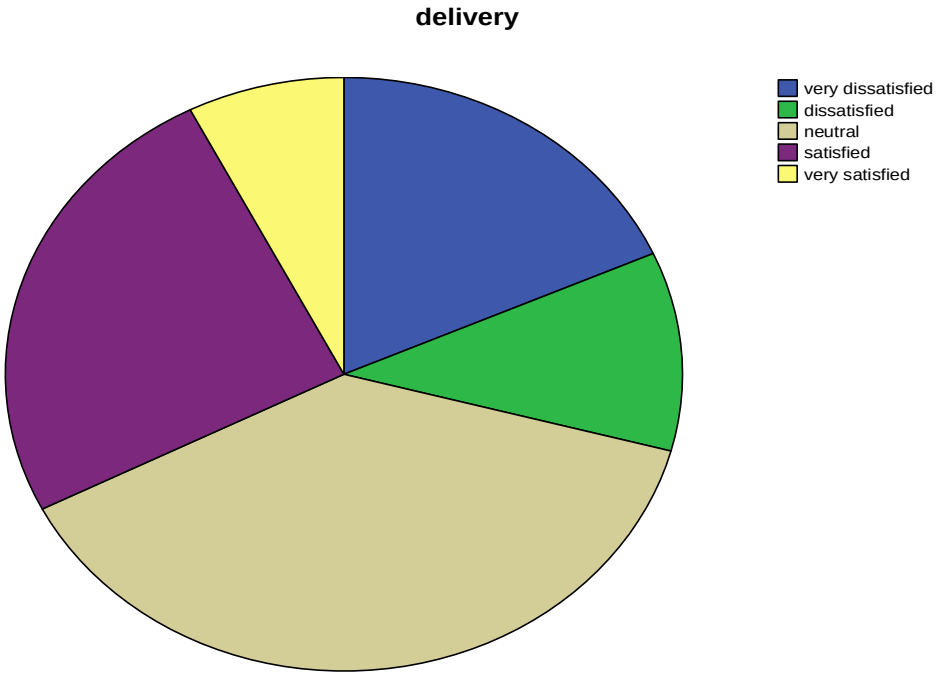


The literature reveals that one often overlooked aspect of quality management as seen in this survey as a business strategy, is the impact of the changes upon an organization that it incurs. Change can be a positive outcome related to quality management but it must be managed positively. Change just for change's sake results in the aforementioned chaos

and companies that are considering quality management of some type must take a cautious outlook towards the change that such strategies are certain to introduce within the firm.

b. Questionnaires

Quality as a perception of a firm's lifeblood was the first dimension that was analysed. The data reveals that 49 quality or brand managers were satisfied with general service delivery while 35 were not satisfied with general service delivery:



Statistical Outcome

Statistics		delivery	level	expectations	recommend
N	Valid	120	120	120	120
	Missing	0	0	0	0
Mean		2.93	3.58	3.31	3.39
Median		3.00	4.00	3.00	3.00
Std. Deviation		1.182	.875	1.044	.792
Minimum		1	1	1	1
Maximum		5	5	5	5

Frequency Tables

Service Delivery		**Frequency**	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	Very Dissatisfied	22	18.3	18.3	18.3
	Dissatisfied	13	10.8	10.8	29.2
	Neutral	46	38.3	38.3	67.5
	Satisfied	30	25.0	25.0	92.5
	Very Satisfied	9	7.5	7.5	100.0
	Total	120	100.0	100.0	

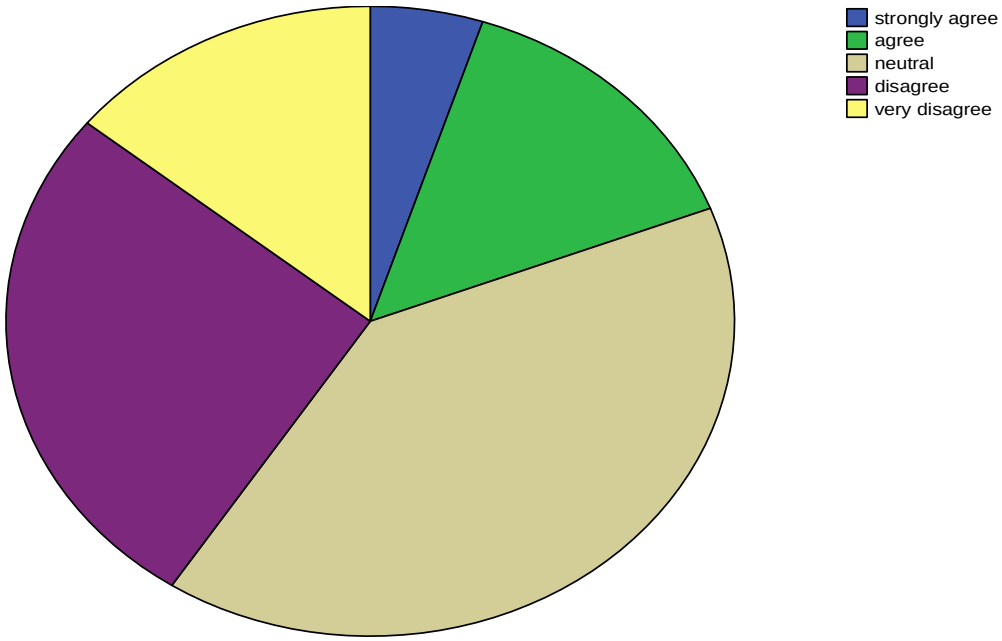
Service Levels		**Frequency**	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	Strongly	2	1.7	1.7	1.7

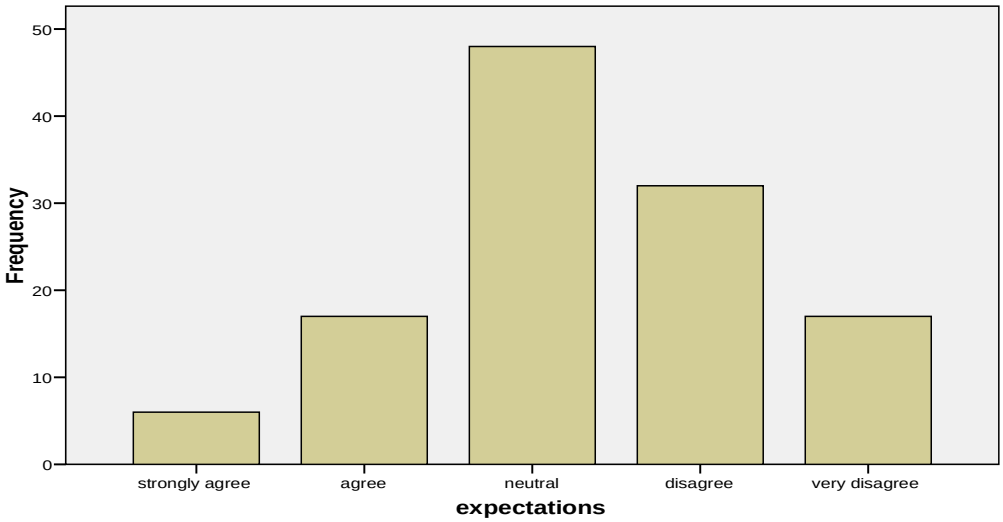
	Agree				
	Agree	7	5.8	5.8	7.5
	Neutral	48	40.0	40.0	47.5
	Disagree	45	37.5	37.5	85.0
	Strongly Disagree	18	15.0	15.0	100.0
	Total	120	100.0	100.0	

Service Expectations		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	6	5.0	5.0	5.0
	Agree	17	14.2	14.2	19.2
	Neutral	48	40.0	40.0	59.2
	Disagree	32	26.7	26.7	85.8
	Very Disagree	17	14.2	14.2	100.0
	Total	120	100.0	100.0	

Recommend		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Unlikely	2	1.7	1.7	1.7
	Unlikely	9	7.5	7.5	9.2
	Fair	57	47.5	47.5	56.7
	Likely	44	36.7	36.7	93.3
	Very Likely	8	6.7	6.7	100.0
	Total	120	100.0	100.0	

The second dimension included within this research project was the best assurance of customer allegiance with the interviewees' companies' products or services. The following chart indicates that 23 quality or brand managers were satisfied in some respect while 49 were dissatisfied in some respect with 48 respondents having no clear opinion:





Statistical Outcome

Statistics		Training	Quality	Program price
N	Valid	120	120	120
	Missing	0	0	0
Mean		2.68	3.19	3.44
Median		3.00	3.00	3.00
Std. Deviation		.963	1.056	.977
Minimum		1	1	1
Maximum		5	5	5

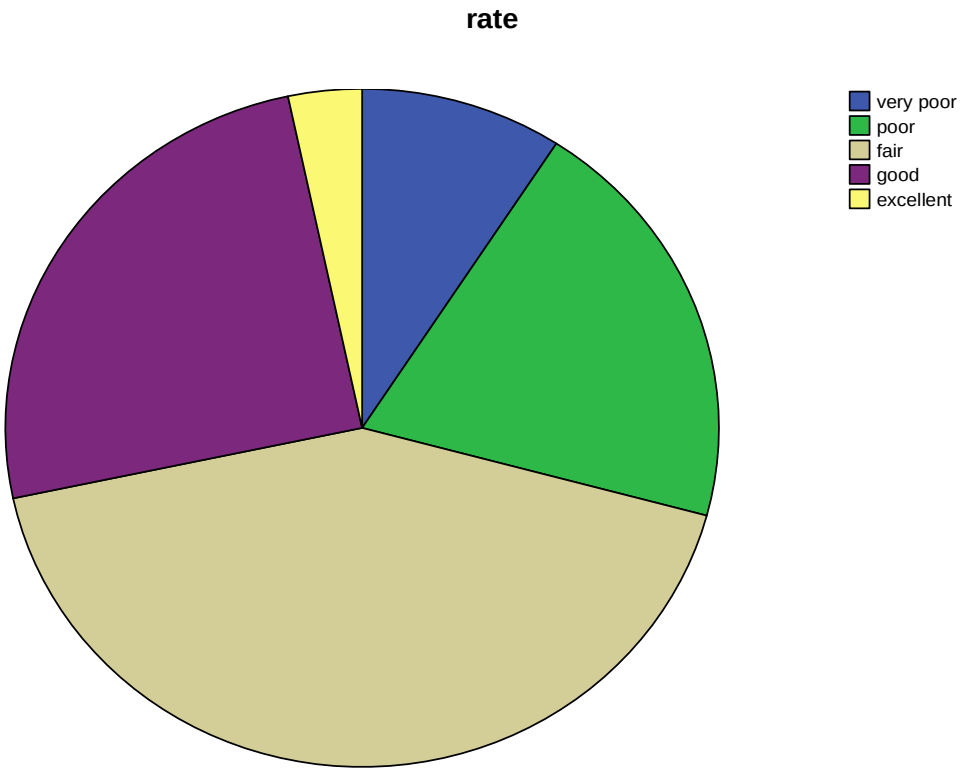
Frequency Tables

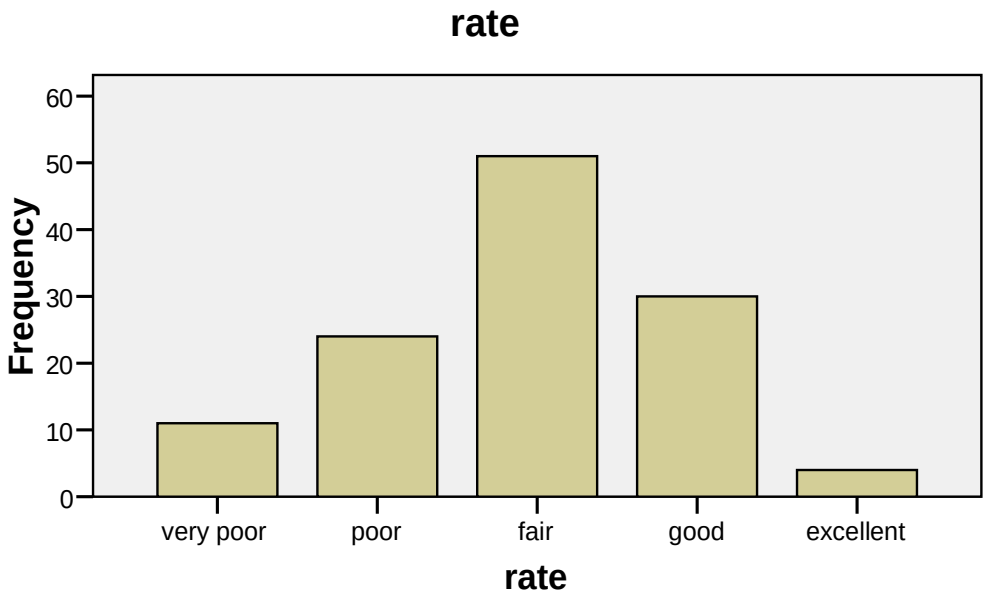
Training		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Poor	13	10.8	10.8	10.8
	Poor	39	32.5	32.5	43.3
	Fair	45	37.5	37.5	80.8
	Good	20	16.7	16.7	97.5
	Excellent	3	2.5	2.5	100.0
	Total	120	100.0	100.0	

Quality		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Poor	12	10.0	10.0	10.0
	Poor	14	11.7	11.7	21.7
	Fair	40	33.3	33.3	55.0
	Good	47	39.2	39.2	94.2
	Excellent	7	5.8	5.8	100.0
	Total	120	100.0	100.0	

Program Price		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Unattractive	4	3.3	3.3	3.3
	Unattractive	12	10.0	10.0	13.3
	Neutral	49	40.8	40.8	54.2
	Attractive	37	30.8	30.8	85.0
	Very Attractive	18	15.0	15.0	100.0
	Total	120	100.0	100.0	

The third dimension examined for this project touched upon establishing a relationship between productivity and quality. The following chart illustrates that only 34 respondent's rated quality or service delivery to be positive while 35 found it to be negative with 51 only rating quality or service delivery to be fair:





Statistical Outcome

Statistics		Production rate	Down Time	Cost Operations
N	Valid	120	120	120

	Missing	0	0	0
Mean		2.93	3.66	2.59
Median		3.00	4.00	3.00
Std. Deviation		.976	1.141	.966
Minimum		1	1	1
Maximum		5	5	4

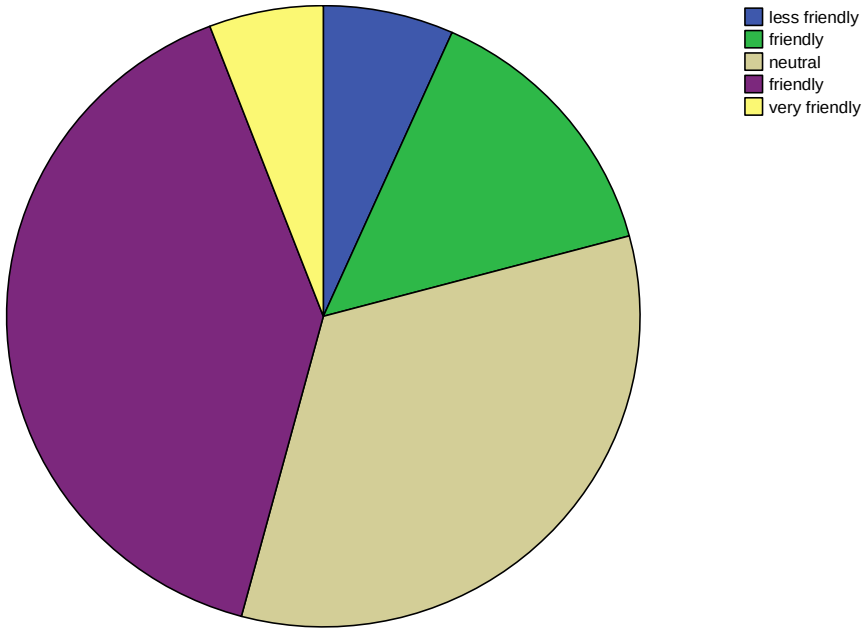
Frequency Tables

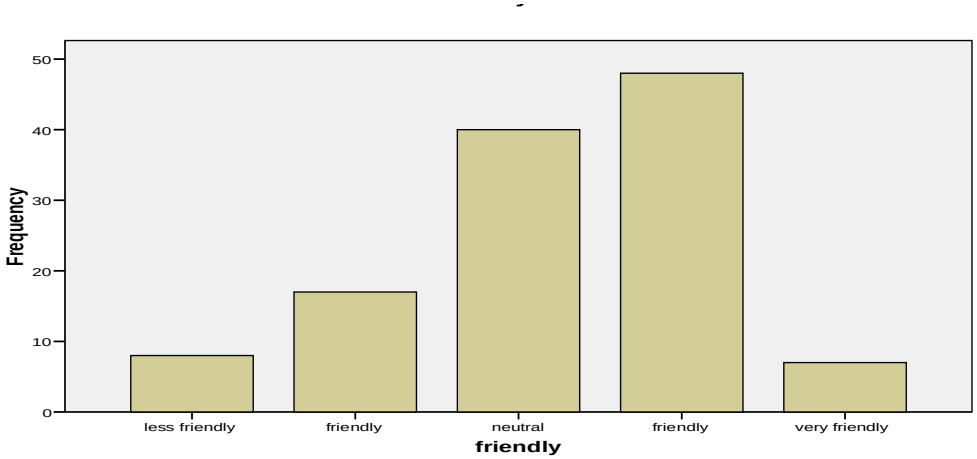
Production Rate		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Poor	11	9.2	9.2	9.2
	Poor	24	20.0	20.0	29.2
	Fair	51	42.5	42.5	71.7
	Good	30	25.0	25.0	96.7
	Excellent	4	3.3	3.3	100.0
	Total	120	100.0	100.0	

Downtime		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not at all	6	5.0	5.0	5.0
	Once per month	14	11.7	11.7	16.7
	Twice per month	27	22.5	22.5	39.2
	Three times per month	41	34.2	34.2	73.3
	More than three times per month	32	26.7	26.7	100.0
	Total	120	100.0	100.0	

Cost of Operations		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than £10	19	15.8	15.8	15.8
	£10-£19	33	27.5	27.5	43.3
	£20-£30	46	38.3	38.3	81.7
	More than £30	22	18.3	18.3	100.0
	Total	120	100.0	100.0	

The fourth dimension examined in this research project was the concept of quality management within an organization over time. A full 55 respondents indicated that the environment within their facilities was quality oriented while only 25 indicated that it was not quality oriented with 48 remaining undecided:





Statistical Outcome

Statistics	Safe work area	Rest areas	Well supplied	Convenient

N	Valid	120	120	120	120
	Missing	0	0	0	0
Mean		3.24	3.38	3.03	2.79
Median		3.00	3.00	3.00	3.00
Std. Deviation		.996	.945	.884	1.084
Minimum		1	1	1	1
Maximum		5	5	4	5

Frequency Tables

Safe Work Area		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less friendly	8	6.7	6.7	6.7
	Friendly	17	14.2	14.2	20.8
	Neutral	40	33.3	33.3	54.2
	Friendly	48	40.0	40.0	94.2
	Very friendly	7	5.8	5.8	100.0
	Total	120	100.0	100.0	

Rest Area		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	very poor	2	1.7	1.7	1.7
	poor	17	14.2	14.2	15.8
	fair	50	41.7	41.7	57.5
	good	35	29.2	29.2	86.7
	excellent	16	13.3	13.3	100.0
	Total	120	100.0	100.0	

Well Supplied		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Once per month	9	7.5	7.5	7.5
	Twice per month	18	15.0	15.0	22.5
	Three times per month	54	45.0	45.0	67.5
	More than three times per month	39	32.5	32.5	100.0
	Total	120	100.0	100.0	

Convenience		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly disagree	20	16.7	16.7	16.7
	Disagree	19	15.8	15.8	32.5
	Neutral	53	44.2	44.2	76.7
	Agree	22	18.3	18.3	95.0
	Strongly disagree	6	5.0	5.0	100.0
	Total	120	100.0	100.0	

4.3 Test of Hypothesis

Unilever Ghana demonstrated that it is willing to take the necessary steps to ensure that the firm develops and maintains best in class operations. This recommendation affirms the hypothesis that quality is extremely critical in order to preserve and expand a company's cash flows and ultimately its profit. In this sense, Unilever Ghana's strong financial performance can be said to be directly dependent upon the firm's ongoing quality management initiatives as well as any potential initiatives relating to knowledge management and it leverages this intellectual capital.

Because of the firm's willingness to commit to such best practices as BPR which reduces expenses and increase quality outputs, Unilever knows that regardless of its operations internationally, it must continue to focus on upgrading its IT and IS infrastructure within Ghana. Yet, one of the more important recommendations that can be made for Unilever Ghana is to build upon its best practices and best in class operations by continuing to evolve its quality management processes. The next stage that the firm should

examine is one that formulizes the processes of ongoing change within the firm while still focusing on quality. This process that is being recommended is one which moves Unilever Ghana's current quality focus from processes and outputs to a focus on quality in relation to its inherent knowledge and intellectual capital within the firm.

Management of quality at Unilever and quality at Unilever are largely associated with making and in possessing the ability to make decisions rapidly within the enterprise setting. Predominantly the character and type of decisions which a manager within the firm makes during the course of his or her duties are aligned with the four functions of the manager. Management of quality at Unilever and quality at Unilever have been many things to many people but one constant remains consistent among all the various schools of enterprise theory. This is that both enterprise quality management at Unilever guide functions and processes within the enterprise. Yet, how individual enterprise quality managers at Unilever actually execute this guidance is almost completely based on their unique mix of skills and talents, or lack thereof, as they relate to decision making. Often this unique mix of skills and knowledge relate directly to knowledge management with respect to quality at Unilever.

Unilever Ghana must recognize that one of its greatest strengths is not necessarily its production lines or its capital reserves because of its immense international presence. In business terms, the company's knowledge base within its employees and its other organizational knowledge forms ensure that its customers will return or leave with a solid opinion of the company. This is an affirmation of the second hypothesis in which it was observed that quality is directly related to brand equity and allegiance for Unilever. Thus, Unilever's greatest strengths rest in its employees and managerial corps where the skills, experience, and know-how for all of the company's business activities actually rest. Thus, the theory behind managerial studies differs with respect to quality only on the approach to

or style of that quality guidance related to skill or talent and the percentage a manager has of each is described in the following manner: the necessity for managing quality at Unilever Ghana arises whenever work is specialized and undertaken by two or more persons...the specialized work must be coordinated, creating the necessary managerial work...managerial work is to coordinate the work of individuals, groups, and enterprises by...four management of quality at Unilever functions: planning, organizing, leading, and controlling. (Sims, 2000, p.9).

The end result is that managing quality at Unilever Ghana, as a science and a business function, results in the accomplishment of these four primary functions: planning, organizing, leading, and controlling in equal proportion. That is, equal proportion to the skills that provide the ability plan and control within the nexus of decision making judgment related to leading and organizing. Each of these managerial functions requires access to the mix of personalized and codified knowledge that exists in any enterprise.

The roles of an enterprise's quality managers at Unilever have been the topic for much academic debate throughout the past several decades. However, generally these roles have been categorized into four broad divisions of activities with respect to quality and how quality is a by-product of a firm's knowledge and intellectual capital. Sims (2000, p.9) relates that while many other functions do exist for which management of quality at Unilever is expected to accomplish, either directly or indirectly, these four primary functional areas of responsibility, remain pivotal in the role of the manager because they form the primary nexus within which almost all of the firm's managerial decision making takes place. Yet, since it is recognized that the role of these enterprise quality managers at Unilever is expanding beyond purely functional purposes to involve facilitative type roles that are symbiotic to globalism, it is necessary to expand the concept of quality at Unilever to include a deeper consideration of quality as knowledge.

Therefore, the trend towards an economically flat environment that relies on data and information, management of quality at Unilever is now seen as a process as well as a function. This concept has been explained by others in the following manner: “Managers of enterprises should be influenced by research that shows that enterprise effectiveness can be increased by allowing complete employee involvement in decision making” (Mudacumura, 2000, para.7). How these new enterprise quality managers at Unilever manage themselves in integrating processes with functional responsibilities tends to define their effectiveness within the enterprise. These functional areas require daily assessments based upon performance related criteria which lead to ever more refined decisions and this is, increasingly, the field of knowledge management relative to quality at Unilever.

Managerial perspectives of quality systems theory, as it relates to enterprise decision making, can be approached from various perspectives. It is often viewed as a systems approach to management of quality at Unilever because of the inter-related set of activities that must be managed within the context of business operations and how such operations are dispensed with. The systems approach to management of quality at Unilever is unique not only for its novelty but also for its efficiency. While many of the underlying principles for establishing and building metrics in an enterprise are universal, the approaches to management of quality at Unilever and the requisite decision making activities have taken many different approaches in order to raise productivity, to improve motivational responses, and create a more refined enterprise culture at Unilever Ghana. Hypothesis three stated that high productivity was an outcome of high quality and this too seems to be the case, affirming the hypothesis. As quality processes are implemented at Unilever Ghana, employees, after overcoming the initial shock, begin to recognize that by canonizing the firm’s operations this in turn frees them up to actually do less work per output than before. The final outcome is that the quality programs actually increase a variety of soft attributes

such as employee morale, job satisfaction, and employee retention. The result is that Unilever gains greater productivity all the while it elevates its output without hiring even more employees.

Much of enterprise culture at Unilever Ghana is now defined by the knowledge of the enterprise and the enterprise's products and services that reside within the human capital of the enterprise. In some respects authors such as McGregor and Barrett are able to point out how the quest for integrated innovation processes as a managerial role is a result of, or a reaction to, these earlier systemic strategies: "A thirst for internal growth across…has made innovation a critical management of quality at Unilever mandate" (2006, para.4). In this sense, the quest for differentiation and competitive advantage has evolved into sub-sets of systems management of quality at Unilever. These are strategies such as situational management of quality at Unilever in which it is recognized that innovation must be fostered through knowledge management at Unilever and necessarily of statistical analysis procedures often emphasized in pure quality programs.

As most business analysts recognize, enterprises are comprised of people as well as business processes and technology. Because of this recognition of the importance of people in the firm, this project also manages to confirm the final hypothesis in which how a company's leadership shifts from one leader to the next impacts the effectiveness or reliability of the company's quality management systems. Some theorists have proposed that enterprise decision making is not based purely on metrics but with an equal degree of relationship with employees and an understanding of the knowledge that resides within each employee and the systems within the enterprise. It is the same way when planning how a leadership structure will take place in advance of who will move into this open position. This is described by others as being: "the amount of guidance and direction a enterprise quality management gives, the amount or depth of relationship support or behaviour a

enterprise quality management provides, the readiness level that followers exhibit in performing a specific task or achieving an objective" (Lowell, 2003, para.4). While employees still must be held accountable for performance at Unilever, the enterprise's quality management based on knowledge management principles should be concerned about the cultural effectiveness of the enterprise in ways that are related to innovation and the fostering of innovative environments.

4.4 Chapter Conclusion

There are numerous reasons to implement information and technology (IT) or information systems (IS) change throughout an organization or even across an industry. One of the most prominent reasons offered for implementing such change initiatives based on IT/IS platforms is that improvements in efficiencies allows organizations to widen their operating margins based on reduced labour requirements as well as increased quality and productivity metrics. In the case of Ghanaian firms, the quality program is intended to result in just such a change where cost savings is one of the primary objectives so that the department could meet budget requirements. These are laudable objectives but

unfortunately, such basic objectives rarely results in success relative to new quality oriented IT/IS platforms.

Many organizations fail to anticipate the associated influences that massive IT/IS strategies have upon an organization. Such a sea change results in uncertainty and doubt among the workforce with many employees fearing, justifiably so, that their positions may be targeted for removal because of the new IT/IS platform and the associated quality programs. Additionally, any IT/IS systemic makeover is accompanied by business process reengineering or BPR initiatives which examine and reconfigures how tasks are accomplished. Such changes introduce further disruption to regular routines and there is a period in which employees resist the new changes and routines.

As the literature revealed, all process improvement can be thought of as positive if planned and implemented appropriately. However, where process improvement and certainly improvements related to BPR, bears some downside risk is in how such strategies are managed or executed. Process improvement and BPR particularly is a necessary part of any organization's operations whether in a production environment or a service environment.

As Ghanaian firms are discovering, poorly managed BPR initiatives and strategies can result in real financial costs for an organization that are completely unexpected and on top of the costs associated with redesigning the process or processes in question. Clearly Ghanaian firms are having difficulties implementing quality oriented IT/IS platforms due to planning and execution issues such as the failed testing to ensure the platform functions as intended. In this light, a well-managed BPR exercises employs a series of monitoring techniques that are implemented at the first sign of distress which is usually indicated by a loss in revenue, a drop in productivity or a decline in quality metrics as is the case with some Ghanaian firms' poor feedback from their quality oversight programs. The planning

and execution of the BPR initiative then must be re-examined from one of these perspectives as well as from the perspective of the three project and process management core pillars which are time, quality and cost.

Process improvement should only implemented if an organization is able to identify and determine that the result of the BPR initiative will result in real gains in efficiency, cost savings, or quality from an organizational perspective. Clearly, Ghanaian firms must update their IT/IS infrastructure but many seem to have overlooked some basic BPR policies. Additionally, much of the downside risk associated with such BPR initiatives within a quality project is not even directly associated with the process improvement itself but rather with the human capital that is involved with the process or processes. Failure to incorporate the input from employees directly affected by the BPR activity results in their being alienated and perhaps not effectively utilizing the improved process improvement for the full benefit of the organization. Considering the extreme negativity from the feedback of some of the survey respondents Ghanaian firms have failed to incorporate important feedback into the BPR across many new IT/IS quality management solutions. This type of oversight delays the full implementation of quality oriented IT/IS platforms as well as prevents the organization from benefiting from its full cost-effectiveness.

Additionally, one of the most common perceptions regarding organizational change is that all organizational change is not only positive but also necessary. Generally, this observation is true in the respect that truly innovative companies or organizations are characterized by change and the willingness to embrace change. Change that tends to occur just for change's sake is indicative of poor strategic vision on the part of leadership and executive management within the typical Ghanaian firm. The issue seems to be that many organizations credit change and change management for the improvements they have benefited from. However, what these local and international organizations often overlook is

that quality oriented IT/IS industry best practices as they relate to quality improvement are not actually focused on change itself but on true innovation.

BPM and BPR as they related to quality management are primarily IT enabled meaning that the level of business processes targeted is uniquely dependent on analysis of variation of performance related data in order to eliminate variation in processes. A business process variation is any result that falls outside of accepted or established tolerance levels for the product or service or, in terms of business performance management methodologies such as TQM, Six Sigma, or similar in which many BPR initiatives are contained, that vary above or below the upper and lower control limits of accepted process or task results. Often, these principles are applied within manufacturing or production oriented operations where variation in many organizations is the assignable cause material and financial variation where cash flow analysis can be used to determine risk factors of which the factors causing the variance are readily identifiable and should be corrected immediately. Following this, the Ghanaian firms can then target the related tasks that produce the financial variation for improvement.

BPM and BPR and associated IT/IS applications are powerful quality management tools that can be implemented to improve or better understand the performance of any Ghanaian firm. However, certainly they are such that their application and use seeks to build a business case for continual financial, operational, and customer satisfaction performance improvements over time. BPM and BPR are value-driven solutions for IT and IS initiatives which can significantly change the character as well as the output of a Ghanaian firm for the better through more comprehensive understanding of an organization’s business activities.

Key Internal Factors	Weight	Rating	Weighted Score
Strengths			
The quality management IT/IS plan should be approved by the company's planners	.20	4	.80
Technology is being effectively used to support quality management activities	.10	3	.30
Systematic placement of the IT/IS infrastructure is now being physically implemented	.10	4	.40
Quality management is considered to be fully integrated	.05	3	.15
Weaknesses			
The funding for the quality management plan has come from a variety of financial devices	.20	1	.20
The company's Technology Department is understaffed	.15	1	.15
The employee to available computer terminal ratio varies throughout the work day	.15	1	.15
There is no current method to document and assess how technology is being used individually in all workstations relative to quality management and oversight	.05	2	.10

Total	**1.00**		**2.25**

	IFE Key
1	Major Weakness
2	Minor Weakness
3	Minor Strength
4	Major Strengths

Enterprise quality managers at Unilever, in respect to their various roles and activities related to the four functions must be able to recognize the nature of their duties and responsibilities within each specific category. In this sense, where some managers might call management of quality at Unilever a science, knowledge oriented enterprise quality managers at Unilever should call management of quality at Unilever and enterprise quality management in general an art where the four functions of planning, coordinating, leading and controlling are all equally balanced. Some researchers state that this art form related to knowledge is based primarily on soft skills rather than hard skills: “The art of enterprise quality management, however, is more difficult to learn and comes about from keen perception, excellent listening skills and plain old experience” (Peck, 2003, para.3). It might be best to refer to this soft side of management of quality as it should be implemented at Unilever Ghana, as the ability to make decisions and assessments, not as operationally oriented per se but in a manner that could also be termed as operationally visionary.

Unilever Ghana should begin to implement a system to collect and categorize its knowledge capital in a way that makes this knowledge capital accessible to the other employees. This ability would improve the overall effectiveness of management at Unilever

Ghana: “establishing a more disciplined way to evaluate and execute ideas, meeting with operations about innovative manufacturing processes, and scouting global markets for new devices” (2006, para.11). While managers would still be concerned with increasing productivity and establishing cutting edge efficiencies, they would realize that within the contemporary systems model maintaining such effectiveness long-term requires establishing an equitable work environment that is conducive to shared knowledge. Such a work environment is one in which the employee is fulfilled in terms of professional accomplishment and recognition as well offered a structured environment where control is readily visible in the work structures. This is also a knowledge process that would enhance enterprise quality management at the firm as well as decision making.

Both management of quality at Unilever and enterprise quality management speak to the same ability to make decisions. An inability to make decisions in either role is unacceptable since all employees in any given enterprise look to management of quality and enterprise quality management to provide guidance. Managing quality at Unilever Ghana, by definition, is ensuring that others, or other functions and processes, perform according to plan and expectation based on the decisions that the manager has made: “A manager turns one person's talents into performance. A manager acts as a facilitator to speed up the reaction between the talents of the person and the goals of the enterprise. A manager's focus is on the success of each individual” (Vosburgh, 2005, para.8). Enterprise quality managers at Unilever tend to operate outside of the limelight because they are concerned with smooth and appropriate functioning of the enterprise. This is an aspect that is most often accomplished by careful enterprise planning that is nothing more than conscientious application of resources.

Additionally, of the five top reasons that businesses like Unilever Ghana might fail, three of them are specifically related to knowledge management. In this case, knowledge

management in relation to quality competencies or skills with respect to decision making: 1) business knowledge, management of quality at Unilever skills, and adequate planning (Rao, 2001, p.119). The role of managing quality at Unilever Ghana as a functional role based on decision making is essential to the enterprise's strong economic performance and consistency. Decision making within the contemporary business environment is perhaps the most critical but intangible skill a manager must possess but is also relies on knowledge management and quality processes.

The study revealed that Unilever Ghana Limited, even though a MNC does not joke with innovations at all. The organization even though big in size adopts small innovations principles and that makes it bigger.

Big business is vastly different from small business. The big company CEO has the knowledge of how the business works to put the innovation in context but lacks the time with customers and outside information required for innovation. As a small business owner, you have the innovation edge, spending up to 80% of your time at the innovation point meeting customers.

Unilever endeavour to satisfy the under listed seven (7) principles of small innovations.

(i) Free Time - Time is a necessary resource for innovation. You do not need a 25-hours day to solve your time resource problem. It's simply a matter of clearing your business from the chitter of old time consuming practice, outdated technology, time wasting habits, and using outsourcing.

(ii) Collect Ideas - Innovative ideas can occur at any place or anytime. The best way to grab the small innovative ideas is not to discover them and think

about it later. It's too easy to forget or quickly rationalize that it's too simple. Just carry around a small packet notebook, a tape recorder, or a few sticky notes.

(iii) Look Outside - No matter how good an innovation is used not only the knowledge and skills within your business but outside resources to succeed including capital, joint ventures, strategic alliances, and strong relationships with suppliers.

(iv) Be customer centric - While applying innovation to your business, it's easy to see the advantages from your perspective while missing the customers' view. Big companies are notorious for innovating on the insider with innovations such as self-service to time stressed customers. If the innovation makes you feel uncomfortable but delights the customer, you are probably on the right track.

(v) Use all type of Innovation - Many of us think of small innovations as an improvement on an existing procedure, operating, or product. This form of innovation is linear and is often necessary to make your business better. But other forms of innovations exist such as the unexpected or simple innovation. Small innovations can end up being a big innovation even when they appear simple at first. In 1998, Google's founders were busy building the code for the search engine and needed a home page so they put a simple page with lots of white space. This simple small innovation was instrumental to Google's success and led to faster download times.

(**vi) Ask the Right Questions** - If you are asking customers for feedback on your products and services you will get a few innovations around those features. To play the innovation game, ask the customer what their experience was like.

(vii) Make a Daily Habit - Innovation does not often occur in a meeting or a desires time. Small innovations occur at anytime and any place. Make it a daily practice to apply innovation to your small business and implement your ideas.

Innovation has no geographic boundaries and the game of innovation is open globally and locally. Your small business can gain the competitive advantage by applying the seven principles of small innovations.

Unilever Ghana Limited has the following as its mission "our mission is to add vitality to life. We meet everyday needs for nutrition; hygiene and personal care with brands that help people feel good, look good and get more out life." It was observed from the interviews of people that Unilever Ghana has lived and continue to live up to their mission.

The company has in place scholarships scheme for brilliant students at the public universities in Ghana. This initiative also fits into the mission of Unilever. It also funds and sponsor's the best journalist of the year on yearly basis.

Unilever Ghana has comprehensive quality and consumer safety police in place. Unilever Ghana Limited is committed to consistently supplying safe and superior quality products and service to meet the needs of consumers and customers in our chosen markets. The company and all employees are committed to continually exceeding the expectations of consumers and customers by designing safety and quality into all the Company's products and processes.

To achieve the above policy, Unilever Ghana does the following-:

- Design, operate and maintain processes and plants to ensure that all products are safe meet both Unilever and existing national mandatory and regulatory product safety standards.

- Operate a mandatory toxicological clearance system for all ingredients, formulations, packaging and processes.

- Establish and maintain standards and procedures for the control and monitoring of all operations that present potential consumer product safety hazards. The Company utilizes Hazard Analysis Critical Control Point (HACCP) and Good Manufacturing Practices to underpin the product quality and safety systems.

- Extend the quality and consumer safety practices to all aspects of the supply chain including sourcing of ingredients, packaging, formulations, manufacturing process, storage, distribution, usage and disposal of waste.

- Manage the outbound supply chain to ensure brand integrity and protect consumers' health.

- Implement the Quality Demerit Index system to monitor the quality of products on shelf and in use.

- Operate a Consumer Information Care line to promptly and effectively address any concerns or queries.

- Provide necessary product information, including safe handling procedures, to customers, consumers and other stakeholders.

- Deal promptly and thoroughly with any complaints related to product safety and quality to guarantee consumer and customer satisfaction. Actions include recalling from the market any product that could potentially harm customers.

- Encourage the culture of continuous quality improvement throughout the supply chain.

- Educate employees on their Quality and consumer safety responsibilities and equip them with adequate authority, techniques and tools for successful performance of the assigned duties and tasks.

The Supply Chain Director is responsible for the implementation and sustenance of the Quality and Consumer Safety Management System.

The CEO has the overall responsibility for product quality and safety and together with the Board review the effectiveness of the policy regularly for continuous improvement.

Unilever Ghana Limited uses International Organization for Standardization (ISO) 14001 because it is Unilever Inc. Approved.

The ISO 14000 family addresses various aspects of environmental management. The very first two standards, ISO 14001: 2004 and ISO 14004: 2004 deal with environmental management systems (EMS).

An EMS meeting the requirements of ISO 14001: 2004 is a management tool enabling an organization of any size or type to:

- Identify and control the environmental impact of its activities, products or service;
- Improve its environmental performance continually;
- Implement a systematic approach to setting environmental objectives and targets, to achieving these and to demonstrating that they have been achieved.

ISO 14001: 2004 does not specify levels of environmental performance. It is specified levels of environmental performance, they would have to be specific to each business activity and this would require a specific EMS standard for each business. That is not the intention.

ISO has many other standards dealing with specific environmental issues. The intention of ISO 14001: 2004 is to provide a framework for a holistic, strategic approach to the organization's environmental policy, plan and actions.

ISO 14001 gives the generic requirements for an environmental management system. The underlying philosophy is that whatever the organization's activity, the requirements of an effective EMS are the same.

This has the effect of establishing a common reference for communicating about environmental management issues between organizations and their customers, regulators, the public and other stakeholders. Because ISO 14001: 2004 does not lay down levels of environmental performance, the standard can be implemented by a wide variety of organizations, whatever their current level of environmental maturity. However, a commitment to compliance with applicable environmental legislation and regulations is

required, along with a commitment to continual improvement – for which the EMS provides the framework.

ISO 14001: 2004 specifies the requirements for such an environmental management system. Fulfilling these requirements demands objective evidence which can be audited to demonstrate that the environmental management system is operating effectively in conformity to the standard.

ISO 14001: 2004 is a tool that can be used to meet internal objectives:

- Provider assurance to management that it is in control of the organizational processes and activities having an impact on the environment.
- Assure employees that they are working for an environmentally responsible organization.

The standard can also be used to meet external objectives:

- Provide assurance on environmental issues to external stakeholders – such as customers, the community and regulatory agencies.
- Comply with environmental regulations
- Support the organization's claims and communication about its own environmental policies, plans and actions

- Provides a framework for demonstrating conformity via suppliers' declarations of conformity, assessment of conformity by an external stakeholder – such as a business client
- and for certification of conformity by an independent certification body.

The ISO 14001 standard:

It is a fundamental principle of ISO 14001 which governs environmental management systems that organizations set their own goals, based on whatever considerations they wish to include, such as the demands of customers, regulators, communities, lenders or environmental groups. The ISO 14001 standard provides a framework within which to develop plans to meet those targets, and to produce information about whether or not the targets are met.

An important benefit of adopting ISO 14001 is to give stakeholders the reassurance they need that the organization's environmental claims are valid.

The ISO 14001 standard is intended to be flexible, and to be of value in a wide variety of situations. However, it is applicable most readily to large companies that already have a formal management system in place, and which have the expertise and resources to incorporate environmental issues into that system.

However, the principles have been designed to apply also to smaller businesses, and to non-business organizations. In general, conformance with one of the international standards can lead to the implementation of other standards. For example, once an

organization has implemented ISO 14001, it is easier for it to satisfy the requirements of EMAS (the European Eco-Management and Audit Scheme).

In Ghana, where Unilever Ghana Limited is incorporated, the regulatory body of standards of institutions is known as Ghana Standard Board (GSB). Unilever is linked to this Board for product certification, periodic meetings, representation on technical committees, and the like.

GSB was established by the Standards Decree, 1973 NRCD 173 with the following aims.

- To establish and promulgate standards with the object to ensuing high quality of goods produced in Ghana either for the local or export markets.
- To promote standardization in industry and commerce.
- To promote industrial efficiency and development.
- To promote standards in public health and industrial welfare, health and safety

In the light of the above, the GSB is the National Statutory Body responsible for the quality infrastructure of Ghana embracing Metrology, Standards, Testing and Quality Assurance (MSTQ).

A sound quality infrastructure is a necessary condition for the systematic and sustainable development of quality capabilities that will enhance competitiveness of products of local companies on both the local and international markets

The mission of the Board therefore, is to contribute towards the enhancement of the quality of life of people living in Ghana through the promotion of standardization.

For the purpose of enhancing the competitiveness of Ghanaian products, the GSB undertakes the following core activities for industries, including Unilever Ghana Limited.

- Standards Development
- Metrology
- Systems Certification
- Product Certification
- Inspection and Testing
- Training for Industry

In order to ensure effective coverage and compliance, the GSB has decentralized its activities into the countryside to cover the whole nation.

The regional offices supervise and coordinate all the standardization activities involving Metrology, Standards, Testing and Quality Assurance.

In order to enhance the competitiveness of goods/services distributed internally and outside Ghana, GSB offers the following services.

1. Certification Services

* Certification of Products
* Certification of Quality Management System

2. Standards Development

* Development of National Standards based on applicable international standards.
* Assistance to organizations to develop standards that are harmonized with those of the target markets.

3. Metrology

* Calibration and verification of weights and measuring devices, on trade, industry, research and medical field.

4. Inspection Services

* Factory Inspection / Factory Quality Audits
* Inspection of consignment of selected imports (High Risk Goods) under Destination Inspection
* Inspection of consignment of exports (fish) destined for EU and Japan markets.

5. Testing Services

* Testing of products in the following areas

- Food, drugs, cosmetics
- Materials and General and Household chemicals
- Engineering Products
- Forensic and toxicological samples

6. Training for Industry

* General training programs on Standards and Quality

* Tailored training programs designed for specific industries.

7 Technical Information and Library Services

* Sale of Standards
* Dissemination of information on relevant Trade Regulations, Technical Regulations, Standards and Conformity Assessment Procedures to importers, exporters and other economic operators.
* Provision of information on WTO /TBT agreements to interested parties through the WTO /ITC National Enquiry Point.

8 Consumer Protection and Public Education

* Public Education on standards and Quality to create quality consciousness.
* Market surveillance on products certified by GSB.
* Market surveillance on products without GSB certification.
* Surveillance on the misuse and abuse of Mark of Conformity.
* Factory Quality Audit (in between certification visits to ensure continued Compliance of relevant products with applicable standards).
* Addressing consumer complaints.

9 Purpose of Services rendered

* To promote and enhance the growth of industry.
* To reduce the proliferation of sub-standard goods.

Standards Development

The GSB develop national standards for the promotion of quality in trade and industry. Standards development covers the following areas.

- Product standards for industrial goods including standards for Non-Traditional Exports (NTE's).
- Methods of Test.
- Codes of goods manufacturing practice
- Glossary of Terms.

1. Harmonization of Standards

These Ghana standards have been harmonized with international standards. The GSB also helps individual organizations to produce company standards that are harmonized with target markets.

2. Standards Development

National Standards are developed through Technical Committees and their Sub-Committees. The committees are made up of representatives of the relevant stakeholders in a particular subject area or industry sector.

The following are the stages involved in the development of Standards.

Stage 1 - Request for the development of Standard in a particular subject area or industry sector.

Stage 2 - Consideration of request and approval.

Stage 3 - Request referred to the relevant Technical Committee.

Stage 4 - Preparation of Working Draft.

Stage 5 - Consideration of working draft by Technical Sub-Committee (SC) members.

Stage 6 - Consideration of working draft document by Technical Committee (TC) members.

Stage 7 - Draft document circulated among interested bodies, other standards Bodies etc for comments (Public Comments stage).

Stage 8 - Final Technical Committee (TC) meeting to consider Comments from public comments

Stage 9 - Editing and publishing of documents.

Stage 10 - Gazetting at the Standard through the Legal Unit of GSB and the Attorney General's Department. (It takes not less than six (6) months, on the overage, to develop and gazette a standard).

Need for National Standards

The implementation of national standards is intended to streamline production processes so as to ensure higher efficiency and productivity for the economic utilization of resources.

Storage and Sale of Standards

The GSB has a library which houses all developed Ghana Standards for varying products categories ranging from food, drinks, drugs, cosmetics, electrical products, plastics, textiles, paper. Leather, paints, wood and wood products to other engineering products.

These standards are sold at the GSB library at reasonable prices. The library also has in stock other foreign and international standards. The GSB information centre has the most comprehensive collection of standards and related documents for Ghana as well as collections from;

- International Organization for Standardization (ISO)
- Codex Alimentarius Commission (CAC)
- International Electro-technical Commission (IEC)
- Great Britain
- USA
- India
- Japan
- South Korea
- Malaysia
- Sri Lanka
- Germany
- Nigerian
- Kenya
- Ethiopia
- South Africa and other African countries among others.

The centre has over sixty (60) CD ROMs on various fields of standardization, import/export requirements as well as quality requirements for WTO and other countries. Its also has information on trade, technical, legal and regulatory requirements for business access to foreign markets.

It houses over three thousand (3,000) books and reference materials in the form of trade directories, encyclopaedias, project reports and periodicals.

Help offered by GSB to exporters.

The centre helps exporters, importers and the business communities to:

- Identify Standards, Trade Regulations, Technical Regulations and Conformity Assessment
- Procedures applicable in importing countries so as to be able to make informed decisions regarding their capabilities of performing specific contracts.
- Stay on step ahead of changing requirements in the global market.
- Increase their competitiveness on domestic and foreign market.
- Reduce cost by discovering the conformity assessment procedures in the country of export and have their products tested by GSB.

The centre is also the WTO / TBT Enquiry Point (established in 1999) and therefore handles all enquires from the business community, as well as interested parties and provides the necessary information about trade regulations, technical regulations, standards and conformity assessment procedures adopted or proposed within Ghana as well as WTO

members. The centre acts as a storehouse for information on WTO /TBT Agreements and notifications from other WTO Member countries.

Metrology

Metrology is the science of measurement. Here the GSB is responsible for the activities in the following areas.

- Legal Metrology
- Industrial Metrology
- Scientific Metrology

  Scope of work is in the areas of Measurements
- Mass Measurements – weights, balances and weight bridges
- Flow measurements – storage tanks/flow meters.
- Dimensional / Linear measurements
- Pressure and force measurements
- Crane testing
- Temperature measurements
- Electrical Parameters measurements
- Time and Frequency measurements

The scope of work cuts across the following setups or establishments.

* Hospital and medical centres

* Food and pharmaceutical industries
* Engineering manufacturing industries
* Mining Companies
* The petroleum industry and petroleum products retailing outlets
* Fabricators of Storage tanks and other measuring devices
* The cocoa industry
* The transport industry and
* Research and educational institutions

The Metrology Division of GSB also offers the following services.

* Assessment and certification of design of weighing and measuring equipment as to their suitability for trade and to ensure conformity with statutory requirements (i.e., patter /type approval certification).
* Organization of training workshops / seminars on measurements for industry with regards to the use and calibration of process control equipment.
* Organizing of training workshops /seminars on measurements and related subjects for industry personnel, users of trading instruments and/or equipments e.g., pump mechanics, purchasing clerks, fuel dealers.
* Provision of Technical Advisory / consultancy services to government, Public bodies and industrial establishments on all aspects of measurements.

Certification

System Certification

Trends in international trade indicate strong and growing demand for quality goods and services. Quality is increasingly becoming the key to business success and passport to international market.

Significant changes in the market conditions that have contributed to this measure include:

- The general acceptance of ISO 9000 as the international standards for Quality Management Systems by the World Trade Organization (WTO) and other major trade organizations.

- The systematic reduction of tariff and non-tariff barriers in trade.

- For a given product on the current borderless international market, there are hundreds of suppliers.

As a result of these developments, large scale buyers are no more interested in spending time and money on testing of samples before making orders. In this regard, the onus now lies on the supplier to prove that he (Supplier) has in place a documented quality system that ensures that his goods and services consistently meet the requirements of the applicable standards. This assurance / evidence are provided through the certification to ISO 9000 Quality Management System Standards.

In view of the above and in order to assist the private sector become competitive on the global market, GSB is implementing a project on ISO 9000 Quality Management Systems. The project seeks to:

- Assist companies from the strategic sector and trade organizations to attain certification to ISO 9000 Quality Management Systems.

- To train Lead Assessors to become consultants in the design and installation of ISO 9000 Quality Management Systems.

- To develop local capacity that will provide consultancy and certification services to local companies at affordable prices.

The GSB has taken this initiative to bring this important service to the Private Sector. In this regard, export – oriented companies are being encouraged to take advantage of this to transform their business and to export high quality goods to enable Ghana generate desired foreign exchanged for national development.

Certification to ISO 9000 Quality Management System:

- Improves cost-effectiveness
- Improves business performance and productivity
- Provides the means of identifying and resolving organizational problems and instituting measures to prevent their recurrence.
- Provides objective evidence that can be used to demonstrate the quality of an organization's products/services.
- Helps to improve customer (both internal and external) satisfaction to enhance company profits.

Special ISO 9000 training programmes can be provided to meet specific needs of organizations. Clients interested in ISO 9000 training programmes are required to contact GSB for necessary assistance.

Product Certification

Apart from the newly established Quality Management Systems Certification Programme, the GSB also operates a product certification scheme which provides confidence to customers that the goods they buy meet the requirements quality image of "made in Ghana" goods. This is because an independent body attests to the quality of the product through the use of a "Mark of Conformity" Product certification therefore provides a means of winning consumer confidence and goodwill.

The Ghana Standards Certification Mark Rules, 1970. LI 662 mandates and enjoins all procedures / manufactures to obtain a valid license to use the GSB Certification Mark on any locally produced goods before they are –exhibited for sale, sold, distributed, prepared for export or exported.

In line with the above and to attract the necessary public confidence in locally produced goods it is important that manufactures subject their goods to the GSB's Product Certification Scheme.

The procedure for the scheme is as outline below.

* A client or producer applies for license to use the "Mark for conformity "on his product. The application is made on a special form, GSB Form XPC – CUS-DIR-FM-001 (CM1) and a copy of the Ghana Standard for the product

is procured from GSB. The completed application form is then submitted together with two copies of the company's registration certificate from the Registrar General's Department.

* The completed application form is processed and the initial factory inspection is carried out to assess its Quality Management System. This is followed by initial sampling and laboratory analysis of the samples taken.

A preliminary Certification Mark meeting is held at the divisional level to assess and approve of inspection and test reports received from the laboratory.

Products that meet the applicable product standard (s) are recommended for consideration at the main certification Mark Committee (CMC) meeting.

* The final stage of the process is the consideration of products that have passed through the preliminary CM stage at the main Certification Mark Committee (CMC) meeting. Companies whose products are approved at this meeting are then issued with licenses, which authorize them to use the Board's" Mark of Conformity".

* The License has a validity period of one year and it is renewable for the same period.

* Products certified by GSB are regularly followed by routine quality audited by GSB inspectors and market surveillance.

Products that have been certified by the GSB normally bear the “Mark of Conformity” also called “Certification Mark”

In order to eliminated the rampant abuse of the Certification mark by unscrupulous manufacturers the GSB has evolved a system which uniquely assigned numbers to the Certification Mark to correspond with companies registered with the Board.

Testing and Inspection

Testing involves Technical operations that consist of the – Determination of one or more characteristics of a given products, service or process according to specified procedures or test methods.

Among the reasons for making measurements and for that matter testing of products include

(i) Away of valuing goods for trade purposes

(ii) Checking the quality of the product for regulatory and certification purposes

(iii) Supporting health care and safety implications

(iv) Analyzing to confirm suitability for use

(v) Investigations and research for product development

(vi) Quality control assurance activities in industry.

The GSB has two (2) technical divisions responsible for the testing of all categories of products. Those are the;

* Chemical Science Division (CSD) in charge of

(i) Food and Agricultural Products

(ii) Drugs, cosmetics and Forensic Products

(iii) Microbiological analysis with respect to the above products

* Physical Science Division (PSD) responsible for

- Materials, general and household chemicals
- Mechanical Engineering products
- Electrical Engineering Products
- Civil Engineering Products Inspection

As part of the certification programmes, the GSB, is involved in the inspection of factories to ensure that they have the capabilities to produce goods that would consistently meet requirements of the applicable standards.

Also in place are market surveillance programmes. These are follow-ups in the open market on products certified by GSB to ensure that they consistently meet the requirements of the applicable standards.

Apart from the normally factory inspection and inspection of locally produced goods, the GSB has a Destination Inspection Department. This unit deals with the inspection of imported “High Risk Goods.” The department, among others is to ensure that

these goods imported into Ghana are of acceptable quality and comply with the requirements of Ghana Standards to which locally manufactured goods are also tested. This activity eliminates the dumping of sub-standard goods on the local market.

Scope of work involves the inspection of imported

- Food items
- Alcoholic and non alcoholic beverages
- Pharmaceuticals
- Chemicals
- Second-hand goods (Clothes)
- Electrical and electronic products
- Pyrotechnic products
- Arms, ammunition and explosives

The above items have been classified as “high risk goods.” Functions of the Destination Inspection Department are”

- Inspection Examinations of imports (High Risk Goods).
- Sampling of High Risk Goods at the designated Entry Points for testing (Quality Evaluation).
- Verification and processing of documents of the importers for clearance of Imports.
- Co-ordination of analytical and testing services provided by the GSB laboratories on the “High Risk Goods”.
- Provision of technical support to importers as for as Destination Inspection Scheme is concerned.

The department has offices at the following places in Ghana

- GSB headquarters, near Legon.
- Kotoka International Airport (KIA).
- Tema Port
- Takoradi Port
- Elubo
- Aflao

Training programmes for industry, exporters, importers, Government Agencies, departments and the general public-:

The GSB has a number of training programmes for economic operators in trade, industry and commence. These training programmes are structured in such a way that beneficiaries are equipped with the relevant knowledge and skills so that they can deliver quality goods and services according to international standards.

Programmes are usually for quality control, production and other relevant personnel in all categories of the manufacturing, production and processing industries (goods, pharmaceuticals, cosmetics, and plastics engineering industries). Areas normally covered in such programs are quality standards, standardization, quality assurance, good manufacturing practices and related subject matter.

Some of the programmes are-:

(i) Training of quality control officers from food industry in good Hygiene Practices and Hazard Analysis and Critical Control Points (HACCP).

(ii) Training analyst for the pharmaceutical and cosmetics industry.

(iii) Training programmes for the law enforcement personnel in the technical aspects of narcotic and psychotropic substances.

(iv) Training programmes for fish processors, fish exporters and fish establishments.

(v) Training programmes in ISO 9000 Quality Management Systems (Training and assisting organizations in the design and installation of ISO 9000 Quality Management Systems).

(vi) Training programmes for fuel /petroleum products dealers in weights and measures.

(vii) Training programmes in measurement systems for industry.

(viii) Training programmes for pump mechanics of the oil marketing companies.

(ix) Training programmes for purchasing clerks and farmers in the correct use of weighing scales in the cocoa industry.

(x) Training programmes for members of trade group associations e.g. Association of Ghana Industries (AGI) and Ghana Real Estates Development Association (GREDA).

(xi) Training programmes for small scale product groups or associations, e.g.

- Small scale carpenters and wood processors.
- Footwear producers
- Batik tie and dye producers
- Drinking sachet water producers
- Sand Crete and pavement block manufacturers.
- Metal fabricators

(xii) Training programmes on packaging and labelling

(xiii) Training programmes in the application of standards in Trade and Industry.

(xiv) Training programmes on the role of Weights and Measures in Industry Commence.

(xv) Training programmes for operators in the export and import business.

(xvi) Tailored training programmes for specific industries.

In addition to the above;

* GSB is the United Nations Drugs Control Programme (UNDCP) Regional Training Centre of Africa for the training of analyst and law enforcement

personnel from Anglophone African countries in the analysis of controlled drugs substances.

* GSB organizes training course in mycotoxins for scientists in the Gambia.

Chapter V: Findings, Conclusions and Recommendations

5.1 Introduction

This study examined the concept that corporate quality management programs, due to the increasing prevalence of globalism as a financial, economic and commercial world eco-system regardless of company size, has become requisite in the transaction of a business' commercial enterprise. This observation has been applied specifically to the Ghana market and Unilever as one of the market's most prominent international firms. Further, this study examined the current role of corporate quality management programs in organizations with the intent of establishing a baseline of how quality management influences the effectiveness of that organization, and then extending the conceptual inquiry into the role that corporate quality management has on an enterprise of Unilever's size but also the small to medium (SME) enterprise which is more prevalent in Ghana within the framework of the Ghanaian market. For corporate quality management programs are a business critical activity as they relate to most corporate activities including culture, teamwork, and management. In other words, corporate quality management is uniquely related to the SME's internal effectiveness, its financial success and its externally oriented interactions with the Ghana marketplace.

Corporate quality management programs as a discipline are often the orphan child of academic research since they are difficult to quantify in concrete terms. Thus, they are often left to such fields as organizational management and examined only in the confines of academia. However, as Shulz states of corporate quality management, “While it may be dismissed as soft, it is actually the hardest part of managing any enterprise...” (2001: para.1). Corporate quality management programs and management of them are often the most difficult task of senior management to define and make use of. Shulz goes on to compare the quality management within an organization to that of an individual by stating that an organization, just as an individual, must achieve maturity through quality of the quality process within cultural framework of the organization(2001, para.6). He determines this necessity of maturity based on years of personal observation in the field as a consultant and through years of industry research. This corresponds to other research that has correlated ethical performance with the degree and integration of quality characteristics of an organization (Fearn-Banks, 2002: 88). The implication that can be drawn from this research is that organizations with personality-based leadership and cultures are often most inclined to lack meaningful and formalized quality management processes because these types of SME’s and organizations rely solely on the personality of the leadership to solve problems rather than any specific quality program. Therefore, it becomes clear that organizations that fortify quality management structures with textual collateral and a well-defined value system based on a mission statement and even a slogan intended to elevate the importance of quality management within the SME are less likely to rely on ineffective quality transactions.

Additionally, organizations with such well-conceived corporate quality management structures tend to attract the best candidates, who are increasingly demanding a meaningful relationship between themselves and the hiring company. These well-conceived quality

management program structures indicate to potential employees that the organization is genuinely interested in seeking their opinion and input. It has been determined this emerging demand of potential recruits through a survey of corporate quality management programs courses conceived to attract potential candidates because corporations learned, as the research indicates, that quality begins with people. In this sense corporate quality management programs are a result of environmental influences and the many research authors often report difficulty in gaining access to top-level executives to further relevant research.

5.2 Findings

Contemporary firms such as Unilever have learned that knowledge is intrinsically related to the creation of value. Value creation is dependent in turn upon the processes of change as intellectual capital is identified and then converted into actionable knowledge. One specific method that allows companies to not only introduce such change but to also develop a long-term competitive advantage is the ability to effectively view knowledge as a resource (Marr, 2008). Knowledge in a firm such as Unilever Ghana results in a process that can be defined as the capacity of a firm in order for it to gather or collect and then share and make available all of the various types of knowledge within the firm (Laff, 2008). In so doing, a firm such as Unilever Ghana ensures that its employees are able to learn and create value centres individually. However, it also ensures that this knowledge becomes part of the common intellectual capital of the firm itself. Increasingly, firms have resorted to IT and information systems (IS) strategies as a method to convert knowledge into actual value to the firm.

Thus, technology has had a profound influence in not only how a manager executes his or her responsibilities but also how enterprise quality managers at Unilever in themselves are developed. IS applications greatly facilitating managerial development with respect to leveraging enterprise knowledge? Essentially, by integrating knowledge development programs into the technology infrastructure of a firm such as Unilever Ghana, a firm such as Unilever Ghana's executives can greatly enhance the firm's managerial contribution to the firm's strategic outcomes (Thierauf, 2003). These resulting contributions in turn create value where previously none existed.

IT and IS systems that are managed within a firm such as Unilever Ghana's IS department, are ideal for this particular type of solution because employees have access to raw information and data. Such access to raw information and data that is provided by IT and IS platforms can be manipulated into actionable knowledge and intelligence. This

actionable knowledge and intelligence is the type of corporate knowledge that leads to firm strategy at all levels of the enterprise. There is a great number of IT or IS applications that firms typically resort to in order to better manage their internal and external knowledge. Yet, some of the largest applications are enterprise resource planning suites or ERP solutions and even such solutions as wikis, among others. Although applications like ERP platforms span across the entire enterprise and its operations, they also engender the capability to collect and amass data and to draw relationships between such data.

The result is that the creation of value in the contemporary business environment is now intrinsically related to technology solutions. IS has not only organically affected the operations of the typical firm but has also affected the firm's intelligence use with respect to how knowledge is gathered, assessed and then distributed across the enterprise. These observations are supported in the research which reveals that technology is an enabler of talent: "Technology often plays a role by providing tools for ongoing LD for managers and executives, and more enterprises are searching their ranks for rising stars and nurturing their skills to build a pool of future enterprise quality management talent"(Barron, 2004, para.7). Furthermore, though raw data and information is normally customized depending upon a firm such as Unilever Ghana's LOB, most IT or IS application providers have some type of knowledge oriented solution.

This integrated knowledge and intelligence strategy within a firm such as Unilever Ghana's internal IT platform results in an actionable system that has changed the role of management of quality at Unilever in the contemporary enterprise. Essentially, if a firm such as Unilever Ghana is going to create value where previously none existed and base that value on the firm's knowledge and intellectual capital, then it must have the necessary IS infrastructure to support these efforts. The point is such that unless knowledge is

accessible across the entire firm it is difficult to create a business strategy that can be properly executed and this is the prime focus for Unilever Ghana.

Contribution to Academic Knowledge

Much of the contribution that this project makes to professional and academic research lies in its recognition that quality management and oversight relies on much more than quantifiable data. Although quantifiable data is important and every firm should be adept at collecting, analyzing and creating actionable intelligence from such data, this is not enough from a quality standpoint. Clearly, this project supports the supposition that quality management is directly relevant to competitive advantage as well as brand equity of a given firm and a host of other competitive considerations. Yet, companies like Unilever Ghana must recognize that the implementation of a quality program is not an end-all be-all type of solution. Rather, quality management programs themselves need to be open and accepting to change processes.

Traditionally, quality management programs have focused on introducing change to the enterprise in some respect and stressing the importance of changing or being willing to changing how things are normally accomplished. The importance of this project lies in its recognition that knowledge management procedures and strategies are the ideal continuation for most quality management programs. This is because most quality management programs rely on fixed models and procedures such as benchmarking and best practices which then become codified in their own right. Thus, by recommending that knowledge management be incorporated within any quality management program but certainly within Unilever Ghana's quality management program, this project begins to introduce both the professional sphere as well as the academic sphere to a new series of possibilities.

Many research projects tend to approach the study of a quality management program and quality management outcomes from the perspective of how these fit within a value chain. Normally, a value chain is designed to demonstrate those areas within a company where the firm's true value is derived from. These typically centre on the firm's competencies such as Unilever's particular competency of manufacturing and production of CPGs for instance. Within such a value chain one of the links in the value chain would be the firm's manufacturing or production equipment or the firm's operators of this equipment or, alternatively, both. Yet, this type of value chain structure enforces the idea that quality outcomes are produced in fixed or isolated areas although the processes are also introduced in a variety of areas simultaneously. The idea is reinforced that regardless of whether the firm adopts a quality management program and ethos, individual departments are more suitable for it or are more appropriate for it than others. This is patently untrue.

In contrast, this present research project has informed the reviewer that quality programs themselves must be open to review and improvement. Even more importantly, this project illustrates that knowledge management is not just concerned with new product research and development but is also intricately related to quality management. In addition to confirming all of the hypotheses which attempted to undermine the very reasons that a quality management program is recognized for. In other words, this project contributed a substantial amount of knowledge management processes taking the typical quality management programs and processes and place them in an environment in which these programs and processes are viewed merely as part of the organization's collective knowledge base. The outcome is that quality processes and procedures can then be effectively integrated into virtually every decision-making effort of the company and at every level of the organization. While this implementation plan might prove too

fundamentally radical to implement at the outset, Introducing such as strategy ensures that potentially harmful contests do not develop for the firm's ownership or similar.

5.3 Conclusion

Contemporary corporate quality management program research has its foundations in conceptual research that first examined corporate quality management programs from a post-modern vantage point. The evidence reveals that the research is based on an examination of historical and contemporary corporate quality management programs from a post-modern viewpoint which emphasized the relationships between co-workers which implies that quality management is important in the post-modern corporation. The conclusion is such that the shift from an externally driven corporate quality management system, such as that based on an integrated corporate model which is driven by a command and control mentality, to a metrics driven corporate quality management programs model whereby individuals effectively internalize the quality processes, is due to the shift to a knowledge based economy. This evolution from command and control type corporate quality management models can be readily traced in larger multi-national corporations (MNEs) such as Unilever's where such models from the '80s and '90s where corporate headquarters tended to dictate everything and quality management was one-directional but was later decentralized to some degree. Unilever has empowered its individuals to affect

change in the corporation through quality management now which is not only a new approach for its quality management procedures but is a shift in its deep culture.

The relationship of corporate quality management relative to corporate performance in the marketplace is also a difficult relationship to quantify. This is because the relationship can be problematic and the character of the quality models in question cannot be deemed a factor. For example, one that is good or bad in nature. One could make the observation that the relationship between corporate quality management programs and performance is partially related to how such firms learn and adapt within their own particular market. The reason is that many organizations with normative characteristics of poor quality management infrastructure; for instance, unethical business practices and/or illegal auditing practices, might often be classified as a "strong-culture" albeit a misguided one. Sorensen bases much of his research on relationships between classically defined "strong-culture" organizations and their respective financial performances derived from financial ratios, such as debt to asset and debt to income, among other examples (2002, para.42). Other research has sought to draw relationships on the quality of corporate quality management and the academic institutions that educate the management structures of the corporate world. Some quality management program researchers point out that the corporate world is actually changing the education model of business schools by virtue of the characteristics that corporations demand of quality management training programs. This is an important area to examine because much of the corporate world has long relied on the respective education systems to train managers to be well-versed in current theory and to also provide them with a strong quality value system.

An example of the effectiveness of intentionally developing a corporate quality management infrastructure based on individuals trained to be so inclined in order to facilitate market performance is the best way to illustrate that corporate quality management

matters. Additionally, an example serves to illustrate that there is an ideal paradigm of quality management that can be blue-printed and modelled as seen in the Unilever example. Other major international firms such as Sunflower Electric Power are a prime example of a corporation that fuelled growth, change and improvement not by first improving its product or service efficiencies or changing its investment strategies, but by first changing its corporate quality management practices:

...Sunflower's...management team identified three key elements that made the transformation possible. First, many mid-managers were ready for a change and they knew it had to be deep, not superficial. Second, the Sunflower Board of Directors brought in a new CEO committed to breaking down organizational walls...as well as opening up decision processes...Third, the new CEO brought in an organizational quality consulting team...(Shulz, Hauck & Hauck, 2001: para.2)

Before improving its internal quality management patterns Sunflower first instituted deep and meaningful change at the organizational culture level which accomplished several things: 1) it demonstrated management's deep commitment to change and improvement, 2) it demonstrated ownerships willingness to make sacrifices at the top levels of management and 3) it gave employees a deeper understanding of their corporate culture and how it related to their ability to manage quality effectively both with peers as well as management.

But even more so, it facilitated the operational improvements that led to better financial and operational performance. This is seen in the sense that, "Sunflower enjoys an exemplary reputation...within the electric utility business...excellence in achievement in...Every measurable operating parameter, including rate decreases…amounting to 34%, an 89% increase in megawatt-hour sales... (Schulz, Hauck & Hauck, 2001: para.43). That so much success can be attributed solely to a re-examination of the corporate quality

management processes speaks volumes for the potential for positive impact on SMEs in Ghana which must continually search for new competitive strategies in order to sustain growth in the global economic framework.

A review of the emergent corporate quality management patterns with a global aspect is worth undertaking since the adoption of such quality management models is important to an SME's success in an increasingly global environment. Corporate quality management programs might best be defined as a flatter, more horizontally mediated quality management structure with decision-making authority residing more in localized management within Ghana than in far-flung or far-removed power structures which facilitates a greater degree of employee/employee and employee/management interaction and oversight. Some researchers have stated the reason for this new, emergent form of corporate quality management structures as being the emergence of the global economy itself:

As organizations research, innovate, and market goods and services in foreign nations, the level of competition from both domestic and international firms becomes more intense. Maintaining a competitive edge in a global, innovative, and dynamically evolving environment produces substantial pressure to redefine how business is conducted. A hierarchical, bureaucratic structure is less responsive in such an environment, and a flatter, more responsive organizational pattern is required... (Ulijin, O'Hair, Weggeman, Ledlow & Hall, 2000: para.4)

Given this increasingly networked and international business climate, even the smallest SME within Ghana is becoming a conceptual MNE at the same time in terms of how it incorporates quality practices and structures. With this in mind, one of the variables that can be used as a control in the respondent category is the position of the respondents within the organization. Finding and controlling effective variables lends a greater degree of

validity to research in quality management studies which is doubly important in such an area as corporate quality management programs.

The emergence of universal quality management patterns and structures within companies is a global quality and not isolated to Western organizations. Some research has indicated that developing a global aspect to a corporation's quality management patterns is also beneficial to the foreign SME in Ghana where clearly enacting quality objectives allows the SME to avoid some of the negative effects of a poorly enacted quality or misunderstood strategy or directions. These observations are easily derived from financial performance data of foreign companies that are publicly traded and cross-referenced with public records indicating any legal action the firm has been involved in which can be indicative of how well its internal quality management processes are functioning. Beneath the hypothesis that companies exhibiting more effective quality management patterns in their management structures are better performing is a key fundamental assumption which states that facilitating individual quality management processes allows employees to be more creative and thus more productive.

Corporate quality management programs often operate under the supposition that there is vast potential in facilitating a corporation's quality management infrastructure, even in the SME within the Ghanaian market. These types of observations lead to some healthy inquiry into particular cultural traits that might be examined in relationship to how these particular cultures enact quality among each other in the workplace. This is a critical aspect of corporate quality management programs in the global era where even the smallest SME is likely to have a diverse workforce consisting of employees and management with different racial, ethical, and socio-economic backgrounds. These observations are in fact based on largely anecdotal evidence and researcher interviews.

One of the societies often associated with such a generalization is the Japanese society, which also, interestingly enough, had the most difficulty in coming to terms with the global economy in that the lifetime guarantee of employment model no longer applied: “In a rapidly changing global environment requiring great flexibility by large firms, Japanese organizations' commitment to a rigid internal labour market supported by lifetime employment is declining...” (Sullivan & Peterson, 1991: para.44). The Ghana market can take some lessons from this example in developing its quality management structures in tandem with improving its human resources components relative to training and efficiency programs.

Other research has indicated that taking a global approach to management and management choice with respect to how it is able to relay information and ideas better prepares a firm to make decisions that are more in-line with the requirements of the marketplace. Thus, it could be said that management decisions, even in home country environments, often must take into account cultural quality management considerations in far-removed locales is one such example. Thus, having a corporate quality management model that is essentially integrated into the overall corporate culture is critical in the global environment since this is, increasingly, how SMEs achieve competitive differentiation and certainly is the case in Ghana.

Inter-departmental quality management in the workforce and among an organization internally is all the more important in the age of globalization. Increasingly, SMEs are not only comprised of diverse cultures and races, but are often geographically dispersed. Developing integrated quality management programs is important both in the execution of individual daily tasks but also for group or team based projects within any given organization where these productive models are now commonplace: “Expectations...predict women and people of colour will fill 75 percent of the 20+ million new jobs created in the

United States. By the year 2010 white men are expected to account for less than 40 percent of the total American workforce" (Arai, Wanca-Thibault & Shockley-Zalabak, 2001: para.2). A breakdown in quality management or ineffective quality management styles is primarily what leads to open conflict rather than any real hostility in an organization.

Understanding this reliance on quality management methods as being of primary importance to quality management, team conduct and team performance can open up myriad options in handling task related issues for the effective leader. Stressing some type of training in quality management programs and integrated relations fosters an atmosphere of community and cooperation within the organization because its employees perceive a genuine regard for cultural awareness and understanding on the part of the organization. This approach can pay dividends beyond the overall daily management of the organization because it engenders a more productive and positive environment where employee and managerial quality factors are consistently higher.

MNCs were among the first organizations to recognize the importance and efficacy of this approach based on improved quality management procedures. This awareness of integrated quality management programs was brought about through necessity rather than through any type of eureka moment of self-discovery, but it was made none-the-less. MNCs were forced to develop the ability to network, enact quality and create interdependencies by virtue of their operational environment. However, as a side-effect, they noticed increases in productivity, group efficacy and economies of scale engendered through a greater ability to enact quality among groups and team members.

The management of international enterprises presents special circumstances to the manager and for the role of management in general relative to corporate quality management programs. One particular difficult circumstance for the manager in the

international enterprise is how to maintain revenue growth and expansion across often diverse markets. Since growth can be considered to be one a company's, as well as that company's executive management's mandates, the larger, more geographically dispersed the enterprise the more difficult it is to achieve growth, whereas in the SME this mandate is much more achievable because it is a much more simple matter to enact quality its strategy across the organization. Additionally, if one of the functions of management, leadership in particular, is taken to be more integrated than other managerial functions, then obviously in a larger, international enterprise where employees represent many different cultures, speak several languages, and work under different priorities, achieving a degree of integrated relations with employees is such environments becomes more difficult. Therefore, quality management programs can play a vital role in corporate strategy not only for the large MNE but also for the SME if it chooses to leverage its ability to better enact quality across its departments.

The complex nature and interrelationships of today's corporate organizations creates an interesting challenge for corporate leadership within Ghana in managing not only everyday operations but in identifying and executing mid and long-term strategies. Much of corporate leadership in contemporary business circles is related to establishing and perpetuating organizational quality management infrastructure and processes. While admittedly much of organizational quality management programs are also related to the product or service the organization produces, in today's market-driven economic model, canonizing processes is much more central to how an organization enacts quality than the actual product or service.

A prime example would be the corporate structure of Unilever as an organizational entity. Unilever's CEO spends far more time communicating the company's mission as a quality device than he does representing the company as a simple manufacturing firm. The

company is far more about first in class quality management such as communicating that message, than merely distributing a random array of products. This emphasis is a corporate strategic decision making instigated at the highest levels of management and is then integrated into the organizational DNA through various methods that are translated into the construction of a distinct and characteristic organizational quality management structure that produces messages both for internal and external consumption:

> ...an organization establishes its identity by prefacing the quality management of values...organizations develop an identity through an abundance of value-based persuasive messages...a rhetorical analysis that members embrace a distinct identity through value exposure to internal and external quality management processes...(Aust, 2004: para.25)

Some of the reasons for this highly complex and integrated construction of a corporate quality management programs paradigm that is consciously fostered by every functional department are the result of the complex nature that organizations must adopt in contemporary globally oriented structures. Managing across disparate organizations creates a completely different set of organizational dynamics that did not exist in previous organizational quality management models.

Contemporary organizational theory addresses this complex quality management program demand on corporate management through the quality of a management structure designed to strategically operate in a globally integrated environment with diminished or no physical, spatial or chronological boundaries. This complex quality management program structure is exemplified by the competencies that are developed to achieve effective quality management programs which rely on both integrated skills developed within the workforce as well as an incorporation of fixed quality management channels such as open door policies and anonymous comment collection processes. Organizations essentially rely on

corporate leadership values that enact quality through formal and informal channels not only to establish and perpetuate organizational effectiveness.

If developing a distinct organizational identity based on how it enacts quality internally and externally its values are the imperatives of Ghana's organizations, then the methodology used to develop these strategic quality management structures is paramount to success. The design and implementation of effective quality management infrastructure, both formal and informal, is dependent heavily on the leadership within a given Ghanaian organization, be it an SME or a large MNE. Such strategic leadership is closely associated with the effectiveness with which an organization does enact quality and great leaders the world over are often recognized to be great at instituting accountability and this is no accident. Other researchers believe such global competencies related to corporate quality management programs are nothing more than generalized corporate traits that can be easily quantified and identified thereby setting the globally competent strategic leader apart from his or her peers at the outset.

These are qualities some researchers describe as: awareness, acceptance and transformative understanding, which are all critical to developing effective quality management channels. The conclusion that can be made is that strategic quality management quality programs are vital to the ongoing financial and operational health of Ghanaian and global enterprises. These enterprises are defined as an organization whose organizational integrity relies on well-defined quality management infrastructure based both on integrated quality management techniques that are taught and formalized quality management channels that are facilitated by policy and IT infrastructure. These structures also provide a degree of executive accountability which is critical in the contemporary business environment. Accountability is a vital component to the success of any strategic quality management paradigm and without it corporate leadership lacks the feedback

mechanism that is important to any leader whose decisions could adversely affect the organization and its employees. Quality management channels and structures foster an environment of improved checks and balances that keep an organization operating both profitably as well as legally in global business climates that are also increasingly regulated.

SMEs, as discussed earlier, have been increasingly reliant on team and group oriented work structures that are less dependent on direct management or supervision. These types of organizational structures, because of their highly autonomous character, rely on corporate quality management programs almost completely for their success within the organization of the SME that, in addition to other factors, simply may not have the resources to field an extensive management structure. This is especially the case within Ghana. For these types of SMEs, group and team structures combined with quality management practices can prove highly effective in the global economy. Group and team concepts as opposed to individual work tasks have taken on a new importance since they are a major push for increases in productivity.

It was found that groups could more effectively and efficiently complete a set of quality oriented tasks. Quality management of goals and objectives in a constructive manner was more effective than if one simply throws tasks to individual employees and hoped for the best which was the antiquated quality management model upon which most organizations, large and small, functioned at the time. In any event, group management has become a science in itself and is often the subject of intensive training in the workplace and certainly given a great amount of attention in the academic setting as well where intensive study of how groups and teams enact quality often are the focus of much research.

Recently, the topic of group work theory has even morphed into the study of virtual teams wherein not a single member of a team or workgroup may actually be in the same geographic location. In this milieu, teams and employees are left to manage their projects

through the auspices of technology as well as to ensure they achieve the organization's quality demands: "...a virtual environment, created through technology...for...the enhancement of teamwork, in all its forms and through all the channels currently available... global companies increasingly rely on virtual teams to construct ...projects..." (Mirjaliisa, 2004: paras.2-3). However, whether all group members are located in the same department, company, geographic region or spread all over the globe, the use and presence of groups has enhanced the performance of companies beyond management's expectations and the quality management processes and structures that support such teams are as vital to their success as selecting the proper group members. The processes that group work dynamics depend on revolve around two primary goals: 1) ensuring that the group stays on task by monitoring its quality management programs and 2) ensuring that the proper composition of individuals is given due consideration in forming the group as it relates to these individuals' proclivity towards integrated quality management skills.

Employee quality management processes have become the focus of the SME in the global economy because, for the most part, all SMEs and organizations have the same access to the same quality of services and products as any other SME in its industry or field. The x-factor in the competitive landscape has become the employee and by extension, the quality infrastructure in the SME itself since even the best, most high-calibre employees will fail in an environment that is not conducive to horizontal and vertical interaction. How to motivate the employee and the workforce is now an integrated strategy in the SME to create competitive advantage in the Ghana marketplace and is directly depended to how well the SME relates its core values and identity through quality management channels to its managers and employees.

Recognition of an employee's quality work is a requirement in the contemporary workplace and is another factor within the SME that relies directly on its quality

infrastructure. It is no longer enough to simply assume that because an employee receives his or her pay cheque in a timely manner that quality work is automatic. The SME must have a quality management mechanism in place that recognizes such employees. It has been proven that individuals do, for the most part, work for more than money: “the retention of employees partially depends upon recognition given by supervisors for follower achievements and efforts” (Isaac, Pitt & Zerbe, 2001: para.16). Management must build recognition of quality work into the quality management system within the organization or risk sub-par performances or high turnover ratios which cost much more in terms of lost revenue.

SMEs within Ghana must also implement reward systems as well as recognition mechanisms that also rely on its quality management channels to facilitate. Yet, rewards are usually more substantial than recognition and are primarily given in the form of actual documents or awards, such as bonuses or raises and therefore are clearly part of the SME’s formalized quality management structure and must have the documentation and tracking mechanisms attached to this quality management effort. However, rewards must be employed within a quality management system because, although individuals do work for satisfaction and other intangibles, at the end of the day, people do require monetary or financial returns for time and effort. By implementing a system of rewards that are enacting quality it is critical to know that strong performance begets returns: “various rewards are contingent upon performance as a consequence of regular quality management” (Isaac, Pitt & Zerbe par.22). Thus, for the Ghanaian SME, almost all of its internal processes are dependent on a highly integrated quality management system that is not subject to the whims of individual management but is a structure that is part of the organizational structure and culture and is therefore a permanent fixture within the SME. While every other functional responsibility can be met with superb performance, if the quality

management component is poor, the overall effectiveness of the SME's output is certain to be compromised.

The Role of Management in Quality Systems

One of the assumptions within this research project was identifying what the role of management should be within an organization in the contemporary business environment that is focused on quality management. Some of the important quality variables identified within the context of these types of assumptions are the role of strategic leadership, which has been a function traditionally left to management and how the organizational culture supports the quality effort.

Management and leadership must develop roles in which cultivating less division among management and employees as well as between functional departments becomes the priority. One reason for reinforcing and focusing on managerial roles focused on human resource management is that every functional department is a result of the complex self-identity that organizations must adopt in today's integrated structures related to the organizational culture where worldwide groups lead product quality. Also, the role of corporate culture is to promote this productivity in some fashion with all of the departments such as finance where quality is the mechanisms for this cultural depth. Managing across disparate business functions creates a completely different set of organizational dynamics that require quality structures led by managers who understand the role requirements these new structures demand.

Contemporary organizational theory addresses this complex demand on corporate management through the quality of a quality management structure. These structures were designed to strategically operate in an integrated environment with diminished, or no,

physical, spatial or chronological boundaries. Organizations rely on corporate quality management not only to establish and perpetuate organizational identity but to also strategically lead the organization in an increasingly complex business environment.

These dimensions of organizational functionality that centre on quality management and managerial roles are interrelated and have effective team composition and team quality management at their core. The variables of organizational leadership and organizational culture are positively inter-dependent relative to quality management because leadership now originates from ever lower functional levels of most organizations and organizational culture certainly permeates all levels of an organization. Organizations based on a team environment know that one of the most important aspects of team quality management is knowing and understanding what factors are involved in the ultimate success of a team prior to beginning the selection process for team members. These factors are commonly recognized to be clear goal making, the right amount and character of leadership, organizational support as well as ensuring tasks are assigned to the appropriate parties. These measures can be taken and decided prior to considering the composition of a team and team selection and identification is one of the emerging roles of the new manager. These factors are important to have completely accounted for prior to selecting team members because they actually prevent and/or solve many common issues that arise during operations involving teams and team work.

Managers are now also tasked with formulating clear goals which allow team members to conceptualize exactly what is being asked of them, while assigning appropriate leadership provides team members with a reliable outlet to address concerns and issues. Additionally, assigning the appropriate organizational support informs a team and its quality management structure that the organization and executive quality management fully

supports the manager's unique business function and that the team, as an extension of managerial role and functionality, is not destined to failure for lack of resource commitment. Some current problems in quality management stem from poor team quality management. These symptoms arise most often when employees are underutilized, wrongly utilized, or simply not utilized. Managers must provision suitable tasks that ensure employees will maintain a high level of job satisfaction and that tasks will be completed more efficiently. Proper team quality management also requires that the follow-up and accountability of tasks ensures that team members are being held accountable to perform adequately and equally within the context of any given organization's mission statement. This clear understanding of the character of the mission and what's being asked of an organization's team and its individual members provides a pragmatic framework around which quality management can construct a quality environment and is based on a role of leadership.

These aforementioned observations are the foundation of quality management in the contemporary organization and were not originally part of traditional management's planning process. Some researchers have begun to question the role of the traditional manager within the context of the quality environment implying a negative relationship between these variables and the hypothesis. One particular innovation in management and especially in quality management that organizations have been utilizing is the shift from traditional managerial roles to one where an emphasis on training and quality is now employed. Additionally, this is now facilitated by management which is facing ongoing demands to increase training and quality as a method to achieve competitive differentiation through quality metrics. Training and quality as a managerial role opens up realms of new possibilities for teams and quality management. By enabling organizational managers to

perpetually train and educate their organizations, they will be able to execute within the parameters of an organization's overall strategic plan. Also, an organization that is continually upgrading its skills and abilities is an organization that is responsive to constantly changing market forces which enables the organization to respond better to shifting markets. Managers form a critical component in these new organizational quality and must actively embrace these roles that are based more on facilitation and counselling than on order-giving.

The motivation to expand the knowledge base relative to this topic is related to the evolving business environment. In this sense, traditional management is a more simple activity because only administrative functions need to be implemented according to corporate guidelines that have been, in the past, clearly documented. Modern quality management roles, on the other hand, require these traditional roles but also entails a well-thought out systemic approach to the management of employees where core competencies, line of business, and corporate level strategy are all integrated at the departmental and organizational levels giving line managers much more authority and influence. Some could have determined that the solution to effective quality management rests in how well a manager is able to affect positive change in terms of employee quality and productivity. These conclusions observe that quality managers are now being required to strategically utilize data rather than just amass it and to understand the potential positive and negative applications associated with that data and information. Management therefore requires a sound theoretical base relative to employee assessment, motivation and quality, combined with an effective and accurate way to measure results and outcomes relative to business level strategies.

In more pragmatic terms, this confluence of theory and practice as it relates to quality management roles, motivation, and the variables of leadership and organizational

culture is often affected through the treatment of employees and managers. This is true of Ghanaian as well as international firms relative to enterprise resources related to the raw material in a sense, of a given organization's core business. In most contemporary organizations and certainly in organizations of the future, this relates to expanding the quality manager's role as a strategic nexus for the sourcing, developing, and distribution of knowledge as it exists in the organization. The research describes this strategic nexus as being the resource with which organizations develop sustainable competitive advantage over time rather than short-lived business advantage that is purely temporary. This business need to assess, manage, and wield the knowledge that exists within an organization intent on improving quality and quality management is one key reason that quality management now places a much larger emphasis on training, quality, and opportunity creation in a way that traditional management could never conceive of.

Such links are generally recognized by most business researchers which is that when organizational practices and processes are thought to be consistent, then their employees tend to respond in a more positive and affective commitment that produces long-term results. The implication in this observation is that consistency is important to quality management policy in terms of employee management and quality because traditional management lacks the flexible and adaptable roles associated with more participative quality management styles. Thus, leadership is found to be relevant for the contemporary manager who must also ensure that his or her leadership characteristics mesh with the unique culture of the organization.

The implication for contemporary managers is that they must now be willing to embrace an expanded role within the organization. In previous eras it might have been possible to simply be aware of one's own department without considering the overall impact that departmental results had on not only the organization but in fact how that

department addressed the company's overall market and industry. This is no longer the case. Quality management roles now include strategic considerations.

This project indicates that both leadership and organizational culture are relevant for quality managers in the contemporary business organization and certainly should be the case in Ghana. Since, as the literature and data reveals, managers must now also introduce and oversee greater degrees of training and quality initiatives for employees, they are becoming both educator and counsellor rather than just controlling a time clock. A follow-on study that would quantitatively examine the research hypothesis and variables posed within this present project would be one that quantified leadership and cultural perceptions in a target organization such as Unilever. The consensus is that quality management and quality processes now rely on a host of factors that span the organization. Certainly, one area that is highly pertinent to the Ghana market would be the area of logistics in addition to manufacturing and production. This is because the market's infrastructure is not as advanced as other international markets and Unilever's quality management program must actively compensate for these and similar deficiencies.

Quality Supply Chain Components

A supply chain can be defined as the sum of all retailers, distributors, transportation methods, storage locations and facilities, as well as supplier networks that contribute to an enterprise's sale, delivery, and/or production of its product or service (Eckes, 2001). It is integrally involved with a company's logistics and overall operations in that operations management oversees the smooth functioning of the organization's supply chain. A supply chain that has bottlenecks, excess inventory, or difficulties sourcing products or services inevitably results in a loss in revenue, poor product/service quality metrics, and a loss of customers, be they internal or external.

Quality logistics supply chain that traditionally has been handled one common trend in supply chain quality management and logistics has been the necessity of companies to implement closed loop supply chains that entail the creation of a quality logistics process. Quality logistics is primarily concerned with quality product returns. However, quality logistics is also closely associated with recycling programs and re-use of packaging material, as well as a method of moving by-products back into the supply chain for re-delivery elsewhere. It could be said that supply chain quality as including quality logistics which is the receiving, handling and disposition of products that are returned from customers. For, unlike traditional outbound logistics solutions, quality logistics handles material in an entirely different fashion. In the quality logistics environment, many decision nodes are created at random in the by simple store clerks.

These low-level employees are typically completely unaware of the consequences or ramifications of parking a single product unit in the backroom for a month to wait for more returns before sending that item back. Therefore, many returns, especially diverse product lines, such as Unilever sells, are of high-dollar value and often are returned with no defect and that many returns are not in demand in one market but have time-sensitive demand in other markets. In light of these concerns, it becomes readily apparent that the subject of quality logistics has long been a major concern for most manufacturers and suppliers but has only been addressed in detail in the recent past. Improvements in IT and internet technologies have made quality logistics more palatable and manageable than before these advances existed. As the cost of product manufacture and transportation has generally dropped across the board in most industries and markets due to advances in technology, so too have industry margins.

These quality initiatives have created an interest in efficient quality logistics supply chains that are at once responsive and appropriate to the nature of their mandate for there is

a lot of value in returns and return technology: “the cost of processing a return can be two to three times that of an outbound shipment...taking 30-70 days to get a returned product back to market...more than US $110 billion dollars in North American goods returned each year...” (Kuzeljevich, 2004: 36). With this increasing importance of quality logistics within the totality of the supply chain as it pertains to a truly closed loop system, there are several strategies that have been developed that lead to more efficient deployment of quality logistics programs:

Quality logistics Strategies	Description
Strategy # 1: Return forms	Create clear, comprehensible return forms
Strategy # 2: Design efficient workstations	Ensure all workstations are efficiently organized and well-supplied
Strategy # 3: Adequate staging	Ensure all work and staging areas are sufficient to handle varying levels of product volume
Strategy # 4: Use a 3-part transaction	Credit refund or exchange, update customer file and determine product disposition
Strategy # 5: Train Staff	Institute sound training procedures supported by adequate documentation
Strategy # 6: Accessible policies	Ensure corporate policies and procedures are accessible to all staff and at any time
Strategy # 7: Use bar codes/RFID technology	Technology applications can ensure product is easily tracked and located
Strategy # 8: Return to stock procedures	Define all return to stock procedures and operate on 8 to 24 hour cycles
Strategy # 9: Use Cross-docking procedures	Ensure that cross-docking procedures are in place to avoid unnecessary restocking
Strategy # 10: Place experienced personnel in key positions	Utilize experienced personnel to make key product decisions

(Barry, 2004: 26-27)

A quality logistics program is truly only extending the traditional supply chain back to its source, albeit in a different form.

This concept is referred to as closed loop supply chain logistics, where the loop is the forward supply chain and the quality logistics operation integrated into one contiguous system: “Quality logistics concerns...used and obsolete products back into the supply chain...Economic, marketing, and legislative drivers increasingly are leading companies to...recover their products...The...product flows pose novel challenges...” (Reverse, 2005: 59). This is now something that Unilever must consider in Ghana in order to upgrade all of its operations. Increasingly, companies are realizing that not only are there innate value centres within an integrated quality logistics program, but, in reality, quality logistics programs are a natural extension of pre-existing supply chains that effectively “close the loop” which begins and ends at product origin. Closed loop reverse supply chain logistics are operations that, if not directly associated with a given enterprise, then are integrally involved in the financial and operational quality of a given enterprise and provide the following service: “...the product can be tested, repackaged and made available for resale. If the product is not salvable, then the product can be scrapped according to the customer's instruction” (Fisher, 2005: 50). Even in scrapped form, products have value and these are value centres formerly ignored or overlooked by manufacturers and producers of a given product. Quality logistics has enabled an entirely new revenue stream to be created out of an operation that largely did not exist 20 years ago and even then, was treated haphazardly at best. This is a necessary and important aspect of its Ghana operations that Unilever must improve upon.

One of the most prominent commonalities among these three disparate operations in terms of their unique supply chains and logistics management systems is the degree to

which the customer has both driven and focused the supply chains of these companies. Unilever has made customer satisfaction a priority for its supply chain operations where previously these operations would have been held aloof from the customer experience. The ability of Unilever's supply chain to respond to customer demand and to ensure that its products are easily returnable has meant that Unilever has had to construct a closed loop supply chain. This would be one that could facilitate returns as easily as supply them. The same imperative has driven Unilever to enable quality product returns more readily and the reverse supply chain is even more important in its industry because of the high-dollar value of many of its products. While the end consumer is less of a concern for Unilever in terms of returns, in order to keep its distributors and retail outlets willing to stock its products, Unilever has to maintain an adequate reverse supply chain to ensure these outlets receive credit for outdated or damaged food products.

The primary differences in these disparate businesses in terms of their supply chains tend to vector with their industries and product lines. Unilever and virtually all of Ghana's SMEs operate in completely separate industry from one another. Many of Unilever's products and services can be distributed across various channels of distribution. Unilever and other large manufacturers, on the other hand, rely primarily on physical distribution but has adopted may consumer based functions across the spectrum of its website. Operationally, Unilever distributes most of its own products through its in-house logistics operations and distribution centres, where Unilever relies primarily on 3rd party quality applications to manage its distribution operations. Other competitors might employ a mix of both where it both directly sales and distributes product and still relies on a network of dealers and distributors.

Perhaps the most impressive and total reformation of supply chain operations among these companies is the change that occurred at Unilever over the last 10 years. Unilever's

supply chain and distribution operations were completely dependent upon an extended network of distributors and retail partners while much of its manufacturing was still handled internally. Currently, both of these dimensions of its distribution channels and its supply chain have been completely altered in order to improve quality delivery as well as product quality. Currently, most of Unilever's manufacturing processes are undertaken by contract manufacturers in overseas locations which have removed a major supply chain burden of supplying manufacturing operations with raw materials from its scope of operations. On the supplier/consumer side of its logistics Unilever has considerably reduced the number of its distributors and, in fact, become a quality management oriented firm. Unilever's distribution and logistics operations have been completely altered by its shift into new product lines in order to enter and take advantage of markets such as Ghana.

Yet, Unilever not completely altered its distribution channels or its supply chains in such a revolutionary way. What they have done is to fully integrate technology solutions that have made operating distribution channels and supply chains much more efficiently and of a greater quality. Additionally, the firm has effectively integrated best practices and strategies into its operations to create seamless service environments. Unilever has shifted even more of its operations over to 3rd party providers but this has been an extension of an operating strategy focused on quality rather than the adoption of a completely new approach to operations.

Many of the collaborative efforts in the supply chain and logistics operating environments can be seen in the degree of integration that 3rd party providers have achieved across all industries in Ghana. As the literature reviewed earlier reveals, companies are instrumental at extending the range and functionality of supply chain quality and, in many cases, of closing the supply chain loop by servicing the quality logistics programs of many enterprises. The research reveals how much of this integration between suppliers, 3rd party

logistics providers and corporate entities is undertaken through a community approach to the business enterprise driven by shared quality models. These authors discuss how shared quality operations in the supply chain environment create both innovation and more efficient results than could otherwise be achieved. Shared quality supply chain operations between companies in various industries increases the efficacy of the supply chain at both the supplier-manufacturer and the manufacturer-distributor level. These integrated communities of shared risk and shared quality seem to be the current platform for supply chain arrangements across many industries and appears to be a growing trend.

5.4 Recommendations

The competitive environment in the contemporary global economy requires an efficient method on the part of enterprises to leverage the innate knowledge and experience of employees and executives for competitive advantage. Knowledge management and quality at Unilever can be thought of as a process in which enterprises establish and utilize information, data, and insight that is contained within its collective body of employees and systems in a logical, systematic, and targeted manner over the course of the knowledge life cycle (Lowe, Culley & Mcmahon, 2004, p.308). In this sense, knowledge management at Unilever should be viewed both as a type of technology infrastructure within an enterprise as well as a type of personnel strategy designed to enhance an enterprise's strategic use of its innate intelligence.

The need to shift knowledge management with respect to quality at Unilever from a purely information and technology (IT) related solution to a strategic personnel driven

solution is rooted in the literature pertaining to the evolution of knowledge management over the past several years. Researchers such as Coff, Coff and Eastvold point out that knowledge management and quality in general and as would be the case at Unilever, has evolved beyond the database driven, quantitative systems approach to include a conscious de-emphasis of masses of data (2006, p.464). Thus, knowledge management and quality at Unilever would be considered a fusion of IT solutions in tandem with strategic human resources (HR) processes.

What is Knowledge within Unilever?

Knowledge within enterprises has become a critical component of developing a sustainable competitive advantage. Knowledge and the management of quality at Unilever imply that there is a two part process which consists of identifying what enterprise knowledge is and then developing a strategy to manage it effectively. Knowledge, as it relates to enterprises can be thought of as consisting of data and information. However, this knowledge is more than just a collection of raw data and information but rather, it is data and information that has been placed in a contextual format (Juceviciene & Mozuriuniene, 2007). This format of knowledge derives meaning or significance from this raw data and information. There is great importance in the distinction between raw data and information as it relates to enterprise knowledge, for instance.

This observation can be summarized by stating that raw data and information by itself is meaningless. For example, if one were to take a traditional telephone book it can be seen that a traditional telephone book contains data that has no real application for most firms. This is because it is simply a collection of names and phone numbers without any specific categorical enterprise to it that is relevant to the average firm. However, if an

enterprise were able to determine that all of the individuals in a telephone book whose names started with “A” actually preferred to shop towards the end of a month, then this raw data and information would have some meaning. This type of knowledge would inform any given competitor that it should market more heavily towards the end of the month rather than in the middle of the month (Zimmerman, 2006). This is the quality that differentiates data from knowledge or intelligence.

Therefore, knowledge is related to sustainable competitive advantage within any given enterprise and certainly so relative to Unilever Ghana. This is because it is partly the constant collecting and categorizing of raw data within an enterprise that allow an enterprise to create actionable intelligence or knowledge. Thus, a distinct difference in knowledge types becomes important in order for firms to create actionable intelligence as well as to develop the ability to identify the application of patterns and associations between various data sets. These types of data patterns and relationships are important because Unilever Ghana competes is a variety of product categories as well as industries making the Identification of patterns and relationships critical if the firm wishes to remain viable in its Ghanaian market.

Within the typical enterprise setting knowledge management relative to quality can be thought of as being the extraction of value from the intellectual capital of the firm’s employees and executives with respect to its daily tasks in its line of business (LOB). Yet, knowledge management and quality at Unilever is often characterized as consisting of two primary divisions and it is important to understand the distinctions between knowledge management and quality at Unilever’s various business levels because most enterprises will ultimately need to employ both types of knowledge management strategies to ensure that quality is prioritized.

Knowledge management and quality at Unilever is generally divided into two separate strategic approaches which are termed codification and personalization. Codification is characterized as a people or person to data or documentation model where the sum total of information in the typical knowledge worker in a given industry is stored (codified). This can be stored or codified in a number of media forms such as in print, in a database, or some other artificial means of repository so that it can classified, categorized and accessed by others (Hansen, Nohria & Tierney, 1999 , p.107). Databases are often associated with codification but it could just as equally well be a file cabinet or a manual of some kind. In contrast to codification where knowledge is artificially recorded and amassed in some type of non-human system, personalization knowledge management and quality strategies is people centred and often employ some type of interactive group activity designed to mine the collective experience and knowledge of employees and executives (Hansen, Nohria & Tierney, 1999, p.107). This type of strategic knowledge is critical in industries of all sorts because they are relationship based and highly nuanced by the personalities of the both the consultants and the clients.

It is believed that most enterprises such as Unilever will eventually employ both codification and personalization in order to best capitalize on the market opportunities. Codification is employed in most competitive firms as a method to segment the market based on concrete data that can be accessed by many individuals simultaneously (Ewing & West, 2000, p.227). In this manner, consulting firms are able to identify target markets as a unit and assign resources to those markets with little conscious effort or commitment of excess resources. Alternatively, some other firms employ personalization knowledge management and quality solutions as a method to actually transact their LOB. That is:

> …tacit knowledge is tied to the person who developed it and is shared by direct person-to-person contacts. A personalization strategy concentrates on the belief that

the most valuable knowledge is tacit knowledge existing in people's heads…shared via interpersonal interaction or social relationships" (Ewing & West, 2000, p.228)

Examples of personalization based solutions might be brainstorming, focus groups, and conferencing within the firm. This method is such that in order to arrive at novel and creative business solutions derived from knowledge that cannot be readily codified.

Therefore, industry competitors in most sectors and certainly ones in Unilever's CPG industry, for example, rely on intensive collaboration among consultants within firms. This intensive collaboration should be accomplished at Unilever in order to arrive at an awareness of the market relevant to developing contacts as well as for developing client solutions. Unilever is such an important component of Ghana's local industry as well as a recognized leader in the international markets that it must also learn to not just focus on physical quality processes but also the intangible quality strategies that set truly ground-breaking firms apart from their competitors.

Knowledge Types

Knowledge comes in a variety of forms within a firm such as Unilever Ghana. Knowledge, at a basic level can be divided into either implicit or explicit knowledge (Leonardi & Bailey, 2008). Explicit knowledge is often considered to be all of an enterprise's knowledge that has been recorded in one form or another, such as codified in a manual, form, memo, diagram, or similar format. In contrast, implicit knowledge can be thought of as information that could be recorded or codified in some manner but, for whatever reason, remains undocumented (Juceviciene & Mozuriuniene, 2007). Understanding these distinctions between implicit and explicit knowledge can lead to an environment of innovation within an enterprise such as Unilever Ghana as its employees and managers begin recognizing all of the learning opportunities that are available.

For Unilever Ghana, its local workers are an immense asset because they, of course, have a vast amount of knowledge about the local market. Additionally, they understand how the local population and the local community views Unilever as a local firm as well as a major international corporation. These types of observations and awareness can be captured which can then be used to assist Unilever in expanding its local market share as well as in developing best practices for other markets that it may be entering or choose to enter. Yet, there are other types of enterprise knowledge as well although three primary types are discussed here. These three primary types of enterprise knowledge are (Zimmerman, 2006):

1. Tacit Knowledge
2. Explicit Knowledge
3. Cultural Knowledge

There are other enterprise forms of knowledge that are just as relevant for enterprises to identify and understand. Many enterprises that might be described as learning enterprises often leverage a different type of knowledge described as tacit knowledge.

Yet, Unilever Ghana must first learn to focus on the tacit knowledge and awareness that permeates its workforce. This is perhaps the most difficult to capture but also one of the most critical with respect to maintaining the intangible qualities so important to quality such as a motivated workforce, a strong community and team work environment, and a positive manager-employee relationship. Tacit knowledge is typically described as knowledge that cannot be codified or recorded in the same way that other knowledge types can be (Juceviciene & Mozuriuniene, 2007). Tacit knowledge can be considered to be an individual employee's work experience or a particular talent. It might also be some other type of innate capacity or competency of an employee who, for whatever reason, might be better at some competencies than other in the workplace.

Developing a strategy to leverage both implicit and tacit knowledge is a core activity of executives within most enterprises and should certainly be adopted at Unilever Ghana. Furthermore, the search to develop methods that allow talented or skilled employees to share such knowledge and to make their unique abilities more accessible is an important aspect of developing a sustainable competitive advantage based on innovation, change and quality practices (Ray & Clegg, 2007). Firm knowledge can be an extremely resource to ensure that the degree of competitiveness within an enterprise remains equal to or outpaces the competitiveness in a firm's competitive market. Knowledge can ensure that a firm such as Unilever Ghana is able to establish a management of quality structure that is able to achieve value where previously no value might have existed or been recognized.

The other type of enterprise knowledge is cultural knowledge within the firm of which Unilever Ghana would have an immense font of. Cultural knowledge is unique in that it is difficult to determine exactly how a firm such as Unilever Ghana has developed this cultural knowledge and how to base firm strategy upon it. Cultural knowledge can be defined as the shared assumptions and beliefs among employees about the firm's goals, capabilities, and its customers as well as competitors (Zimmerman, 2006). Cultural knowledge can be effectively integrated with the other enterprise knowledge types at Unilever Ghana in order to develop a more actionable corporate strategy. The corporate strategy would be one that managed to integrate both the company's financial performance metrics as well as its intellectual capital in a manner that new business opportunities would likely be the result.

This solution allows a firm such as Unilever Ghana to capitalize on the knowledge that already exists across the firm without going outside of the enterprise. If Unilever Ghana managed to capture it intellectual capital and more effectively manage this knowledge, then it is certain that the company will also be able to reduce its operating costs and thereby

reduce its operating margins. This type of outcome due to an integrated knowledge management strategy not only pleases shareholders but also frees up valuable revenues that can be redirected to other capital expenses or similar. Furthermore, knowledge is uniquely facilitated through the leveraging of different information and technology (IT) solutions that are readily available (Snowden, 2008). Such IT solutions are excellent strategies to ensure that a firm such as Unilever Ghana's knowledge as well as its intellectual capital remains within the firm rather than leave when key personnel may depart the firm.

Personalized knowledge management at Unilever and related strategies and solutions are also considered vital in developing client solutions. These outcomes are enabled because they are made in tandem or in collaboration with clients or customers because of the particular quality of personalization knowledge management at Unilever transfer that states that tacit knowledge of the client is best understood in face-to-face interactions because is this is thought to be the richest tacit knowledge medium (Koskinen, 2004, p.16). Most competitive firms now recognize that the personalization knowledge management at Unilever would form the nexus of both corporate strategy as well as client related solutions strategies. Since Unilever Ghana is such an important MNC in Ghana, any ability of the firm to improve its operational profile as well as to expand its market also has an added benefit of improving the economic environment of its market.

Recommended Technology Infrastructures

The recommendation in this regard is not necessarily directed towards a specific technology application or architecture. Rather, it is focused on philosophically and appropriately aligning IT and IS imperatives with the firm's knowledge management initiatives. Information systems or IS platforms can be awarded a significant role in knowledge management and quality processes at Unilever in relation to practices in contemporary management of quality. This relates to management of quality as well as

knowledge at Unilever and its structures relative to the integral role of IT and IS considerations. This relationship is largely an organic development rather than by any external design.

Examined as a representative model of this organically developed role of IS departments in contemporary enterprises are the character, use, and application of ERP software suites in corporate environments. As stated, Unilever Ghana does rely on an ERP to manage both its operations and its quality programs and metrics but this platform can also be redirected to include management of the firm's inherent knowledge and intellectual capital. ERP systems are found to contribute intrinsic value to enterprises through their overall efficiency and essentially mirror the IS's newfound strategic role in the business environment because of the increased emphasis on identifying pools of knowledge and of making them readily available across the enterprise.

Unilever can take advantage of its existing IT architecture in order to begin its knowledge management initiatives and then move to integrate more targeted solutions in the future. Researchers such as Luftman, point out that, "IT is changing enterprise forms...The real power of IT-enabled...enterprises emerges when relationships among electronically connected people...produce new or qualitatively different communication that yields... innovation" (2003, p.4). These observations are supported by other researchers who have identified IT and ARE as the greatest strategic driver of the 21st century and the primary driver of the global economy and global business models (Jackson, Harris & Eckersley, 2003). While no single analyst or industry pundit questions IS's impact on the modern enterprise, the underlying assumption argued here is that the ERP systems currently in vogue mirror the organic development of IS's functional importance to enterprise

strategy because of their ability to manage and route an enterprise's codified knowledge but also of their ability to create virtual databases of personalized knowledge.

Management of quality at Unilever and quality oversight at Unilever as an institution has shifted dramatically from the command and control period of earlier management periods. The character and sophistication of technology as a quality management strategy at Unilever has altered not only how management of quality at Unilever functions but, in fact, altered the very role of the manager in across the organization. While there are many technological innovations that have facilitated the manager's task list and execution of core competencies, such as: the simple fax, the Internet, e-commerce, networking, scanners, third party service providers such as off-site storage facilities both for data and physical records, as well as a host of others, none currently holds as much promise nor is as pervasive as the current list of ERP software systems. The growth and development of ERP systems have evolved over time to mirror the core competencies of the enterprises that employ them and through this process they have intrinsically shaped the character of the overall enterprise. This extreme integration of Unilever's ERP platforms is what makes this recommendation of knowledge management and leveraging of intellectual capital so attractive to the firm's forward strategy.

These IT and IS packages, designed to facilitate many of the knowledge transaction processes of an enterprise's internal value chain, have the potential to maximize every functional process within an enterprise and to remove a large percentage of the intuitive commitment required of management of quality at Unilever that makes it, as an enterprise institution, so vital in today's business environment. ERP systems shifted the emphasis of management of quality at Unilever's focus from competency execution to a more soft skill type of focus on knowledge management at Unilever because the ERP systems have the

ability to execute on competencies based on the data they themselves collect and interpret. This is often characterized as being: “In the future, fostering communication and helping to focus attention on a few important issues will be paramount responsibilities of managers. Personal integrity will be critical to effectiveness” (Parrish & Frisby, 1997, p.79). As noted previously in the text ERP systems tend to automate many of the traditional quality management roles at Unilever allowing the enterprise to reassign, reassess or remove some managerial positions because the enterprise’s knowledge is no longer confined to individual departmental silos.

The role of quality management at Unilever has been impacted by technology in broad operational terms and by its integrated ERP systems specifically. This is facilitated through these applications’ intrinsic ability to mediate the movement and allocation of knowledge from within an enterprise (Desouza, 2002). Where a manager once was considered the specialist within the department or the expert that all employees within the department turned to for referential information, the manager is now a specialist in nothing but a knowledge generalist in many things: “The New Function of Middle Management of quality at Unilever...is better knowledge...There is a need to acquire and transfer knowledge across and through the enterprise; and the middle manager is a key player...” (Blumentritt & Hardie, 2000, para.5). More than become a repository of information and data as general management was expected to do in previous years, management at Unilever today must know where to find data and information more so than acquire it and this is the basis of knowledge management and quality at Unilever. In a sense, databases have become the middle manager of today while enterprise quality management has been freed to occupy itself with higher level tasks and the repositioning of resources. This is the suggestion that Unilever now evolve from a pure quality management program focused on quality outputs to one that now integrates the intangibles within the firm.

Data, databases and ERP systems that tend to manage the movement of knowledge across enterprises form the backbone of modern, cutting edge enterprises that must respond to marketplace events in hours rather than days, days rather than weeks and weeks rather than months. The contemporary enterprise quality management has been shifted into a the role of integrating the very technology into a corporation's internal value chain: "...when a new technology disrupts existing work routines, the adopting enterprise must go through a learning process, making cognitive, interpersonal, and enterprise adjustments that allow new routines to become ongoing practice"(Edmondson, Bohmer & Pisano, 2001, para.6). It is often middle management at Unilever that is left to implement the actual technological integration as well as the management of quality at Unilever to a level that is expected to exceed quantifiable targets.

Thus, technology has had a deep impact in not only how a manager executes the position's responsibilities, the character and type of these responsibilities and the roles of the position, but also how enterprise quality managers at Unilever can be developed. Technology applications greatly facilitate management of quality at Unilever as well as development and training with respect to the acquisition and access to knowledge: "...interest in particular in providing enterprise quality management development to people new to management of quality positions and younger people seen as emerging enterprise quality managements ...Many are pursuing blended approaches that combine... technology-based activities..." (Barron, 2004, para.10). By incorporating knowledge management and quality development programs into the technology infrastructure of the enterprise, the firm can greatly enhance its managerial development programs as well (Thierauf & Hoctor, 2003). ERP systems, mediated through an enterprise's IS department, are ideal for this particular application because not only do participants have access to requisite information and data relevant to firm operations, but because of the infrastructure requirements for the

ERP system itself, program accessibility and delivery of an enterprise's knowledge is virtually assured.

Implementation

Unilever is large enough, even within the Ghanaian market, that implementing an IS and IT cantered solution is not as imposing or resource demanding as it would be in smaller firms. IS not only organically affected the character of the enterprise itself but affects its developmental progression with respect to how knowledge is gathered, assessed and then distributed. This is apparent in the research which indicates that technology is what facilitates the collection, assessment, and actual deployment of knowledge. Additionally, though content is customized depending upon the enterprise's line of business, most IT or IS application providers have development and training application modules, usually incorporated into their HR modules, for instance, that are simply integrated into these systems. These all work together to collate an enterprise's internal knowledge resources into a manageable system that has changed the role of quality management at Unilever and will change how knowledge is current treated as well.

Recommended Knowledge Management Concept

In order to effectively manage knowledge within the firm, Unilever Ghana needs to change how it approaches its manufacturing and production systems. This also applies to its internal organizational processes as well such as its HR and employee development programs. These outcomes can best be affected through a change in how the firm perceived it in that it should adopt an organizational model based on that of a learning organization or enterprise. Learning enterprises are perhaps the foundation of knowledge management at Unilever. Learning enterprises imply a host of assumptions about an enterprise that are related to the various types of explicit and implicit types of knowledge, how this knowledge

is distributed throughout an enterprise and what an enterprise does with this knowledge (Hansen, Nohria & Tierney, 1999). There are a host of competing definitions of what comprises a learning enterprise. Defining what a learning enterprise is requires more than simply stating that a firm such as Unilever Ghana or similar firm implements a variety of training programs for example. Senge, who is perhaps one of the most seminal researchers associated with learning enterprises describes learning enterprises as being enterprises in which employees are encouraged and facilitated to expand their creative capacities and collective desires are fostered (1990, p.3). Thus, according to Senge, learning enterprises seem to be characterized as enterprises in which individuals are allowed to be creative and to involve others in developing this creativity.

However, there are other definitions of learning enterprises that are somewhat more specific. For some, simply defining a learning enterprise can be a complex activity full of seemingly insubstantial references to esoteric concepts. One approach to take in characterizing a learning enterprise is to describe it by its most prominent features. In this fashion, a learning enterprise can be described as consisting of the following characteristics (Thierauf, 2001, pp.87-93):

1. Adaptive in nature and able to make rapid adjustments to their environments
2. Constantly enhancing their ability to make such adaptations or, put another way, constantly learning
3. Developing both individual and collective learning process that may involve enterprise sponsored training as well as facilitating personal education efforts, among other strategies
4. Applying the outcomes of learning processes towards firm performance

Together, these various definitions of what comprises a learning enterprise provide a more complete characterization of a learning enterprise. The first, offered by Senge, is more

conceptual in nature while the second refers to some of the actual pragmatic objectives of a learning enterprise.

The concept of learning enterprises and their existence is important to knowledge management strategies because knowledge management is the outcome of actual learning and learning activities. KM can be thought of as the manipulation of learning into a strategic focus for any given enterprise that employs it. Thus, it is important to identify what learning actually is, what learning enterprise models facilitate it, and how these relate to knowledge management. Learning enterprises are not simply training programs but rather are focused on devising systems that develop higher knowledge processes and thinking skills through the following (Desouza, 2002, p.51-54):

1. First level learning in which facts and knowledge are applied to circumstances where change that may occur is relatively minor
2. Second level learning where acquiring new employment skills can be transferred to a variety of other positions or circumstances
3. Third level learning in which members of an enterprise learn how to adapt and solutions to business issues are not readily apparent but must be actively resolved
4. Fourth level of learning is the one where an individual actually learns how to learn and this is the stage where creativity and innovation are emphasized

Knowledge management systems are implemented within learning enterprises in order to support these various levels of learning. Such integrated knowledge management systems ensure that the learning that occurs in the enterprise is not simply learning for learning's sake with no implicit business related purpose. While such a learning enterprise might be fulfilling for employees it would result in few business related performance improvements or would do so in a haphazard manner.

Unilever's Knowledge Management Target:

Intellectual Capital

Intellectual capital is an important competitive consideration for contemporary firms. Yet, intellectual capital is often one of the most overlooked assets of a firm such as Unilever Ghana. Intellectual capital can be thought of as a hidden asset within a firm such as Unilever Ghana that produces knowledge of some kind (Barkauskas, 2008). Intellectual capital consists of the intangible qualities within a firm such as Unilever Ghana that lead to knowledge production, firm strategies, or even customer service, for example. Additionally, intellectual capital, just as enterprise knowledge, also comes in a variety of forms.

Because intellectual capital is a quality within a firm such as Unilever Ghana that is intangible it is difficult to quantify or even to characterize. However, intellectual capital is often described as being either internal intellectual capital or external intellectual capital (Dias, 2008). Internal intellectual capital is comprised of a variety of enterprise qualities such as the actual knowledge that exists within employees as well as a firm such as Unilever Ghana's brand identity, trademarks, as well as patents or copyrights. In contrast, external intellectual capital consists of the activities and relationships a firm such as Unilever Ghana has with its customers and its suppliers or vendors. Thus, it is clear that intellectual capital is as important as financial capital to the long-term success of a firm such as Unilever Ghana.

Developing a firm's knowledge management competencies related to quality such as Unilever Ghana's intellectual capital requires some investment in learning processes. This is because intellectual capital is not as tangible as other types of enterprise knowledge. Therefore, one of the most important observations that can be made regarding the character of intellectual capital is that there is no single method to leverage it. Just as no two companies are necessarily the same no two intellectual capital strategies are identical in all respects. Some companies might benefit from intellectual capital by implementing a series

of recognized learning strategies, for example (Kirwan & Birchall, 2006). Yet, it is not enough to simply make a formal announcement to the employees of a firm such as Unilever Ghana that the firm is now a learning firm. Or state publicly that employees are now tasked with developing the firm's intellectual capital. Such formal announcements tend to cause a great deal of consternation since many employees and even managers may not be clear about what constitutes intellectual capital in the first place.

Although this type of raised or heightened awareness of intellectual capital may prepare the firm and its employees for the actual learning processes that result from such awareness, such announcements are rarely enough. The best type of learning process designed to improve a firm such as Unilever Ghana's creation of value from its intellectual capital is one that provides the foundation for improved communication, more informed feedback, and engenders an atmosphere of professional respect (Frazer, 2007). The learning environment that results from increased awareness of a firm's such as Unilever Ghana, intellectual capital results in an enterprise that is concerned with maintaining a sustainable competitive advantage. Such firms are also concerned about developing and empowering employees and management of quality to create value in even routine activities.

In order to ensure that knowledge management is appropriately focused within a given enterprise, there exist different models of learning enterprises. One such model is that offered by Garvin in which he describes the learning enterprise as being: "…an enterprise skilled at creating, acquiring, interpreting, transferring, and retaining knowledge, and at purposefully modifying its behaviour to reflect new knowledge and insights" (2003, p.11). Garvin's model is based on an introspective learning process in which the learning always occurs within a context of how it can be effectively applied to the enterprise's LOB and how the knowledge gained can be both documented and transferred from person to person. It is a model founded on structured processes similar to a process known as the After Action

Review in which outcomes of any activity are examined to identify lessons learned and how it can be improved upon next time (Garvin, 2003, p.107). This type of learning enterprise with its related KM practices is based on structured principles and clearly enunciated practices.

In contrast to Garvin's learning enterprise model, other learning enterprise models and their respective knowledge management practices differ both conceptually and structurally. Senge's model of the learning enterprise is founded upon the concept of systems theory in which learning is based on experiences that are then subject to an ongoing process of delay and then exposure to feedback through an integrated system of feedback loops (1990, p.92). Senge's model of a learning enterprise employs systems theory as a foundation within which to base his core principles of learning and knowledge management. These core principles within his model are what he terms disciplines. For Senge, a learning enterprise manifests these core competencies or disciplines (1990):

1. Personal mastery in which learning enterprises can only be the result of individuals that learn
2. Mental models where assumptions and generalizations about the environment guide decision-making and strategy
3. Establishing a shared vision in which all members of an enterprise share the same concept of what the enterprise is and where it is going
4. Team learning in which all members of a workgroup or team are willing to act in unison to accomplish a goal or an objective
5. Leading the learning enterprise in which enterprise quality managements are not so much motivators and taskmasters but designers and instructors that focus on instituting the vision of the enterprise

Senge's model of the learning enterprise is the more well-known learning enterprise model. However, enterprises are all different and must adopt a learning enterprise model that is most effective for their own enterprise culture.

Return on Knowledge for Unilever

Finding, organizing and leveraging the knowledge that is innate within enterprises is an important function of quality management at Unilever. Given the sheer variety of knowledge which in general terms can be thought of as implicit and explicit as discussed previously, combined with the variety of learning types such as formal and informal learning processes, it is clear that knowledge management systems are necessary enterprise devices. Yet, without a consistent method to identify return on knowledge or ROK, any such knowledge management system cannot be justified from a business perspective. These are business perspectives in which capital investments must be rationalized through extensive ROI analyses like the weighted average cost of capital or WACC and other cost management techniques that are certainly employed within Unilever practices (Hansen, Nohria & Tierney, 1999, p.112). Yet, knowledge management systems and knowledge itself are difficult to quantify in the same manner that most capital investments are typically examined. This necessitates the development of a ROK system specifically tailored to knowledge management purposes.

There are a series of new and emerging methods to produce a ROK analysis for knowledge management systems that firms like Unilever can then deploy in order to make strategic business decisions based on their results. One such solution is the Knowledge Value Added or KVA method in which the knowledge that exists within a given firm is quantified (Lowe, Culley & Mcmahan, 2004). The KVA method converts this knowledge into a quantifiable figure that is then allocated financial resources based on both the cost to

use that knowledge and the value-add that the knowledge produces. There are several methods to demonstrate KVA but in fact the KVA methodology is not dissimilar to the activity based costing or ABC method in accounting.

In assigning a value to knowledge the KVA method first determines the cost that the firm incurs to train and introduce this knowledge into the employee or employees and then it adds the cost associated with utilizing this knowledge (Coff, Coff & Eastvold, 2006). This is essentially the same as the zero-costing or ABC method in accounting where, for example, KVA would examine how much the firm invested in a marketing manager in terms of training on a particular program or initiative, identify each hour spent on related projects in the firm by that manager, and integrate any cost savings or cost increases resulting from the manager's input. This technique can be applied at any level of the enterprise be it individual, departmental or enterprise wide.

KVA results in a ROK which is a ratio in the same manner that traditional financial analysis is. These types of numerical ratios allow executives to make more informed decisions related to corporate strategy and investments. KVA has been described as a type of "analytic tautology in that it operates on the assumption that, at a given point in time, all of the knowledge required to execute processes is known and…is a surrogate for the economic value it produces" (Housel, Sawy, Zhong & Rodgers, 2001, p.100). Thus, in order to most accurately determine ROK, the enterprise must first identify and make explicit all forms of knowledge within its structure. Since this is part and parcel of any knowledge management strategy, KVA can be instituted simultaneously with the implementation of a knowledge management solution and utilized at any time thereafter.

Another important aspect of the KVA methodology is that it does view knowledge in a slightly different manner than the traditional knowledge management system does. Although both identify and isolate all the same types of knowledge, KVA sorts knowledge

based on its association with activities that produce outputs that are related to a firm such as Unilever Ghana's LOB (Gottschalk, 2004, p.5). This allows firm analysts to determine how long it took an employee to acquire the skills and knowledge to perform the activity that resulted in the outputs. It also facilitates isolating the time and effort it took the firm's representatives to sell and market the same outputs, depending on the firm's LOB. Together, all of these knowledge increments are assigned a value based on employee compensation figures, training costs, and the storage costs of those particular knowledge increments within the knowledge management system itself.

5.5 Limitation of the Study

This study is necessarily limited in scope due to a series of resource limitations as well as practical research limitations. The series of resource and practical limitations that constraint the scope of this research project is listed below:

* This project work is limited to Unilever, although reference was made to other manufacturing companies, because this company is locally situated but internationally recognized.

* This study is also limited to the knowledge and experience in quality management of the researcher involved.

* Furthermore, this study is limited to the information gathered or provided by the company itself, which is presented within the context of the case study methodology employed.

* Although the study has been conducted in Ghana, it is limited to Accra, Tema and other towns because these two cities hold about 70% of the Ghanaian market. Accra is the national capital and the most popular city, with Tema as the most industrialized city with a modern harbour.

These limitations affect the scope of the research project. Some limitations are obvious and are defined by access to appropriate funding sources, while others are related to logistical issues wherein extensive foreign travel to other markets is not only impractical but effectively impossible.

Financial constraints also proved as serious limitations to the researcher. The researcher was made to undertake personal accident policies for him and all the assistants before they could enter the factor premises of the company under study. This was to take care of potential injuries to be sustained within the factory. Numerous trips were also undertaken to the plantations of Unilever which were in the Central and Eastern regions of Ghana for data gathering for the project.

Time also became very essential for both the researcher and officials of the firm under study. Another limitation is that the research and its generalization will be limited to Ghana and other developing countries. Data collection is limited to key knowledgeable persons with the company under study and few persons outside the firm. Some of the information expected may be full of biases due to human errors.

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APPENDICES

Appendices One--Questionnaire

ST CLEMENTS UNIVERSITY QUESTIONNAIRE

TOPIC : QUALTIY MANAGEMENT SYSTEM OF UNILEVER GHANA LIMITED

This survey is undertaken by a Doctoral student of the above University to gather relevant data on quality assurance systems, policies and procedures used in Unilever Ghana Limited. The results will be used to design and/or recommend programmes to assist the organization develop or align their quality performance systems to the requirements of an International and/or local quality management system standard so as to improve their competitiveness in the marketplace and hence, satisfy their customers and other stakeholders on a continuous basis.

- Supplements may be included where it is necessary to expand statement.
- The information given in this document will be treated with strict confidentiality.

Please answer every question. A 'Yes' or 'No' response is accepted in most of the sections. Please tick the appropriate box where provided. If the question is not applicable, please mark N/A.

(A) Company Information

1. Name of Company : **Unilever Ghana Ltd**
2. Address : P O Box 721, Tema
3. Telephone Numbers : 233 22 218100
4. Fax Numbers : 233 22 210367
5. E-Mail Address : Kofi.Essuman@unilever.com
6. Office Location : Plot No.IND/A-2/3A-4 Heavy Industrial Area, Tema
7. Contact Person : Kofi Essuman
8. Type of Business

(a) Manufacturing **X** :

(b) Provision of Service :

(c) Agricultural :

(d) Others (please specify) :

9. Business Classification

(a) Public

(b) Government

(c) Private

(d) Partnership

(e) Multinational **X**

(f) Others (please specify).

10. Number of Employees **550** :

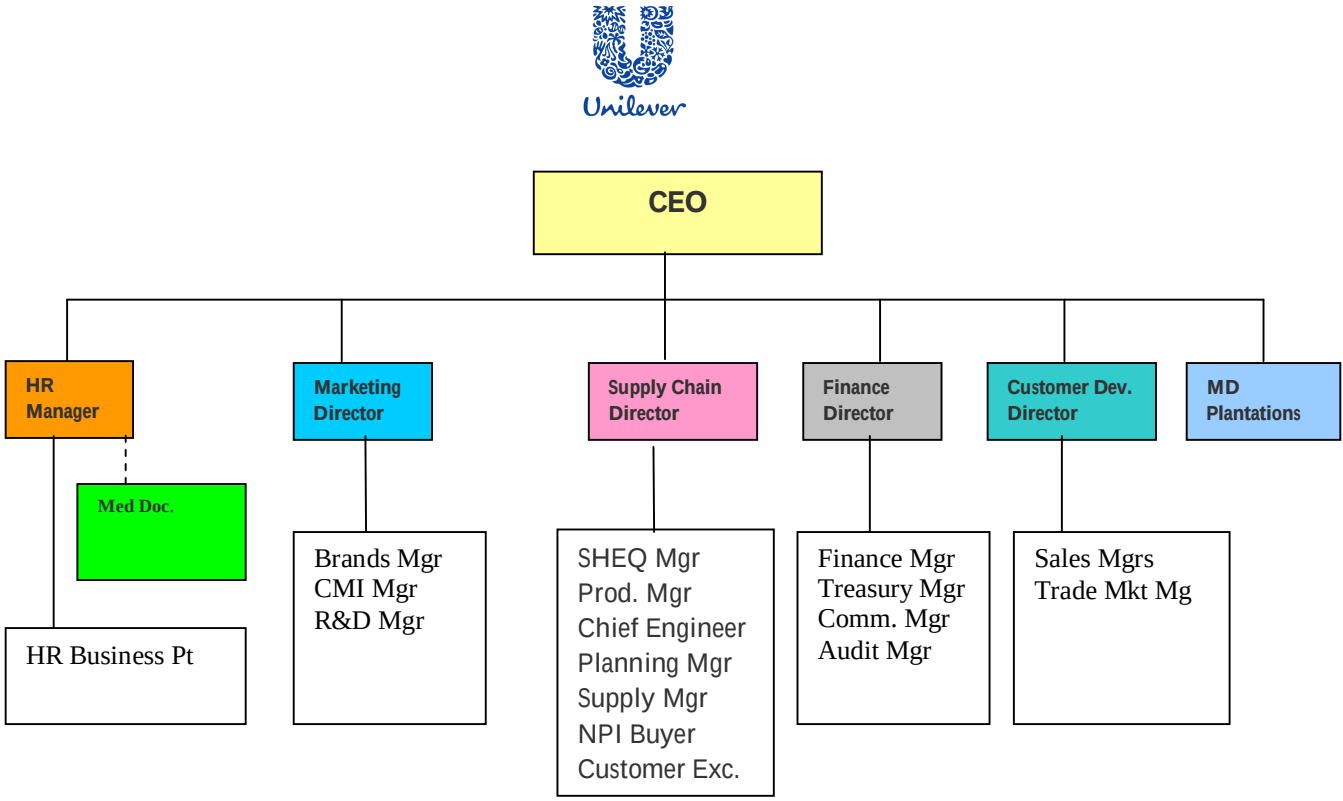
11. Do you have subsidiary offices? **Yes**.

12. If the answer to 11 is yes, please provide details under the appropriate column.

SUBSIDIARY	LOCATION	STAFF STRENGTH
BENSO OIL PALM PLANTATION	**Adum Banso W/R**	**300**
TWIFO OIL PALM PLANTATION	**Twifo Praso C/R**	**350**

13. Do you have an organogram? **Yes**

14. If answer to 13 is yes, please indicate the type.



15. What is Unilever Ghana Limited's Mission (please state).

Our Mission is to add Vitality to Life. We meet everyday needs for nutrition; hygiene and personal care with brands that help people feel good, look good and get more out of life.

(B) Product Information

1. What are your main products/outputs? (Please list).

Foods: - Royco, Blue Band Margarine, Frytol Vegetable Oil,

Soaps: - Key Soap, Brillant, Sunlight, Lifebuoy, Lux, Geisha, Rexona, Omo, Lifebuoy, Vim, Sunlight Dishwashing Liquid.

Personal Care, Close up, Pepsodent, Sunsilk, Vaseline

2. Do you export any of your products? **Yes**.

3. If answer to 2 is yes, could you tell me the countries involved. (Please state).

Nigeria (BBM), Cote D'Ivoire (BBM)

(C) <u>Quality Information Systems</u>

1. Does Unilever Ghana Limited has a quality policy? **Yes**

QUALITY AND CONSUMER SAFETY POLICY

Unilever Ghana Limited is committed to consistently supplying safe and superior quality products and services to meet the needs of our consumers and customers in our chosen markets. We are committed to continually exceeding the expectations of our consumers and customers by designing safety and quality into all our products and processes.

To achieve this Unilever Ghana will:

- **Design, operate and maintain processes and plants to ensure that all our products are safe and meet both Unilever and existing national mandatory and regulatory product safety standards.**
- **Operate a mandatory toxicological clearance system for all ingredients, formulations, packaging and processes.**
- **Establish and maintain standards and procedures for the control and monitoring of all operations that present potential consumer product safety hazards. We will utilise Hazard Analysis Critical Control Point (HACCP) and good Manufacturing Practices to underpin the product quality and safety systems.**
- **Extend our quality and consumer safety practices to all aspects of the supply chain including sourcing of ingredients, packaging, formulations, manufacturing process, storage, distribution, usage and disposal of waste.**
- **Manage the outbound Supply Chain to ensure brand integrity and protect our consumers' health.**
- **Implement the Quality Demerit Index system to monitor the quality of products on shelf and in use.**
- **Operate a Consumer Information Care line to promptly and effectively address any concerns or queries.**
- **Provide necessary product information, including safe handling procedures, to customers, consumers and other stake-holders.**
- **Deal promptly and thoroughly with any complaints related to product safety and quality to guarantee consumer and customer satisfaction. Actions will include recalling from the market any product that could potentially harm our consumers.**
- **Encourage the culture of continuous quality improvement throughout the Supply Chain.**

- **Educate our employees on their Quality and Consumer safety responsibilities and equip them with adequate authority, techniques and tools for successful performance of the assigned duties and tasks.**

The Supply Chain Director shall be responsible for the implementation and sustenance of the Quality and Consumer Safety Management System.

The Chief Executive Officer has the overall responsibility for product quality and safety and together with the Board will review the effectiveness of the policy regularly for continuous improvement.

2. What ISOs do you use in your company? (Please specify).

   ISO 14001,

3. Can you state in brief any reasons for opting for the particular ISOs?

   Unilever Approved.

4. Do you have any documented quality performance procedures? **Yes**

5. If the answer to 4 is yes, please indicate if there is a master list of all the documents.

   Yes

6. Are the documents readily available to users? **Yes**

7. Do the documented procedures / work instructions address the requirements of any Quality Management System Standard or International Standard? **Yes**

8. If the answer to 7 is yes, please indicate the standard. **ISO 9001: 2001, others (please specify).**

9. If the answer to 7 is yes, is it being implemented according to plan? **Yes**

10. Is the implementation yielding the expected results? **Yes**

11. What is the level of documentation regarding procedures, work instructions, etc.?

    90- 100% complete

12. What are your company's goals and objectives for the next 2 years?

    Profitable Growth through increased market share, good margins,

13. How do you intend to achieve the goals and objectives indicated in 12?

Strategic change management to be pursued vigorously in all functions of the company.

14. How important is quality performance documentation in your plans for the achievement of set goals or objectives?

Very important

15. How adequate is your documentation for the realization of your objectives?

Very Good

16. Will you require technical/professional guidance to help develop or complete your company's quality performance/assurance systems or procedures and manuals? **Yes**

17. If answer to 16 is yes, please mark (x) in column (3) of the table below against the type of technical assistance needed to help your company realize its objectives.

(1) No.	**(2) TECHNICAL ASSISTANCE**	**(3) CHOICE**
1.	Training in ISO 9000.	**X**
2.	Design and Installation of Quality Performance Systems.	
3.	Training in Procedure Writing.	
4.	Training in the Preparation of Quality Manuals.	
5.	Pre-audit Assessment of Quality Performance Systems.	**X**
6.	Training of Internal Quality Auditors.	**X**
7.	Arrangement for External Assessment of Quality Performance Systems for Certification/Registration.	
8.	Any other service (please specify). Employ the services of monitors on performance.	

18. Have you appointed an Officer to be responsible for the preparation, implementation and maintenance of Quality Assurance Procedures or Quality Performance Systems for the organization? **Yes**

19. If the answer to 18 is yes, please state the qualification and experience of the Officer.

    MSc Food Science, 20 years.

    Trained in Project Assessment and Performance Monitoring.

    (a) Ensure Products Quality.

    (b) Maintenance and Production Operations

    (c) Others (please specify).

20. Do you have any link with Ghana Standards Board? **Yes**

21. If answer to 20 is yes, please state the extent of the link with GSB.

    Product certification, Periodic Meetings and Representation on Technical committees.

<u>Occupational Health and Safety Management System (OHSAS)</u>

22. Do you have OHSAS in place? **Yes**

23. If the answer to 22 is yes, then why did you choose such a system? (Please state).

    Unilever Safety framework and specific standards are Mandatory for all Unilever operating companies.

24. Is your OHSAS compatible with ISO 9001 (Quality) and ISO 14001 (Environmental) management systems standards? **Yes**

25. If answer to 24 is yes, state how compatible the system is.

    Built around ISO standard.

26. Do management commit adequate resources into OHSAS? **Yes**

Food Safety (HACCP)

27. Do you operate a comprehensive, fool proof approach to food safety? **Yes**

28. If answer to 27 is yes, then have you accepted the under listed principles:

    (i) Analyse hazards, **Yes**

    (ii) Determine the critical control points (CCPs), **Yes**

    (iii) Establish preventive measures with critical limits for each control point, **Yes**

    (iv) Establish procedures to monitor the critical control points, **Yes**

    (v) Establish corrective actions to be taken when monitoring shows that a critical limits has not been met, **Yes**

    (vi) Establish procedures to verify that the system is working properly, **Yes**

    (vii) Establish effective record keeping documenting the HACCP system. **Yes**

29. Is your food safety facility located, constructed and maintained according to sanitary design principles? **Yes**

30. Do you have in place written specifications for all ingredients, products, and packaging materials? **Yes**

31. Are all your production equipments constructed and installed according to sanitary design principles? **Yes**

32. Do you establish and document preventive maintenance and calibration schedules? **Yes**

33. Do you document all procedures for cleaning and sanitation of the equipment and facility? **Yes**

34. If the answer to 33 is yes, are the documentations followed? **Yes**

35. Do employees and even other persons entering the manufacturing plant follow fully the requirements for personal hygiene? **Yes**

36. Do you train every person engaged in food safety in personal hygiene, cleaning and sanitation procedures and personal safety? **Yes**

Design and Development

37. Do you design your products? **Yes**

38. Do you control your design and development process? **Yes**

39. Do your design and development process include the following:

    (a) Design and development planning; Yes

    (b) Design and development inputs; Yes

    (c) Design and development review; Yes

    (d) Design and development verification; **Yes**

    (e) Design and development validation; **Yes**

    (f) Control of design and development changes. **Yes**

Purchasing

40. Do you purchase the materials and services you use to build your product? **Yes**

41. If answer to 40 is yes, how do you do the buying of those materials and services?

    Specifications, Approved suppliers, Audit suppliers,

42. If answer to 40 is yes, do you specify your material requirements to the suppliers to allow you to provide quality products? **Yes**

43. Do you evaluate your suppliers and determine the best suppliers to provide the materials and services? **Yes**

44. Who are some or all of your major suppliers? (Please specify).

GOPDC = Palm Oil, Poly Group = Packaging and Positive Packaging =Packaging

45. Do you keep your purchased materials in stores? **Yes**

46. If the answer to 45 is yes, for how long on average do you keep the materials in stock? (Please specify).

2-3 weeks for local and 12-13 weeks for imports

47. Do you have a stores officer who keeps yours stocks? **Yes**

48. What is the qualification and experience of the storekeeper? (Please state).

Chartered Accountant

49. How do you issue materials from the stores to the production line? (Please give details).

Production issues Material Requisition form to stores; Stores issue Goods Receives Report to production. Transaction is captured in 4th Shift (Computer Database)

50. Do you have any special reasons for choosing the method(s) stated in 49 above (please elaborate).

Effective Tracking, monitoring and control.

51. What documentations do you use in controlling your stocks/stores/materials? (Please specify).

4th shift print outs, Material Requisition, Goods Receives Report, waybill, audit report, stock taking report, quality control report

52. Have you been experiencing stocks/stores/material loses? **Yes**

53. If answer to 52 is yes, please state the quantum in percentage.

2- 5% maximum

Transport

54. Do you operate a transport unit that conveys your products to your dealers? **No**

55. If answer to 54 is No, then what type of transport system do you use? (Please state).

    3rd Party Haulage (private) Trucks

56. Do you use private transport system for your operations? **Yes**

57. If answer to 56 is yes, then why did you opt for private transporters? (Please state).

    Cost effectiveness, Transportation is not a core business activity, and so leaves transport operations to professionals.

58. Do you experience shortages/losses of products during the transporting period? **Yes**

59. If answer to 58 is yes, who is held responsible for the losses? (Please state).

    Transporter is held responsible for damages and pilferage if found to be negligent.

60. Do you ensure that the drivers maintain proper hygiene in their contact with the products they carry? **Yes**

61. If answer to 60 is yes, how do you do that? (Please state).

    Use of Hygiene checks list and regular inspection.