

## Total Quality Culture and Customer Loyalty: A Study of Lafarge Africa Plc

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**Abstract:** Total Quality Management (TQM) is a philosophy aimed at improving businesses as a whole. Some of the benefits lie in the continuous improvement of processes and products and enhanced efficiency of people and machines leading to improved quality overtime. The major thrust of Total Quality Management (TQM) is to achieve productivity and process efficiency by identifying and eliminating problems in research processes and systems. This study examines basic total quality concepts and its impact on customer satisfaction, customer retention and customer loyalty. Emphasis was made on a shift from these conventional principles to the total quality culture as the sustaining factor towards quality strides by organizations in the long term. How managers should understand, adapt and uphold a quality enabling environment through its culture is espoused and the various orientations it may be applied through. Two case studies in the Nigerian cement industry were selected using secondary data to analyze both companies. The implications of the study includes managers conforming beyond methods and processes advancing towards propagating a quality culture whose benefits radiates beyond the final products.

**Key words:** Quality culture, quality management, industry, customer satisfaction, customer loyalty

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### INTRODUCTION

Total quality management is a management philosophy which focuses on the research process and people with major concern for satisfying customers and improving organizational performance. It involves the proper coordination of research processes which allows for continuous improvement in all business units with the aim of meeting or surpassing customer's expectations. It emphasizes totality of quality in all facets of an organization with the aim of reducing waste to reduce cost and increase efficiency in production.

As a result of many pressures facing organizations in a fast paced and demanding business environment, there is need for managers to move beyond the traditional 'Total Quality Management' to create a culture in which employees live quality in everything they do within the research environment. It builds foundation upon total quality management involving the coordination of research processes, allowing continuous improvement in all business units with the aim of meeting or surpassing customers' expectations. Total quality culture is an established core mind-set of quality management and continual improvement such that new challenges would be dealt with in the most efficient way. It refers to the specifics within an organizational culture relating to

quality initiatives and continuous sustenance. It goes beyond lip service or methods and processes to emphasize how enabling the research environment is towards employee ownership of quality initiatives on a continuous scale. In Nigeria, quality improvement and total quality management in particular have become very popular. This may be attributed to the fierce competitiveness of the global market. Relatively, preference for Foreign made goods compelled Nigerian industries to transform ways of doing businesses into an organizational approach focused on continuous improvement.

The Nigerian Cement Industry was among the earliest import-substitutes industries after its independence. Cement is a finely ground mixture of materials, a hydraulic with adhesive and cohesive properties. Concrete is a composite material composed mainly of water, aggregate and cement mixed together to form a fluid mass easily molded into shape. Cement and concrete are essentially a necessity with no close substitute needed in every construction which includes homes, schools, offices, hospitals and infrastructures. The two key players within the Nigerian state are Dangote cement and Lafarge Africa plc. Lafarge Africa plc is a member of the Lafargeholcim group (largest cement, concrete and aggregate producer in the world) and the second oldest Nigerian cement and

Table 1: Crosby's quality management maturity grid

Quality management maturity grid (Crosby)	Assessor			Department	
Measurement categories	Stage 1: uncertainty	Stage 2: Awakening	Stage 3: Enlightenment	Stage 4: Wisdom	Stage 5: Certainty
Management understanding attitude	No comprehension of quality as a management Tool. Tend to blame quality Department for "quality problems"	Recognising that quality management may be of value but not willing to provide money Or time to make it happen	While going through quality improvement programme learn more about quality management; becoming supportive and Helpful	Participating understanda absolutes of quality management recognise their personal role in continuing emphasis	Consider quality management as an essential part of company system
Quality organisation status	Quality is hidden in Manufacturing or Engineering departments Inspection probably not Part of organisation Emphasis on appraisal and sorting	A stronger quality leader is appointed but main emphasis is still on appraisal and moving the product. Still of manufacturing or other	Quality department reports to top management, all appraisal is incorporated and manager has role in management of company	Quality manager is an officer of company effective status reporting and preventive action involved with customer affairs and Special assignments	Quality manager on board of directors. Prevention is main concern. Quality is a thought leader
Problem handling	Problems are fought as They occur; no resolution; Inadequate definition lots Of yelling and accusations	Teams are set up to major problems long-range solutions are not solicited	Corrective action communication established; problems are faced openly and Resolved in an orderly Way	Problems are identified early in their development; all functions are open to suggestion and improvement	Except in the most unusual cases problems are prevented
Cost of quality as Percentage of sales	Reported: Unknown Actual: 20%	Reported: 3% Actual: 18%	Reported: 6% Actual: 12%	Reported: 6.5% Actual: 8%	Reported: 2.5% Actual: 2.5%
Quality improvement actions	No organised activities. No understanding of Such activities	Trying obvious "motivational" short-range efforts	Implementation of a multi-step programme (e.g., Crosby's 14-step) With through understanding And establishment of each Step	Counting the multi-step programme and starting other pro-active preventive product quality initiatives	Quality improvement is a normal and continued activity
Summary of company quality posture	"We don't know why we have problems with quality"	"Is it absolutely necessary to always have problems with quality"	"Through management commitment and quality improvement we are identifying and resolving our problems"	"Defect prevention is a routing part of our operation"	"We know why we do not have problems with quality"

Crosby (1984); Quality without Tear. New York: McGraw Hill

concrete company established in 1960. Over several decades, it has evolved through various business stages and has various cement products with high reputation for quality. Lafarge equally blaze the trail in concrete as the first national commercial player since 2011 and Pulverized Fly Ash (PFA) in 2015.

Its cement brands include Elephant Classic, Elephant Supaset and Lafarge Powermax. In contrast however, Dangote cement is a member of the Dangote group (one of the most diversified conglomerates in Africa), it holds the largest market share in Nigeria and aims to be the largest cement company in Africa. It commenced operations in Nigeria in 1992 at the Obajana cement plant in Kogi State. Its cement brands are Dangote Portland and Dangote 3X cement. This study dwelt on the operations in cement business of Lafarge Africa plain Nigeria. It assessed the relationship of consistent quality delivery on customers' satisfaction, retention and loyalty. An examination of how continuous patronage from customers contributes to strategic positioning in the rising giant in the Nigerian scene.

## Literature review

**Overview of total quality concept and principles:** The well-known total quality management concept was

postulated by Deming who created (14) points which includes constant improvement of products and services; adoption of quality management as the new policy; non-dependence on mass inspection; little emphasis on production cost as basis for improving systems of production; new methods of training; new method of supervision; reduce fear; cooperation between staff areas; elimination of numerical goals for the researchforce; elimination of numerical quotas; removing barriers that hinder hourly workers; new program of education and training and top management involvement of quality managements.

The next total quality management concept belongs to Crosby (1984) who introduced the principles of zero defects do it right the 1st time, the system of prevention and focus on the measurement of quality. His maxim is that higher quality reduces costs and raises profits. Quality cost was a tool to achieve that goal. He emphasized prevention rather than corrective measures and presented the quality management maturity grid which may be used by organizations to assess their quality management maturity (Table 1).

Its five stages, see Table 1 are uncertainty, awakening, enlightenment, wisdom and certainty. These

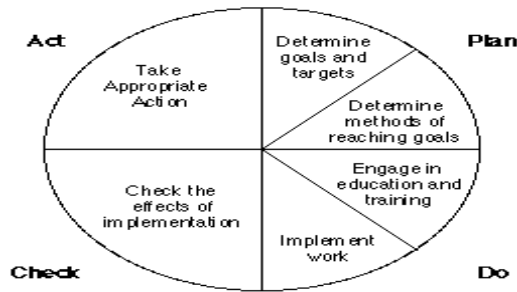


Fig. 1: Ishikawa's expansion of Deming's four steps into six; Crosby (1984)

were used to assess progress on a number of "measurement categories" such as management understanding and attitude, the status of quality in the organization, problem handling, cost of quality as a percentage of sales, quality improvement actions. Ishikawa defined quality as the "development, design, production and service of a product that is most economical most useful and always satisfactory to the consumer". He further argued that quality control extends beyond the product and encompasses after-sales service, the quality of management, the quality of individuals and the company itself. The researcher further advocated for employees participation as the key to the successful implementation of TQM.

Ishikawa also propounded six principles in achieving total quality namely: Quality first not short-term profits; customer orientation not producer orientation; breaking down sectionalism; using statistical methods, facts and data to make present performance; participatory management philosophy and cross-functional management.

"Ishikawa defines quality as the 'development, design, production and service of a product that is most economical, most useful and always satisfactory to the customer' (Fig. 1).

Juran (1986) defined 'Quality as customer satisfaction or fitness for use'. He explained that management was responsible for the establishment of quality policies, time frame for attaining quality goal and provide all necessary resources needed to achieve them. He considered quality management in three basic processes otherwise known as the Juran Trilogy: quality planning, quality control and quality improvement. In his view, the approach to managing quality consists of the sporadic problem which is operated upon by the process of quality control and the chronic problem which requires quality improvement (Fig. 2).

Feigenbaum defined quality as the "total composite product and service characteristics of



Fig. 2: Juran's Trilogy; Ishikawa

marketing, engineering, manufacture and maintenance through which the product and service in use will meet the expectations of the customer". He argued that quality is an integral part of the day-to-day research of the line and staff and that total quality management covers the full scope of the product and service "life cycle" from product conception through production to customer service. He stressed a systematic approach to quality in four main stages which are; setting quality standards, appraising conformance to these standards, acting when standards are not met and planning for improvement in these standards. He considered effective staff training and education to be an essential component of TQM. He states that education and training should address the three vital areas of quality attitudes, quality knowledge and quality skills. Taguchi (1986) emphasized an engineering approach to quality. He defined quality as the "loss imparted to the society from the time a product is shipped". Examples of loss includes failure to reach ideal performance, failure to meet the customer's requirements, breakdowns and harmful side-effects caused by products. Therefore, the minimal the loss, the more desirable the product. Key elements of Taguchi's quality concepts are: Quality improvement should concentrate on reducing the variation of the product's key performance characteristics with regard to their target values; the loss suffered by a customer due to a product's performance variation is often approximately proportional to the square of the deviation of the performance characteristics from its target value; the final quality and cost of manufactured products are determined to a large extent by the engineering design of the product and the manufacturing process; products or processes performance variation can be reduced by exploiting the non-linear effects of the product or process parameters on the performance characteristics; statistically planned experiments can be used to identify the settings of product/process parameters that reduce performance variations.

In the 1980 and 1990s, many companies in the US, EU and Japan followed the quality management approach in

order to improve their product and service. As a result, the companies that implemented the total quality management practice can save cost of production and service. The main values that are essential in implementing a total quality management process include the following elements: quality information must be used for improvement (not to judge or control people); authority must be equal to responsibility; there must be rewards for results; cooperation not competition must be the basis for working together; employees must have secure jobs; there must be a climate of fairness; compensation should be equitable and employees should have an ownership stake (Goldman, 2005) further noted that the customers' need should be included to the development of product, process and service. Juran (1986) posited that the benefits and goals of total quality are lower costs, higher revenues, delighted customers and empowered employees. Customers continue to demand higher quality goods and services.

Delighted customers always purchase over and over again, advertise goods and services for the company and check first when they are going to buy anything else to see what is offered by the company they are loyal to. Similarly, Chin and Pun (2002) stated that the implementation of total quality management can generate improved products and services, reduced costs, more satisfied customers and employees and improved bottom line financial performance. Other benefits of Total Quality Management include improved company image, improved certainty in operations, improved morale, improved management and committed customers (Davies, 2003). Total Quality Management deals with both individual and collective behaviors that can create customer satisfaction through continuous improvement (Claver *et al.*, 2001). However, it is not easy for management to implement total quality management because it is a cultural overhaul, (Rao *et al.*, 2004) (Table 2).

**Concept of total quality culture:** According to Gracia (2011), quality evaluations is precursor to loyalty. An initial favourable assessment of a products quality is

sustained over time with a positive feeling towards the company in the form of repeat purchases and then loyalty. Despite successes documented in TQM, McNabb and Sepic (1995) posits that most if not all of TQM adoption failures are not failures of management but the "fundamental, pervasive culture of the Organisation and the operating climate the culture instills in its employees". It refers to the specifics within an organizational culture relating to quality initiatives and continuous sustenance. Dellana and Hauser (1999), argues that a major challenge with studies and culture is the lack of uniformity in defining TQM.

While it is generally accepted that the core of it requires the firm to define and continually redefine quality based on customers' set terms, it undermines how the process of continuous change and improvement is accomplished which varies across organisations. Scott and Richard further explained that every manager has personal principles and values therefore when they take over the helm, they create and tend to impose an organisational cultural scheme whose philosophy mirrors their own. The true culture of quality is an environment in which employees not only follow quality guidelines but also consistently see others taking quality-focused actions, hear others talking about quality and feel quality all around them.

#### Moving beyond quality management to quality culture:

The importance of organizational culture to quality management is being emphasized in recent literature, (Wu, 2015). There is a switch of research trends from technical trends focused mainly on quantitative tools to cultural approaches. The development of Total quality culture is a strategic issue for the achievement of stakeholders' satisfaction and business competitiveness in a highly demanding and uncertain business environment (Campos *et al.*, 2014). Quality culture roots from organizational culture. Organizational culture is the net sum of business environment, organizational values and rites, cultural role models and cultural transmitters, (Ahmed, 2002). He elaborates that 'good results (quality) are an indicator of aligned organizational culture where people's actions beliefs and experiences align with the requirement (results)'.

As cited by Campos *et al.* (2014), quality is an organizational subsystem culture characterizes it by its beliefs, values and practices. Campos further referring to other researchers defining values as enduring goals that serve as principles for individuals influencing their means and ends; Practices as systems and behaviors sustained within the organizations and beliefs as shared assumptions on how individuals perceive their own environment which guides their course of action. Goetsch

Table 2: The great philosophers of TQM

Guru	Definition	Emphasis	Dominant factors
Deming	Customer led	Process	Control of variation
Juran	Customer led	People	Fitness for purpose
Crosby	Supply led	Performance	Zero defects
Feigenbaum	Customer led	Process	Total quality control
Grocock	Value led	Process	Chain of conformance
Taguchi	Supply led	Process/design	Quality loss function value to society
Ishikawa	Value led	People	Company-wide quality control/quality circles

Claver *et al.* (2001)

and Davis (2012) defined quality culture as an organizational value system that constantly creates a conducive environment that establishes and continually improves quality. It is the concentration of human and organizational resources in a never-ending quest for greater quality and service in every dimension (Viljoen and van Waveren, 2008).

Scholars have noted that total quality management results in a radical change in the culture and the way of research in an organization. A fundamental factor is leadership, including philosophy, style and behavior. To make total quality management an organization wide initiative, it has to be rooted in the culture of the company. It needs to be aligned with human resource systems, including job design, selection processes, compensation and rewards, performance appraisal and training and development. The culture requires quality in all aspects of the company's operations with processes being done right the first time and defects and waste eradicated from operations. Hyde further posits that Firms with strong comprehensive culture implement highly the total quality management elements of top management leadership, people, process and customer and supplier management. Firms with clan-driven culture implement highly the element of process management while firms with hierarchy driven and weak comprehensive culture implement lowly to moderately all elements.

## **MATERIALS AND METHODS**

**Winning customer loyalty through satisfaction:** Loyal customers may not be always satisfied, but satisfied customers are apt to be loyal (Fornell, 1992). This study will examine TQM as a means of ensuring customer satisfaction, sustaining retention and ultimately winning loyalty.

**Customer satisfaction:** For decades, customer satisfaction is considered to be the key success factors for every profit-oriented organization as it affects companies' market share and customer retention. As early as 1960, Dudu and Agwu (2014) defined marketing as "satisfying the needs and desires of the consumer". Several studies have shown that it costs about five times to gain a new customer as it does to keep an existing customer (Naumann *et al.*, 1995). According to Kotler *et al.* (1996), satisfaction is the level of a person's felt state resulting from comparing a product's perceived performance (or outcome) in relation to the person's expectations. In brief, satisfaction level simply is a function of the difference between perceived performance and expectation.

Unlike the quality of goods which may be tangible and measured objectively by using indicators such as performance, features and reliability, service quality is not tangible and is thus defined in terms of attitude, interaction and perception therefore, service quality is judged by what a customer perceives rather than what a provider offers. Several companies have adopted customer satisfaction as their operational goal with a carefully designed framework. Hill and Alexander wrote that "companies now have big investment in database marketing, relationship management and customer planning to move closer to their customers". Jones and Sasser posited that "achieving customer satisfaction is the main goal for most service firms today". Increasing customer satisfaction has been shown to directly affect companies' market share which leads to improved profits, positive recommendation, lower marketing expenditures and greatly impact the corporate image and survival. Service quality promotes customer satisfaction, stimulates intention to return and encourages recommendations (Nadiri and Hussain, 2005).

Customer satisfaction increases profitability, market share and return on investment (Stevens *et al.*, 1995) on his empirical study proved that the Total Quality Management approach affected the customer satisfaction results positively such that the business units that started applying Total Quality Management earlier had more satisfied customers than their less experienced counterparts. According to Bernhardt *et al.* (1994), Eklof and Westlund (1998) and Geyskens *et al.* (1999), customer satisfaction is very vital to the profitability of the organization.

Agus (2000) elaborated that implementing total quality management could improve the company's customer satisfaction. Ingram and Chung (1997) explained that total quality management practices could increase customer satisfaction in health care industry while Aghazadeh (2002) also agreed that totality of quality practice is absolutely important for business.

**Customer retention:** Several researchers have illustrated that there is a positive relationship between customer satisfaction and customer retention; customer satisfaction is positively related to customer retention (Anderson and Sullivan, 1993). To retain a customer, it is necessary to satisfy him. A satisfied customer is more likely to return and stay with a company than a dissatisfied customer who can decide to go elsewhere. Customer satisfaction is a central determinant of customer retention. Customer satisfaction is positively related to customer retention and the effect varies by customers' size and the customers' current level of satisfaction.

**Customer loyalty:** Customer loyalty as defined by Alrubaiee (2012) is a deeply held commitment to re buy or re patronize a preferred product or service in the future not with standing situational influences and marketing efforts that have the potential to cause switching behavior. Loyalty is a function of satisfaction, switching barriers and voice. Loyalty is a process at the end of which satisfaction affects perceived quality which could cause loyalty and intention toward certain behavior (Alrubaiee, 2012). An expectation of continuity reflects the customer's intention to maintain the relationship in the future and captures the likelihood of continued purchases (Palmatier *et al.*, 2006). Coyne stated that customer satisfaction has measurable impact on customer loyalty in that when satisfaction reaches a certain level; on the high side, loyalty increases dramatically at the same time when satisfaction falls to a certain point, loyalty reduces equally dramatically.

Yi expressed that the impact of customer satisfaction on customer loyalty by stating that "customer satisfaction influences purchase intentions as well as post-purchase attitude". In other word, satisfaction is related to behavioral loyalty which includes continuing purchases from the same company, word of mouth recommendation and increased scope of relationship. Dudu and Agwu (2014) found out that there is a positive relationship between customer satisfaction and customer loyalty but this connection is not always a linear relation. This relationship depends on factors such as market regulation, switching costs and brand equity, existence of loyalty programs, proprietary technology and product differentiation at the industry level. Jones and Sasser proposed that the link between satisfaction and loyalty can be classified into four different groups: loyalist/apostle (high satisfaction, high loyalty), defector/terrorist (low satisfaction, low loyalty), mercenary (high satisfaction, low loyalty) and hostage (low satisfaction, high loyalty). There is a link between customer loyalty (in the context of behavioral loyalty) and customer satisfaction. Oliver stated that the relationship between satisfaction and loyalty is that satisfaction is transformed into loyalty with the assistance of a myriad of other factors. However, this relationship is complex and asymmetric. High levels of satisfaction lead to high levels of attitudinal loyalty. Attitudinal loyalty involves different feelings which create a customer's overall attachment to a product, service or company. To yield highly satisfied and loyal customers, organizations throughout the world are striving to produce products and services of superior quality. In addition, satisfied customers tend to be less influenced by competitors, less price sensitive and stay loyal longer (Dudu and Agwu, 2014).

## RESULTS AND DISCUSSION

**Implementation of total quality management:** There is no single approach to the implementation of Total Quality Management. Each organization needs to develop a programmed that is suited to its own needs, taking into account a multitude of factors, including product type, its stage of organizational development, resources available, organizational culture and customer requirements. It is very likely that organizations planning for Total Quality Management will seek external assistance with quality training and strategy. Forza and Filippini (1998), suggests that there are different functional perspectives on quality:

- A supply chain perspective: Many important quality-related activities are part of supply chain management. These include supplier qualification, acceptance sampling and conformance rates
- An engineering perspective: Product and process design involves activities associated with developing a product from concept development to final design and implementation. This involves quality-related activities such as Statistical Process Control (SPC), Design of Experiments (DOE), reliability and Failure Modes Effect Analysis (FMEA)
- An operations perspective: Operations management uses the "systems view" that underlies modern quality management thinking
- A strategic management perspective: Quality-related goals, tactics and strategies should be part of the organization's strategic plan

Oakland also proposed a model based on three Cs which are:

- Culture: Evaluating the organizational cultural values among its employees because it helps to get the desired results
- Communication: Sending the right message, gestures and language on TQM deliverables
- Commitment: Involvement of every employee in realizing TQM objectives regardless of challenges that may be encountered in implementation

And the four PS which are:

- Planning: The development and deployment of policies and strategies; setting up appropriate partnerships and resources and designing in quality
- Performance: Establishing a performance measurement framework; carrying out self-assessment, audits and reviews and benchmarking

- Processes: Understanding, management, design and redesign; quality management systems; continuous improvement
- People: Managing the human resources; culture change; teamwork; communications; innovation and learning

According to Kehoe (2012), the quality development of an organization involves systems, techniques and people. While each organization has a unique journey, most organizations will progress successively through the following three stages of development. A systems orientation - emphasis is on implementing "mechanistic" systems and trying to interest people in quality. Typical characteristics of this stage are: Teamwork is limited to specific problems, management style reflects an awareness of Total Quality Management, customers are defined and their requirements are determined, techniques such as acceptance sampling are used to sort conforming from non-conforming products and quality systems such as ISO9000: 2000 and environmental systems such as ISO14001 are implemented.

An improvement orientation recently, Evans and Lindsay (2013) posited that this stage implies considerable progress has been made with respect to the culture and deployment of tools and techniques. The typical characteristics of this stage are: Establishment of improvement teams, management style reflects involvement in Total Quality Management activities, processes are improved to exceed customer requirements, business excellence self-assessments are deployed and improvement tools including the seven quality control tools (flow charts, tally charts, histogram, Pareto analysis, cause and effect diagrams, scatter diagrams and control charts) are implemented.

A prevention orientation-represents a mature stage of quality development where emphasis is on defect prevention and sustainability. Typical characteristics of this stage are: team based organizational structure, style of management reflects commitment to TQM and its sustainability, customer relationships and loyalty are developed, people are recognized and rewarded for appropriate behavior and values. Evans and Lindsay (2013) states that advanced prevention-based quality tools and methodologies such as benchmarking, Failure Modes and Effect Analysis (FMEA), reliability analysis, design of experiments, the seven management tools (at this stage will affinity diagrams, inter-relationship diagrams, tree diagrams, matrix diagrams, matrix data analysis, process decision charts and arrow diagrams) and total preventative maintenance are deployed. External recognition is also anticipated through winning business excellence awards.

There are several Quality Awards worldwide. Ghobadian and Gallear (1996), describes the aims of these awards as an encouragement of systematic self-assessment vis a vis established criteria and market awareness simultaneously, increase superior competitiveness, sharing information on deployed quality strategies and benefits of implementing them and promote understanding of requirements to attain quality strategies. Major awards include the Deming Prize in Japan, the European Quality Award in Europe and the Malcolm Baldrige National Quality Award in the United States of America.

In Nigeria, the Standard Organization of Nigeria (SON) is the national and most prominent quality NIS ISO award. Each award is based on a perceived model of total quality management. They do not focus solely on either product or service perfection or traditional quality management methods but consider a wide range of management activities, behavior and processes which influence the quality of the final offerings. They provide a useful audit framework against which organizations can evaluate their quality management methods, the deployment of these methods and their end results (Zhang, n.d.).

#### **Critical success factors to total quality culture:**

Srinivasan and Kurey (2014), studied quality-improvement actions in eight different categories and conducted regression analyses to understand the relationship between those actions and employees' appraisals of their company on quality. There was little or no correlation between the use of standard tools and achievement of a culture of quality. They suggested that companies should not abandon these tools, it should support rules-based quality measures not as an underpinning of a true culture of quality. They raised concerns in four areas for TQC to be successful in organizations using world class organizations to illustrate clearly.

**Maintaining leadership emphasis on quality:** Employees tend to get mixed messages on whether quality is truly important because there are often gaps between what executives say and what they do. Srinivasan and Kurey (2014) studied Seagate, a \$14 billion provider of media storage solutions which uses series of leadership engagement mechanisms to help executives identify inconsistencies between their actions or decisions and the company's ideal culture. Company leaders begin by agreeing on what would constitute an ideal culture and what behaviors would be needed to achieve it. The quality and HR teams compares their definitions of "ideal

culture” with employees’ observations and areas for improvement are exposed. The leaders then attend workshops that enables them spot behaviors that might impede their stated goal. By showing leaders the gaps between the expected and the current state of their culture, their participation trickles down cultural change through the organization because awareness and buy-in are created.

**Message credibility:** Srinivasan and Kurey posited that majority of companies energetically uphold messages on the importance of quality, unfortunately these efforts are wasted if these messages are not believed. They studied the beverage firm Diageo whose brands include Johnnie Walker, Crown Royal and Tanqueray in their study. Challenged with having over 21,000 employees in disparate locations, Diageo identified four distinct segments of employees in terms of what drives hard work and created quality messages tailored to each one. For example, it recognized that some workers respond best to messages emphasizing the reduced cost and hassle of producing defect-free goods while others are inspired by an emphasis on customer satisfaction. Local site managers chose the campaign they thought would most appeal at their site and this customization helped the company’s messages believable. Smart leaders must realize that like any campaign, quality messaging needs to be tested, refreshed and use feedback for ensuring sustained relevance.

**Peer involvement:** Srinivasan and Kurey referred to this as a deliberate balancing act to check the over involvement or little support by organizational leaders. They argued that if too involved the authenticity and impacts will diminish and if they show little support, important opportunities will be missed. They studied HGST (formerly Hitachi Global Storage Technologies), a Western Digital company was used to illustrate further. This company uses positive social pressure to encourage employees to generate quality initiatives by displaying employees’ ideas on posters in a busy hallway. It provides a reminder that everyone at the company should research on quality. Managers publicly evaluate employees’ quality-improvement projects, highlighting not only business impact but also softer criteria such as participant enthusiasm. Friendly quality competitions are also organized to spark ideas.

**Employee ownership and empowerment:** A definite trait of an organization with true culture of quality is the freedom of employees to apply judgements to business situations outside the rules. It is key to provide the right guidance as

too little leaves blurred precepts about their authority to make decisions and implement them while too much stifles creativity and discretionary actions. Wrigley, best known for manufacturing chewing gum, writes “quality in action” guidelines to help employees understand the company’s expectations.

It takes great care to apply the guidelines only to a short but critical list of improvement opportunities the dozen or so “quality accountabilities” that each function is responsible for on a daily basis and to strive for clarity while avoiding micromanagement. In addition, Wrigley created opportunities for employees to observe and recognize quality actions that fall outside the guidelines and it conducts group brainstorming sessions to determine the root causes of mistakes and identify corrective actions. Srinivasan and Kurey stressed that specific actions are needed to help organizations shift from a rules-based quality environment to a true culture of quality. These actions will differ across companies but the first step in the process is the same: Managers must decide that a culture of quality is worth pursuing.

#### **Selected case**

**Lafarge Africa Plc:** The cement industry in Nigeria has experienced immense growth over the past decades. It has a significant contribution to the country’s Gross Domestic Product (GDP) and is a source of Foreign Direct Investment. Through the construction, renovation and rehabilitation of major roads, bridges, networks and public infrastructure, the cement industry plays a major role in overall economic development and enhancement of social welfare. Demand for cement has been on the rise ever since, the commencement of cement production in Nigeria after independence. According to Proshare Nigeria from 2003-2007, estimated annual demand for cement grew from 8.2 million metric tons to 18 million metric tons, representing a CAGR of 22%. The average cement consumption in the world is estimated at 273 kg/Capita which is much higher than that of Nigeria at 90 kg/Capita. Lafarge Africa plc, formerly West African Cement Plc (WAPCO) was established at a time when the country was solely dependent on importation in the fifties from England into the country.

Having fulfilled the national desire to establish a cement manufacturing company in 1960, since its operations has made tremendous contribution to the availability of cement in Nigeria. Lafarge Africa plc is a member of the LafargeHolcim group, the world leader in cement, aggregates and concrete due to a merger between two most powerful players in the construction sector in 2015. It has a current installed cement capacity in Nigeria of 8 Million Metric Tons, the second largest market



shareholder behind the emerged Dangote cement in the last decade. Prior to that, Lafarge had the largest market share by all indices such as capitalization, sales turnover and profit after tax for several decades creating a niche as the quality brand in the cement business. The company's premium brand, Elephant Classic Cement is of impeccable standard and quality with strength, maturity, resilience, durability and reliability. Lafarge Africa, in July 2015 reported first half pre-tax profits that rose 13% to N29.72 billion from 2014. Turnover by June also increased to N116.7 billion from N104.15 billion last year.

**Lafarge quality mastery standard:** The plant operating model is the total quality management strategy of Lafarge Africa, aimed to deliver and sustain its long term performance. Over the years, the decline of its market share from the largest to sec in the last decade and in a tough operating environment like Nigeria with issues like erratic power supply, inconsistent government industry policies, poor functionalities of railway for products dispatch etc. Its commitment to total quality standards has not been compromised despite these challenges and was awarded the "Most Resilient Manufacturing outfit" in Nigeria and its brand, Elephant Cement, the "Most Consistent Brand" by the Commerce and Industry Correspondents Association of Nigeria (CICAN) in 2011. Since 2005, the launch of quality mastery standard in its operations have had significant improvements in cement products quality. The Panorama further described CEM' UP as a term used by Lafarge referring to two essential pillars the plant operating model and Sales/marketing operating model. The plant operating model has been key to the firm's rich tradition of achievements and winnings compared to competitors and has led to Industrial Operations Excellence on these four levers:

- Safety, health and environment excellence every where, every time and everybody
- Production mastery reliable, smooth, maximized production and dispatch
- Cost excellence doing more with less (costs, inventories and capex)
- Quality mastery right quality, uniformity and product flexibility for the customer

There has been increased production profitability based on the lab mastery and Quality Management rules. A major example is the lab accuracy which improved from 66-95% over time as confirmed by Bruno Lafont, CEO Lafarge Africa in 2013. There has also been increased business results because the quality mastery standard has ensured strict compliance of cement to internal and

national standards thereby increasing customer satisfaction in an evermore challenging environment. It has also been the firm's key to maintaining its reputation as choice supplier in terms of product quality and innovative solutions.

In its December 2013, Employee Newsletter, the company stated that after its first certification to ISO (International Organisation for Standardisation) in 2000, they have keyed into existing international standards like the ISO 9001. ISO 9001 deals with quality Management systems designed to meet the needs, statutory and regulatory requirements of customers, stakeholders and products. The ISO certificate is not a once for all time process but it is renewed based on extensive sample of its sites, functions, products, services and processes. An indication of its consistent quality management was the 2009 bronze award for eight years consistent conformity to standards at the 2010 Nigeria quality/world standard day, Abuja.

## CONCLUSION

In an environment where customers' tolerance for quality problems is declining, a workforce that embraces quality in methods, processes and culture as a core value is a significant competitive advantage. As evident in the case of Lafarge Africa plc, its reputation for quality consistency and sustenance has not only led to profitable survival for 55 years yet still very attractive in the industry even in the face of declined performance due to fierce competition in Nigeria. It is evident that Quality was an attractive bargaining chip in this case study which lured viable strategic alliances overtime, evolved a local/host company to become part of today's world largest cement, aggregate and concrete company. The comparative benefits of creating a quality culture on long term outweighs mere conformity to quality management tools, processes and methods. As in the case of Dangote Cement, though it has very few quality awards to show, it can be deduced that there is a leverage on the high quality records of the groups other products like Dangote Sugar.

This leverage in addition to massive investment has projected its Dangote cement on a larger platform, earning quick wins within a short period of its existence. However, it is necessary that the company concentrates on its quality indexes so as to be able to sustain its current tempo given the recent expansion of the world's biggest Cement producer Lafargeholcim into Nigeria, projected to shake up the entrenched market by bringing competition; best practices and more choices for consumers which will further enhance quality stakes in the Nigerian industry.

The value created by the quality culture differentiates the product or services not only from the customers' viewpoint but from industry stakeholders as well. This in itself is an emphatic survival strategy should the need arise because it radiates far and longer beyond the final products.

### IMPLICATIONS

The following are the implications of this study:

- Management should be loyal to environments that create, enhance and sustain quality. Sometimes, turbulent business reasons may blink this resolve but the quality reputation outweighs short term profit for the records
- Employees should be encouraged and enabled to own the quality process that way they enforce and radiate the totality of the firm's quality
- Conforming only to methods or processes in adopting TQM will not sustain core quality principles. Managers should adopt, build or instill cultural values that encompasses more than their individual management philosophies on the organization. This way the organization grows its own culture, evolving on its own its totality of quality.

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