

## **TOTAL QUALITY MANAGEMENT (TQM) AND THE RELATIONSHIP BETWEEN COMPANIES AND THEIR CUSTOMERS**

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### **Abstract**

*This paper writes on the significance of Total Quality Management (TQM) in the Brewing Industries in order to ascertain the level of customer satisfaction with their products. Tables were used and the following formular were also used in the work, which are; the Yaro Yamane was used to determine the sample size, the z-test statistical tool was also used in testing the hypotheses, with the population size of 200. The research gave way for different hypotheses which were tested accordingly. The sources of data used for this research were both primary and secondary from the research conducted, it was found out that TQM does not enhance change in management, the paper recommended amongst others that the provision of TQM leadership to achieve everything in quality, 3 things are necessary: they include, people, process, and product.*

**Keywords:** Total Quality Management, Brewing Industry, Staff and Product

### **Introduction**

Quality is more than just something we taste, see, measure or manage. Quality shows itself in all aspects of our actions towards things around us. The term Quality is true only when a matter in question in 100% if then it is not accepted as worth been quality.

Total Quality Management as an organization -wide approach towards quality, which results in performance leadership in meeting the customer's requirements doing the right things right and at the right time.

It is difficult or perhaps impossible to achieve total quality but companies that aim for it arc being in the right direction (Drucker. 1955).

This management concept TQM was formal h known as total quality control and extensively recognized by its abbreviation TQM since the mid-nineteen eighties (1980s) emphasized the crucial role of management in the quality process. Total Quality Management involves the creation an organizational culture committed to the continuously improvement of skills, team work, process, product and services quality towards customer's satisfaction (Creech, 1994).

This implies that, the involvement and commitment of all personnel across the organization towards the realization of corporate objectives is in practice. According to Drucker (1995) a man will give his best to his job because he really finds fulfilment in it and also when he is a assigned a defined responsibility.

The best companies emphasize designing quality into process, therein greatly reducing the need for inspection or control effects.

As you might expect, different business organizations arc in different stages of this evolution process: the least progression rely heavily on inspection. Quality assurance that relies heavily and primarily on inspection after production is referred to as "acceptance sampling", and the quality control efforts that occur during production are referred to as statistical process control.

The primary role of management as regards TQM is to lead an organization, in its daily operations and to mention it as a viable entity into the future. Quality has therefore, become an important factor to success in this strategic responsibility (Drucker. 1955).

In the past, companies could always get customers who patronize them there was no need for improving or changing there systems significantly. Now things have changed because companies and organizations are faced with four (4) challenges which include;

- (a) Customer
- (b) Legislation

- (c) Technology
- (d) Competition.

### **Statement of the Problems**

If the administrative set up, the operation structures, the machinery, the financial and personnel settings are fit and proper for operation of the organization then the only factor which many not be easily quantifiable but nevertheless relevant, and critical to result oriented operation is the TQM.

For some time now, the declining level of productivity in Nigeria has been a matter of concern to employers and the study was undertaken.

Therefore, to ensure stability is the production of quality products is Nigeria, especially in the brewing industry, the following must be emphasized:

- (1) Staff quality
- (2) Motivation
- (3) Technological development
- (4) Ability to create change.

### **Significance of Total Quality Management**

The result of their study is expected to be of incensed benefit to;

- (1) The management educators and the reappraisal of existing management by objectives (MBO) long held to be very popular in the management circle.
- (2) The students of management for enriching their knowledge in a topic that have become the rave of the moment.
- (3) The management consultants and organizational strategists to be able to re-engineer their companies to achieve greater efficiency and keep to global trends.
- (4) The government, it enable it consider of adopting new raising productivity methods.

### **Relationship between Total Quality Management and Organization**

Total Quality Management is a comprehensive and structural approach to organizational management that seeks to improve the quality of products and services through out coming refinements in response to continuous feedback. The relationships are;

- (1) It is a wide approach to continuously improve the overall quality of the process, products and services of an organization.
- (2) It is a common approach to implementation of the programmer for quality improvement within an organization.
- (3) It is a set of practices geared towards ensuring the organizational consistency in meeting or exceeding the customers requirements by planning strong focus on process measurements as a means of continuous improvement.
- (4) It is a philosophy that embraces all activities through the needs and expectations of customers (both internal and external) and the community and the objectives of the organization are satisfied in the most possible effective ways.
- (5) It is a creative problem - solving process of managing qualm throughout the organization to ensure an improved organizations" products, services and operations.

### **Why Should a Company Adopt TQM?**

Adopting Total Quality Management philosophy will;

- 1) Make an organization more competitive
- 2) Establishes a new culture which will enable growth and longevity
- 3) Provides a working environment in which everyone can succeed
- 4) Reduce stress, waste, and friction
- 5) Build teams, partnership and co-operation.

TQM can be adopted at anytime after executive management have seen the error of their ways, open their minds and embrace the philosophy, it cannot be attempted if management perceives it as fix or a tool to improve workers performance.

### **How Should a Company Adopt TQM?**

Total Quality Management will force change in culture, process and practice. This changes will be more easily facilitated and sustained if there is a formal management system in place. Such a system will provide many of the facts on which to based change and will also enable changes to be implemented more systematically and permanently.

In order to focus all efforts on am TQM initiative and to yield permanent benefits, a company must answer some fundamental questions:

- (a) What is its purpose as a business?
- (b) What is its vision for the business?
- (c) What is its mission for the business?
- (d) What are the factors upon which achievements of its mission depends'?
- (e) What are its values?
- (f) What are its objectives?

### **The Principles of Quality Management**

They are eight principles of quality management:

- (1) **Customer Focused Organization:-** Organizations depend on their customers and therefore, should understand current and future customers needs, meet customer's requirements and strive to exceed customers expectations.
- (2) **Leadership:-** Leaders establish unity of purpose, directions and the internal environment of the organization. They create the environment in which people can become fully involved in achieving the organization's objectives,
- (3) **Involvement of People:-** People at levels are the essence of the organizations and their full involvement enables their abilities to be used for organization's benefits.
- (4) **Process Approach:** A desire result in achieve more efficiently when related resources and activities are managed as a process.
- (5) **System Approach to Management:-** Identifying understanding and managing a system of interrelated process for a given objective contributes to the effectiveness and efficiency of the organization
- (6) **Continual Improvement:** Continual improvement is a paramount objective of an organization.
- (7) **Factual Approach to Decision Making:-** Effective decisions are based on the logical and initiative analysis of data and information.
- (8) **Mutually Beneficial Supplier Relationship:-** Mutually beneficial supplier relationship between the organization and its suppliers enhance the ability of both organizations to create value.

### **When should a Company Adopt Total Quality Management**

Total Quality Management can be adopted anytime after executive management has seen the error of its ways, opened its mind and embrace the philosophy. It cannot be attempted if management perceives it as a quick fix, or a tool to improve worker performance.

### **Common Mistakes Why Total Quality Management Fails**

Total Quality Management initiatives have been prove to failure because of common mistakes, this include;

- (a) Allowing external forces and events to drive a Total Quality Management initiative
- (b) An overwhelming desire for quality awards and certificates
- (c) Organizing and perceiving Total Quality Management activities as separate from day-to-day work responsibilities.
- (d) Treating Total Quality Management as an add on with little attention given to the required changes in organization and culture.
- (e) Senior management understanding the necessary commitment lo Total Quality Management.

### **Organizational Development**

This refers to appreciable growth in the organizations process and better ways of doing things. It also invokes employees development, training and re-training of the employees for self-improvement. Empowerment of employees to take decisions that will enhance the growth of the organization.

### **Factors that Aid Total Quality Management Implementation**

According to Tinuoye (2001) factors that contributes to organizational Total Quality Management dynamics are:

- (a) Strong visionary and strategic leadership from the top
- (b) A tested and powerful management team.
- (c) A well motivated, committed, skilled and flexible work force.
- (d) A flexible structure, which is appropriate to the operations and culture of the organization and the environment with if functions.

#### **Core Team Concepts and Principles**

- (1) **Management Commitment to Quality:-** In most cases, organizations culture is a reflection of top management values.
- (2) **Focusing the Customer:** It can be argued that Total Quality Management has some important role that is satisfy the customers
- (3) **Continuous Improvement:** Total Quality Management advocate for continuous improvement in all areas of organization,
- (4) **Quality Measurement:** Clocks, thermostats, speedometers and fuel gauges are all measurements.

#### **Purpose of Quality Management**

The purpose of quality management (TQM) is listed as follows (Akanwa, 1999).

- (i) To put the organization in a competitive advantage over others.
- (ii) To optimize the productive level of individual employees
- (iii) To improve the quality of goods and services.
- (iv) To reduce cost associated with wastages
- (v) To create better working conditions
- (vi) To create customers satisfaction.

#### **Principles of Total Quality Management (TQM)**

There are discussions in man}" quarters as to whether Total Quality Management concept is going to be a fad (have today gone tomorrow) or it's going to be enduring. Total Quality Management as a concept make sense and whether it becomes a fad or a way of life of a business concern is a function of the management personnel.

Some organizations can apply the concept in such a sustainable manner that the employees sees it as a culture and a way of doing business. In summary, Total Quality Management could be a fad business for others: any organization that desires to implement the Total Quality Management concept could apply the basic principles as highlighted (Kreithner, 1995). These are:

- (1) Do it right the first time.
- (2) Be customers - centred
- (3) Make continuous improvement a way of life
- (4) Build team work and empowerment.

**Do it Right the First Time:** This calls for designing and building quality into the product abinitio, if this is done, the costly fixing or throwing away the substandard goods will be avoided.

**To be Customer - Centred:** Total Quality Management organization requires everyone in the organization to have one or more customers. The customers could be internal or external. Internal customers are those employees who rely on you work to be able to theirs. The external customer refers to the and user of goods/services of any organization.

This is the cardinal preaching of the marketing concept.

As noted by Kreithner, been customers centered means, anticipating the customer's needs, listening to the customers, learning how to satisfy the customers, and responding appropriately to the customers.

**Make Continuous Improvement a way of Life:-** This calls for the improvement of the overall system by improving the little details. A Total Quality Management minded manager seeks to improve quality on a continuous basis.

For him, quality improvement is an on-going process. It does not means perfection, but he rather continuously search for possible areas for improvement, should work towards consistent goods and services quality, faster cycle times; greater flexibility; lower cost and less wastages.

Total Quality Management does not believe in the concept of trade-off where the aim is to maximise the overall benefits. In the case of trade-off, a gain in one area may necessitate a loss in the other but the total effect may be better than before the trade-off.

Total Quality Management believes that gains must be made in all areas and no loss should be tolerated.

**Building Team Work and Empowerment:** This are two related terms. Building work requires an organization culture where every worker appreciate the inter-relationship between their work and that of another worker.

In an organization where team-work exist, every worker is relevant to the success of their organization and the workers should be made known of this fact.

Empowerment on the other hand require the provisions of an enabling environment which will make it possible for workers to tap in their full creativity, motivation, and commitment.

As noted by Kreithner (1995) empowerment occur when employees are adequately trained, provided with all necessary information and the best possible tools, fully involved in key decisions, and fairly rewarded for results.

### **TQM Process Improvement Tools**

Kreithner (1995) identified seven of such tools to include:

- (1) Flow chart which is graphic display of activities and decisions. It is used to increase efficiency, reduce costs and eliminate waste.
- (2) Cause and effect analysis (fish borne diagram) is used to track down a likely cause by constructing a fish borne diagram.

Assuming that a new product introduced into the market had failed, what would management do? It will use this tool to try to determine the cause was the quality of the product bad? Was the price high? Where there competitors activities during the period, and so on.

- (3) Parents analysis - named after the Italian economist Wilfred parents (1848 - 1923) who desecrated the 80/20 patterns in Mann worldly situations.

In other words, few people or events (about 20% account for most of the results or impact) (about 80%).

Pareto analysis bar chart indicate which problem needs the most attention. The most urgent problem is represented by the tallest bar chart on the chart.

- (4) Control chart is a visual aid showing acceptable and un-acceptable variations from the norm fir repetitive operations. It is used to monitor actual versus desire quality measurement.
- (5) Histogram is a bar chart showing whether repeated measurement of giving quality characteristics confirms with the standard bell-shaped curve. Any deviation from standard will call for corrective actions.
- (6) Scarier diagram is used to plot the correlation between two variables.
- (7) Time series or trend chart tracks the frequency or amount of a given variable over times.

### **Core Qualities of High Quality in an Organization**

CORE VALUE	OPERATIONAL RESPONSE
1. <b>Be Response:</b>	Identification of customers and make account of them developing new good services or reply to request for goods/services.
2. <b>Be Accessible:</b>	Incoming calls should mailed directly to the appropriate employees who have the responsibility for handing the enquiry. Incoming should be answered on the same-working day.
3. <b>Be Credible:</b>	Do not promise more than you can deliver.
4. <b>Be Courteous:</b>	Do not keep customer waiting for long time before attending to them in the case of service for example, the bank premise must be clean and tidy. Employees should always look neat and be considerate to customers and follow employees.
5. <b>Be Competent:</b>	Employees should know the products. They should be trained so that they should be able to deal with customer's requirement affecting the organization promptly.
6. Understand your customers:	Employees should take time to learn customers

- 7. Be reliable: Do every job right in the main time.
- 8. Be reasonable: Consider the over all business with each customers when assessing charges for facilities such as short term overdrafts.
- 9. Communication: Be able to explain goods/services to different customers in the language they can understand.

**Source:** Sani Abubarkar (2002). Seminar paper in marketing.

It can be reasonably inferred from both individual and corporate customers point of nation of the following:

- (1) Company reputation
- (2) Prompt response to requests
- (3) Timeliness of service.
- (4) Quick cash withdrawal in the case of return items
- (5) Availability of modern facilities
- (6) Availability of experts advices
- (7) Courteousness
- (8) Dress cod
- (9) Monetary compensation for disappointments
- (10) Structure and architectural design of buildings
- (11) Service charge/price of products.

**Total Quality Management and Marketing**

Total Quality Management may be a new concept in management but it is old in marketing except that it is existing under different names.

Having said this, marketing has a lot to borrow from the TQM concept. Early in this chapter, we had made the point that a borrowed approach 10 looking at the total quality service (TQAS). TQS is not discriminatory since no mention is made of either management or marketing.

The emphasis is purely on the improvement of services to the benefit of the customers and the organization which indeed, is the core of our discussion.

**Analysis of Questionnaire**

**Table .1:** Research Question 1: Productivity is a concern of managers?

<b>Respondents</b>	<b>Frequency</b>	<b>Percentage %</b>
Agreed	40	30.0
Strongly agreed	45	33.8
Disagreed	20	15.0
Strongly disagreed	18	13.5
Null	10	7.5
<b>Total</b>	<b>133</b>	<b>100%</b>

**Source:** Field Survey, (2011).

The analysis in table 4.6 shows that 40 respondents of 30.0% agree that productivity is a major concern of managers, 45 respondents of 15.0 disagreed. 18 respondents of 13.5% strongly disagreed and 10 respondents of 7.5% had no answer for the question.

**Table .2:** Research Question 2: Does TQM help is achieving the goals and objectives of the organization?

<b>Respondents</b>	<b>Frequency</b>	<b>Percentage %</b>
Agreed	40	30.1
Strongly agreed	60	45.1
Disagreed	12	9.0
Strongly disagreed	19	14.3
Null	2	1.5
<b>Total</b>	<b>133</b>	<b>100%</b>

**Source:** Field Survey, (2011).

The analysis above shows that 40 respondents of 30.1% agreed that TQM helps in achieving the goals and objective of the organization, 60 respondents of 45.1% strongly agreed, 12 respondents of 9.0% disagreed, 19 respondents of 14.3% strongly disagreed and 2 respondents of 1.5% had no idea.

**Table .3:** Research Question 3: Does total quality management (TQM) affect organizational productivity?

<b>Respondents</b>	<b>Frequency</b>	<b>Percentage %</b>
Agreed	30	22.6
Strongly agreed	60	45.1
Disagreed	10	7.5
Strongly disagreed	20	15.0
Null	13	9.8
<b>Total</b>	<b>133</b>	<b>100%</b>

**Source:** Field Survey. (2011).

The analysis shows that 30 respondents of 22.6% worth agreed that TQM affect organizational productivity, 45.1% strongly agreed, 7.5% of the respondents disagreed, 15.0% of the respondents strongly disagreed and 9.8% of the respondents had no idea.

**Table .4:** Research Question 4: The organizational managers are well trained to exercise TQM'?

<b>Respondents</b>	<b>Frequency</b>	<b>Percentage %</b>
Agreed	40	30.3
Strongly agreed	60	45.1
Disagreed	15	11.3
Strongly disagreed	10	7.5
Null	8	6,0
<b>Total</b>	<b>133</b>	<b>100%</b>

**Source:** Field Survey, (2011).

From the table above, 30.1% of the respondents agree that organizational managers are well trained to execute TQM. 45.1% strongly agreed. 11.3% disagreed and. 7.5% of respondents strongly disagreed and 6.0% of the respondents had no idea.

**Table .5:** Research Question 5: Does the management measure the productivity of managers?

<b>Respondents</b>	<b>Frequency</b>	<b>Percentage %</b>
Agreed	20	15.0
Strongly agreed	40	30.1
Disagreed	45	33.8
Strongly disagreed	15	11.1
Null	13	9.8
<b>Total</b>	<b>133</b>	<b>100%</b>

**Source:** Field Survey, (2011).

The analysis above shows that the highest number of respondents (45) disagreed that the management measure the productivity of managers. 40 respondents strongly agreed. 20 respondents agreed, 15 strongly disagreed, and 13 respondents had no idea.

**Test of Hypotheses**

When the critical value in higher than the calculated value, we accept the null hypotheses (H0). But when the calculated value is higher than the critical value, we reject the null (H0).

**Table.6**

H01: Total Quality Management is not dependent on staff quality.

<b>Response</b>	<b>Frequency</b>	<b>Percentage %</b>	<b>Proportion</b>
Agreed	72	54.1	0.5541



Strongly Agreed	25	18.8	0.189
Disagreed	20	15.0	0.15
Strongly Disagreed	12	4	0.09
Null	4	3.0	0.03
<b>Total</b>	<b>133</b>	<b>100%</b>	<b>1</b>

$$Z = \frac{P - P_0}{\sqrt{\frac{P_0(1-P_0)}{N}}}$$

Where: P =  $\frac{\text{Sample size}}{\text{Population}}$

P = Proportion of success

N = Sample size

Therefore,

$$\frac{0.665 - 0.541}{\sqrt{\frac{0.541(0.459)}{133}}} = \frac{0.124}{\sqrt{\frac{0.541(0.459)}{133}}} = \frac{0.124}{0.043} = 2.88$$

Z<sub>calculated</sub> = 2.88

Z<sub>tabulated</sub> = 0.9980

**Decision Rule:** Since the Z calculated value (2.88) is higher than the Z tabulated (0.9980) we reject the null hypothesis (H<sub>0</sub>) which states that total quality management is not dependent on staff quality.

**Table .7**

H<sub>02</sub>: There is no relationship between total quality management and motivation.

Response	Frequency	Percentage %	Proportion
Agreed	70	52.6	0.53
Strongly Agreed	25	20.3	0.20
Disagreed	20	15.0	0.15
Strongly Disagreed	12	9.0	0.09
Null	4	3.0	0.03

<b>Total</b>	<b>133</b>	<b>100%</b>	<b>1</b>
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$$Z = \frac{P - P_0}{\sqrt{\frac{P_0(1-P_0)}{N}}}$$

Where:  $P = \frac{\text{Sample size}}{\text{Population}}$

$P$  = Proportion of success

$N$  = Sample size

Therefore,

$$\frac{0.665 - 0.53}{\sqrt{\frac{0.53(1-0.53)}{133}}} = \frac{0.135}{\sqrt{\frac{0.53(0.47)}{133}}}$$

$$\frac{0.135}{\sqrt{0.0019}} = \frac{0.135}{0.0416} = 3.25$$

$Z_{\text{calculated}} = 3.25$

$Z_{\text{tabulated}} = 0.9994$

**Decision Rule:** Since  $Z$  calculated value (3.25) is higher than the  $Z$  tabulated (0.9994) we reject the null hypothesis ( $H_0$ ) which states there is no relationship between TQM and motivation.

**Table .8**

$H_{03}$ : There is no significant relationship in practice TQM and improved technologies.

Response	Frequency	Percentage	Proportion
Agreed	72	54.1	0.541
Strongly Agreed	34	18.0	0.18
Disagreed	21	15.8	0.15
Strongly Disagreed	10	7.5	0.07
Null	6	6	0.04
<b>Total</b>	<b>133</b>	<b>100%</b>	<b>1</b>

$$Z = \frac{P - P_0}{\sqrt{\frac{P_0(1-P_0)}{N}}}$$

Where:  $P = \frac{\text{Sample size}}{\text{Population}}$

$P$  = Proportion of success

$N$  = Sample size

Therefore,

$$Z = \frac{0.665 - 0.541}{\sqrt{\frac{0.541(1-0.541)}{133}}} = \frac{0.124}{\sqrt{\frac{0.541(0.459)}{133}}} = \frac{0.124}{0.043} = 2.88$$

Z calculated = 2.88  
 Z tabulated = 0.9980

Decision Rule: Since the Z calculated value is higher than the Z tabulated, we reject the null hypothesis (H0) which states that there is no significant relationship in practice of TQM and improved technologies.

**Table .9**

Ho4: TQM does not have the ability to create change.

Response	Frequency	Percentage %	Proportion
Agreed	71	53.4	0.534
Strongly Agreed	25	18.8	0.188
Disagreed	19	14.3	0.143
Strongly Disagreed	11	8.27	0.083
Null	7	5.5	0.05
<b>Total</b>	<b>133</b>	<b>100%</b>	<b>1</b>

$$Z = \frac{P - P_0}{\sqrt{\frac{P_0(1-P_0)}{N}}} = \frac{0.665 - 0.534}{\sqrt{\frac{0.534(1-0.534)}{133}}} = \frac{0.131}{\sqrt{\frac{0.534(0.466)}{133}}} = 3.01$$

Decision Rule: Since the Z calculated value is (3.01) while the Z tabulated is (0.9987) we reject the null hypothesis (H0) which states that TQM does not have the ability to create change.

There has been improvement in the level of output since the adoption of Total Quality Management in Nigerian Breweries Pic Makurdi, Benue State.

### **Conclusion**

On the basis of the findings of the study in Nigerian Breweries Makurdi, Benue State, staff quality determines Total Quality Management. The introduction of Total Quality Management leads to invention of new technologies.

The adoption of Total Quality Management has brought an improvement in the level of output in Nigeria Breweries Makurdi Total Quality Management does not enhance change in the organization.

Recommendations;

- (a) Adequate enlightenment of TQM in organization. The employees must be taught diligently on how to get things done right at the right time that is through work-shops, seminars, conferences this will make them pay more attention to Total Quality Management.
- (b) Provision of TQM leadership and motivation to achieve everything quality; three (3) things are necessary. These are people, process and product. Achieving quality in people does not only imply quality, recruitment and selection but also means quality orientation, appraisal and promotion, the human resources of even organization and the individual concerned.
- (c) Method of measuring results to be improved; for better results to be achieved from the better results to be achieved from the practice of T.Q.M, continuous improvement must be pursued vigorously.

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