

## TQM Practices and Customer Satisfaction among Small and Medium-Scale Enterprises in Nigeria: An Empirical Investigation

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### ABSTRACT

This study focused on TQM Practices and Customer Satisfaction among Small and Medium-scale Enterprises in Nigeria. The study used survey research design. Primary data were collected through structured five-point likert scale questionnaire. The population of the study captures the management staff and employees population which totalled 5000; other sub-population is the selected SMEs customers. The sample sizes were 500 respondents from the management staff and employees of the selected SMEs, and that of the customers was 600. A random sampling method which was judgmental was used to select the SMEs covered. The study analyze data using descriptive and linear multiple regression model. The study revealed that TQM practices among SMEs in Nigeria have little or no effect at all on customer's satisfaction, retention and loyalty. Furthermore, findings shows that TQM practices among many SMEs cannot influences customers retention and loyalty. The study concludes that effective implementation of TQM can lead to customer's satisfaction. The study recommends that SME owners should be properly educated on the importance of TQM practices and awareness; that they should not only be on the management of quality as the only TQM determinants but should also incorporate training, customers focus, teamwork, suppliers quality, process and strategy management, as well as human resources management as part of their TQM policies and practices determinants; and that the government should stimulate and assist SMEs towards participating in improvement activities that will lead to excellence in customers' satisfaction.

Keywords: TQM Practices, Customer Satisfaction, Continuous Improvement, Quality Assurance, Customer's Relations, Customers Retention and Loyalty.

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### INTRODUCTION

The drive to satisfying customers around the globe has induced global competition. The quality of goods is determined by customers, thus customers are the only factor that can create competition among organizations. For organizations to compete effectively, [1] suggested the need to create new management based on total quality management. [2] stated that quality management is one of the most important factors in every organization. Successful enterprises understand the dominant influence customer-defined quality can have on business [3]. The

consumers are the king and quality assumed the central determinant in consumption. If an organization does not consider quality, the customer will be dissatisfied. The outcomes of such an approach are lost customers and opportunities for rival to catch benefit of the market need [4]. If organizations served poor quality in organization the customer will be dissatisfied. [5].

However, paying serious attention to customers' needs made quality a priority. [6]; stated that it means meeting and exceeding customer expectations by

involving everyone in the organization through an integrated effort. This integrated effort is named Total Quality Management (TQM). Conceptually, [6] expressed that TQM is principles guiding managers in the adoption and maintenance of a culture of continuous improvement in the firm's processes and procedures. [7] noted that TQM is a factor that can improve quality and a holistic approach in continuous improvement in all organizations.

Key issues regarding TQM are effective top management commitment, an effective steering committee engaged in policy and planning management, real employee involvement, employee rewards and skills development, increases in stakeholders' satisfaction, profitability, market share and decreases in manufacturing costs, remaining competitive and ensuring business survival. For TQM to succeed, all the components within the organization must be collectively involved. When all the components within the organization are actively pursuing the goal of TQM, innovation, competitive advantage, and organizational culture are systematically enhanced. Total quality management is identified as an origin of innovation, competitive advantage, and organizational culture [8].

Small and medium enterprises (SMEs) sector in any economy are seen as the

bed-rock of such economy due to their importance in terms of employment generations, suppliers of both raw materials and semi-finished products to large organizations and part-way to industrialization among others. The products or services of these SMEs owners when produced are either being consumed by their customers or end users of these produced goods. Hence, for customers or end users of these products or services to enjoy value for their money, the output of these SMEs must be of quality, as quality remains the only focal point for any organization that wants to stand a test of time in this present competitive business environment. Though, the study conducted by [9]; and [10] have focused on TQM and customers' satisfaction, but their attentions majored on larger businesses. They have shown a positive relationship between the use of quality control procedures and the health of a small business. No attempt has, however, been made to empirically investigate the extent to which quality and business improvement related activities are practiced in Nigerian SME to enhance customers satisfaction. Thus, this study intends to explore this gap, and equally compare TQM adoption among SMEs in Nigeria.

#### **OBJECTIVES OF THE STUDY**

The main objective of this study is to empirically investigate TQM practice and

customers' satisfaction of Small and Medium Enterprises (SMEs) in Nigeria.

- i. To investigate the influence of TQM practices on customer(s) retention and loyalty among SMEs in Nigeria
- ii. To compare TQM adoption among SMEs in Nigeria.

#### LITERATURE REVIEW AND THEORETICAL FRAMEWORK

##### **Conceptual Framework on Total quality Management (TQM)**

Total Quality Management (TQM) is an endless journey in pursuit of a delighted customer. In recent years, the word "quality" itself has changed meaning. It has come to mean more than the reliability and price/performance of a product or service, as essential as those are. It is more than a program. It encompasses every aspect of customer satisfaction, including how fast a solution is delivered, its usability, availability of support, efficiency of service, and even the simplicity of bills and prompt, courteous telephone responses. Total quality management needs to be integrated into everything the business does [11].

Total Quality Management (TQM) is different from the old concept of quality because its focus is on serving customers, identifying the causes of quality problems and building quality into the production process [12]. Seven features of TQM combine to create the TQM philosophy: customer focus, continuous improvement, employee empowerment, use of quality tools, product design, process management and managing supplier quality [13]. Total Quality Management (TQM) is an integrated organizational effort designed to improve quality at every level [12]. The new

concept of quality which is TQM is proactive, designed to build quality into the product and process design [13].

TQM requires that the principles of quality management should be applied in every branch, and at every level, in the organization with an emphasis on integration into business practices, and a balance between technical, managerial and people issues. It is a companywide approach to quality, with improvements undertaken on a continuous basis by everyone in the organization [14]. TQM is the mutual co-operation of everyone in an organization and associated business processes to produce products and services which meet and hopefully, exceed the needs and expectations of customers [14].

Total Quality Management (TQM) is a philosophy that involves everyone in an organization in a continual effort to improve quality and achieve customer satisfaction [15]. There are three key philosophies in the TQM approach [15]. One is a never-ending push to improve, which referred to as continuous improvement, the second is the involvement of everyone in the organization, and the third is a goal of customers satisfaction, which means meeting or exceeding customer expectations.

### **The Philosophy of Total Quality Management (TQM)**

What characterizes TQM is the focus on identifying root causes of quality problems and correcting them at the source, as opposed to inspecting the product after it has been made. Not only does TQM encompass the entire organization, but it stresses the quality in customer driven. TQM attempts to embed quality in every aspect of the organization. It is concerned with technical aspects of quality as well as the involvement of people in quality, such as customers, company employees and suppliers. It is important to look at the specific concepts that make up the philosophy of TQM. These concepts and their main ideas are summarized below, [16].

#### **Customer Focus**

The first and overriding feature of TQM is the company's focus on its customers. Quality is defined as meeting or exceeding customer expectations. The goal is to first identify and then meet customer needs. TQM recognizes that a perfectly produced product has little value if it is not what the customer wants. Therefore, we can say that quality is customer driven. However, it is not always easy to determine what the customer wants, because tastes and preferences change. Also, customer expectations often vary from one customer to the next. For example, in the auto industry trends change relatively quickly, from small cars to sports utility vehicles and back to small cars. The same

is true in the retail industry, where styles and fashion are short lived. Companies need to continually gather information means of focus groups, market surveys, and customer interviews in order to stay in tune with what customers wants. They must always remember that they would not be in business if it were not for their customers.

#### **Continuous Improvement**

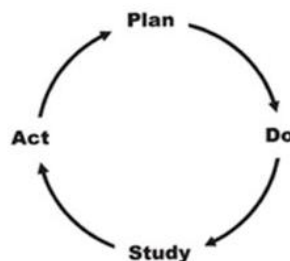
Another concept of the TQM philosophy is the focus on continuous improvement. Traditional systems operated on the assumption that once a company achieved a certain level of quality, it was successful and needed no further improvements. We tend to think of improvement in terms of plateaus that are to be achieved, such as passing a certification test or reducing the number of defects to a certain level. Traditionally, change for American managers involves large magnitudes, such as major organizational restructuring. The Japanese, on the other hand, believe that the best and most lasting changes come from gradual improvements. To use an analogy, they believe that it is better to take frequent small dose of medicine than to take one large dose. Continuous improvement, called kaizen by the Japanese, requires that the company continually strive to be better through learning and problem solving. Because we can never achieve perfection, we must always evaluate our performance and take measures to improve it. To take this study further, it will be necessary to probe into

two approaches that can help companies with continuous improvement: the plan - do - study - act (PDSA) cycle and benchmarking.

**The Plan-Do-Study-Act (PDSA):** cycle describes the activities a company needs to perform in order to incorporate continuous improvement in its operation. This cycle, shown in figure 1 is also referred to as the Shewhart cycle or the Deming wheel. The circular nature of this cycle shows that continuous improvement is a never-ending process. The specific steps in the cycle are:

- **Plan:** The first step in the PDSA cycle is to plan. Managers must evaluate the current process and make plans based on any problems they find. They need to document all current procedures, collect data and identify problems. This information should then be studied and used to develop a plan for improvement as well as specific measures to evaluate performance.
- **Do:** The next step in the cycle is implementing the plan (do). During the implementation process managers should document all changes made and collect data for evaluation.
- **Study:** The third step is to study the data collected in the previous phase. The data are evaluated to see whether the plan is achieving the goals established in the plan phase.
- **Act:** the last phase of the cycle is to act on the basis of the results of the first three phases. The best way to accomplish this is to communicate the results in other members in the company and then implement the new procedure if it has been successful. This is a cycle, and as such, the next step is to plan again. After we have acted, we need to continue evaluating the process, planning, and repeating the cycle again

**Figure 1: Showing the Plan-To-Do-Study-Act**



**Source:** Evans and William (1999) [17]. The management and control of quality, 4<sup>th</sup> ed. South-Western: Cincinnati.

**Benchmarking:** Another way companies implement continuous improvement is by studying business practices of companies considered "best in class." This is called

benchmarking the ability to learn and study how others do things is an important part of continuous

improvement. The benchmark of a company does not have to be in the same business.

### **Employee Empowerment**

Part of the TQM philosophy is to empower all employees to seek out quality problems and correct them. With the old concept of quality, employees were afraid to identify problems for fear that they would be reprimanded. Often poor quality was passed on to someone else, in order to make it "someone else's problem." The new concept of quality, TQM, provides incentives for employees to identify quality problems. Employees are rewarded for uncovering quality problems, not punished.

In TQM, the role of employees is very different from what it was in traditional systems. Workers are empowered to make decisions relative to quality in the production process. They are considered a vital element of the effort to achieve high quality. Their contributions are highly valued, and their suggestions are implemented. In order to perform this function, employees are given continual and extensive training in quality measurement tools.

To further stress the role of employees in quality, TQM differentiates between external and internal customers. External customers are those that purchase the company's goods and services. Internal customers are employees of the organization who receive goods or services from others in the company. For

example, the packaging department of any organization is an internal customer of the assembly department. Just as a defective item would not be passed to an external customer, a defective item should not be passed to an internal customer.

### **Team Approach**

Team Approach TQM stresses that quality is an organizational effort. To facilitate the solving of quality problems, it places great emphasis on teamwork. The use of teams is based on the old adage that "two heads are better than one." Using techniques such as brainstorming, discussion, and quality control tools, teams work regularly to correct problems. The contributions of teams are considered vital to the success of the company. For this reason, companies set aside time in the workday for team meetings.

Teams vary in their degree of structure and formality, and different types of teams solve different types of problems. One of the most common types of teams is the quality circle, a team of volunteer production employees and their supervisors whose purpose is to solve quality problems. The circle is usually composed of eight to ten members, and decisions are made through group consensus. The teams usually meet

weekly during work hours in a place designated for this purpose. They follow a present process for analyzing and solving quality problems. Open discussion is promoted, and criticism is not allowed. Although the functioning of quality circles is friendly and casual, it is serious business. Quality circles are not mere “gab sessions.” Rather, they do important work for the company and have been very successful in many firms.

### Use of Quality Tools

TQM places a great deal of responsibility on all workers. If employees are to identify and correct quality problems, they need proper training. They need to understand how to assess quality by using a variety of quality control tools, how to interpret findings, and how to correct problems. Basically seven tools have been identified which can be use of quality tools. These tools are often called the seven tools of quality control. They are easy to understand, yet extremely useful in identifying and analyzing quality problems. Sometimes workers use only one tool at a time, but often a combination of tools is most helpful. These tools are cause-and-effect diagrams which are problem-solving tools commonly used by quality control teams. Specific causes of problems can be explored through brainstorming. The development of a cause-and-effect diagram requires the team to think through all the possible causes of poor quality; Flow chart (a flow chart is a systematic diagram of the consequence of

steps involved in an operation of process). It provides virtual tools that are easy to use and understand.

**Flowcharts:** A flowchart is a schematic diagram of the sequence of steps involved in an operation of process. It provides a visual tool that is easy to use and understand. By seeing the steps involved in an operation or process, everyone develops a clear picture of how the operation works and where problems could arise.

**Checklist:** A checklist is a list of common defects and the number of observed occurrences of these defects. It is a simple yet effective fact-finding tool that allows the worker to collect specific information regarding the defects observed. A checklist can also be used to focus on other dimensions, such as location or time. For example, if a defect is being observed frequently, a checklist can be developed that measures the number of occurrences per shift, per machines, or per operator. In this fashion we can isolate the location of the particular defect and then focus on correcting the problem.

**Control Charts:** Control charts are a very important quality control tool. These charts are used to evaluate whether a process is operating within expectations relative to some measured value such as weight, width, or volume. For example, we could measure the weight of a sack of flour, the width o a tire, or the volume of a bottle of soft drink. When the

production process is operating within expectations, we say that it is “in control.”

To evaluate whether or not a process is in control, we regularly measure the variable of interest and plot it on the control chart. The chart has a line down the centre representing the average value of the variable we are measuring. Above and below the centre line are two lines, called the Upper Control Limit (UCL) and the Lower Control Limit (LCL). As long as the observed values fall within the upper and lower control limits, the process is in control and there is no problem with quality. When a measured observation falls outside of these limits, there is a problem.

**Scatter Diagrams:** Scatter diagrams are graphs that show how two variables are related to one another. They are particularly useful in determining the amount of correlation, or the degree of linear relationship, between two variables. For example, increased production speed and number of defects could be corrected positively; as production speed increases, so does the number of defects. Two variables could also be correlated negatively, so that an increase in one of the variables is associated with a decrease in the other. For example, increased worker training might be associated with a decrease in the number of defects observed.

The greater the degree of correlation, the more linear is the observations in the scatter diagram. On the other hand, the

more scattered the observations in the diagram, the less correlation exists between the variables. Of course, other types of relationships can also be observed on a scatter diagram, such as an inverted U. This may be the case when one is observing the relationship between two variables such as oven temperature and number of defects, since temperatures below and above the ideal could lead to defects.

**Pareto Analysis:** Pareto analysis is a technique used to identify quality problems based on their degree of importance. The logic behind Pareto analysis is that only a few quality problems are important, whereas many others are not critical. The technique was named after Vilfredo Pareto, a nineteenth-century Italian economist who determined that only a small percentage of people controlled most of the wealth. This concept has often been called the 80-20 rule and has been extended to many areas. In quality management the logic behind Pareto’s principle is that most quality problems are result of only a few causes. The trick is to identify these causes.

One way to use Pareto analysis is to develop a chart that ranks the causes of poor quality in decreasing order based on the percentage of defects each has caused. For example, a tally can be made of the number of defects that result from different causes, such as operator error, defective parts, or inaccurate machine calibration. Percentage of defects can be



computed from the tally and placed in a chart.

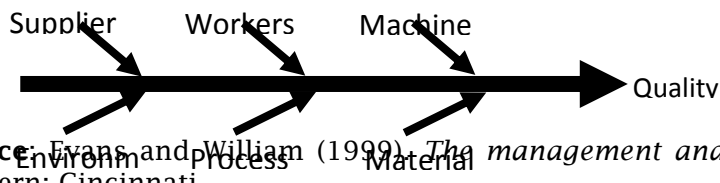
**Histograms:** A histogram is a chart that shows the frequency distribution of observed values of a variable. We can see from the plot what type of distribution a particular variable displays, such as whether it has a normal distribution and whether the distribution is symmetrical.

In the food service industry the use of quality control tools is important in identifying quality problems. Quality

tools can be used to evaluate the acceptability of product quality and to monitor product quality from individual suppliers. They can also be used to evaluate causes of quality problems, such as long transit time or poor refrigeration. Similarly, restaurants use quality control tools to evaluate and monitor the quality of delivered goods, such as meats, produce, or baked goods.

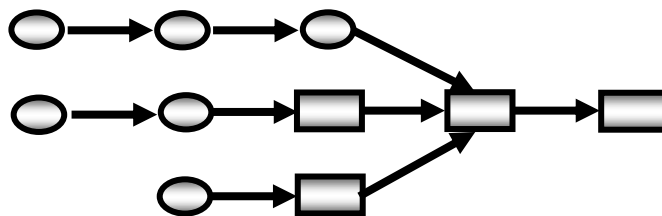
The diagrams below show the cause-and-effect, flow chart, checklist control chart, scatter graph, pareto chart and histogram.

**Figure 2: Cause-and-Effect Diagram**



**Source:** Evans and William (1999). *The management and control of quality*, 4<sup>th</sup> ed. South-Western: Cincinnati.

**Figure 3: Flowchart**



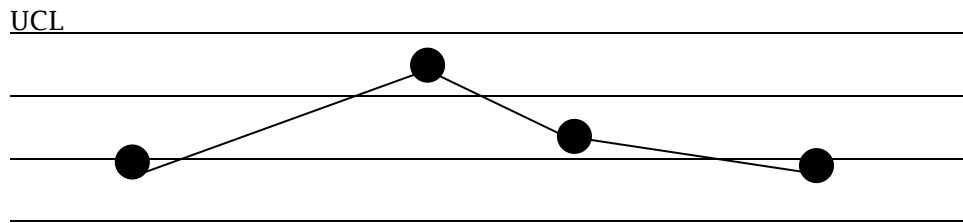
**Source:** Evans and William (1999)[17]. *The management and control of quality*, 4<sup>th</sup> ed. South-Western: Cincinnati.

**Figure 4: Checklist**

Defect Type	No. Of Defects	Total
Broken Zipper	√√√	3
Ripped material	√√√√√√√	7
Missing buttons	√√√	3
Faded colour	√√	2

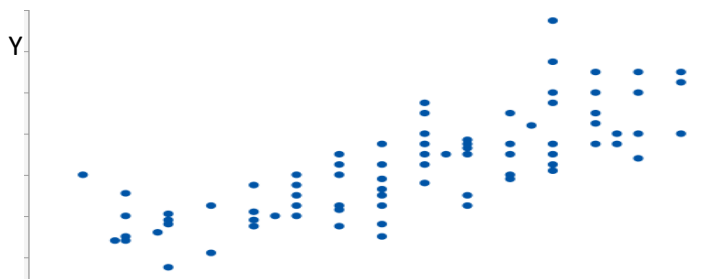
**Source:** Evans and William (1999)[17]. *The management and control of quality*, 4<sup>th</sup> ed. South-Western: Cincinnati.

Figure 5: Control Chart



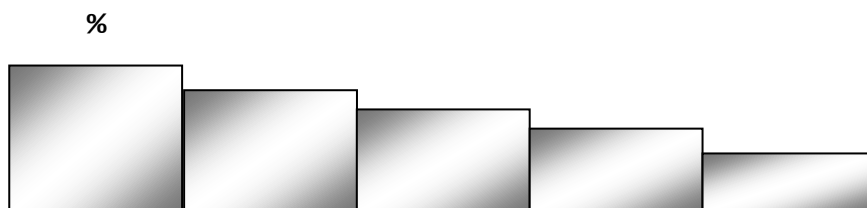
Source: Evans and William (1999). *The management and control of quality*, 4<sup>th</sup> ed. South-Western: Cincinnati

Figure 6: Scatter diagram



Source: Evans and William (1999) [17]. *The management and control of quality*, 4<sup>th</sup> ed. South-Western: Cincinnati.

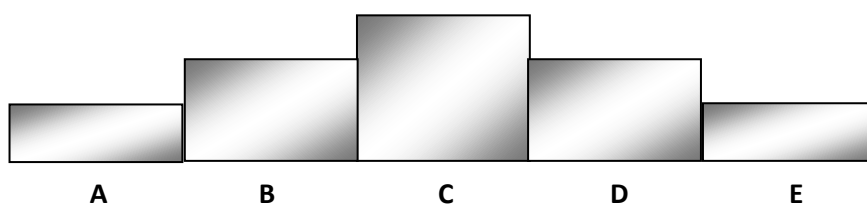
Figure 7: Pareto Chart



Source: Evans and William (1999). *The management and control of quality*, 4<sup>th</sup> ed. South-Western: Cincinnati.

Figure 8: Histogram

Frequency



Source: Evans and William (1999). *The management and control of quality*, 4<sup>th</sup> ed. Cincinnati: South-Western.

### **Do It right First Time and Every Time**

This means avoiding network, detective work and their associated lost ad

processes to doing the right things as seen from the customer's point of view.

### **Strengthen the Customer Supplier Chain**

Effective TQM implementation requires a strengthening of the customer supplier chain to ensure the ultimate users get quality product or service. The customer receives input to be able to complete his job while the supplier provides such input. The quality of goods and services delivered by both the internal and

external supplier will affect the quality of products or services offered users. Thus, it is important to strengthen each unit, department or workgroup within the organization and a quality agreement must be reached with the external suppliers [18].

### **Investment in Training**

Quality education is another imperative for the success of TQM. Both the senior and junior employees must be enlightened and educated on what TQM is all about. Ignorance of the subject matter of TQM should not be allowed to thrive in a organization which is customer oriented. Employee enlightenment ensures better commitment and success of TQM programme. Training also leads to increased efficiency. [19] said, "it is evident that refresher training is required from time to time. And [20] agreed with [19], by saying, "TQM training is forever".

management decision must be based on data and facts [21].

### **Problems of TQM Implementation**

Companies have had various successes in the implementation of TQM. Some have been quite successful, while others have struggled. [15]

opined that part of the difficulty in the implementation of TQM may be with the process by which it is implemented rather than with the principles itself. Among the factors cited in the literature are the following [15]:

- a. **Lack of a companywide definition of quality:** efforts are not coordinated; people working at cross-purposes, addressing different issues and using different measurements of success.
- b. **Lack of a strategic plan for change:** without such a plan the chance of success is lessened and the need to address strategic

### **Talk With Fact and Data**

Fact and data are essential indication making. They ensure objective, clear and understandable analysis of a problem thereby enhancing the quality of decision taken [18]. Thus, as part of the quality enhancement process, management information, management judgement and

implementations of change is ignored.

- c. **Lack of a customer focus:** without a customer focus, there is a risk of customer dissatisfaction.
- d. **Poor intra organizational communication:** The left hand does not know what the right hand is doing; frustration, waste and confusion ensues.
- e. **Lack of employee empowerment:** Not empowering employees gives the impression of not trusting employees to fix problems, adds red tape, and delays solutions.
- f. **In ordinate presence of international politics and “turf” issues:** these can sap the energy of an organization and derail the best ideas.
- g. **Lack of strong motivation:** managers need to make sure employees are motivated.
- h. **Lack of time to devote to quality initiatives:** do to add more work without adding additional resources.

To [21] in [22], on the difficulties faced by organizations in their quality improvement efforts, it was revealed that organizations found difficulties both in introducing and in sustaining TQM activities. In particular, the lack of top management commitment and vision and

a “favour of the month” type of attitude are significant obstacles to introducing TQM. More so, pressures and constraints in terms of time, workload, and resources and lack of continuous commitment are main inhibitors to sustaining TQM [22]. [23], in [22], using real life case of a medium sized service company, vividly illustrated 12 main pitfalls which affected the company’s TQM implementation. All the problems actually started with the managing director, conforming the top management commitment and leadership are the most important of all. These dozen of problems include the following:

- a. Lack of constancy of purpose;
- b. Failure to adopt a new philosophy;
- c. Failure to institute change in the organization;
- d. Refusal to provide industry recognized training to the workforce;
- e. Management by fear and intimidation;
- f. Barriers among departments;
- g. Lac of a learning culture;
- h. Unrealistic overwork;
- i. Failure to make decisions based on objective evidence;
- j. Not taking a company wide scope of quality improvement;
- k. Putting teamwork to second importance; and
- l. Policies create in secret.

#### RESEARCH METHODOLOGY

The study used survey research design. The study gathered data through primary source (questionnaire), and relevant

literature from textbooks, journals, seminars and workshops materials. Two sets of questionnaire for both customers

and the management staff of the SMEs were generated. A list of socioeconomic, demographic and attitudinal attributes, which are assumed to influence the level of participation, and which are meant to generate data for the stated hypotheses are applied in the questionnaire. Each attributes is made up of two or more

mutually exclusive components which is referred to as “modalities”. The study focused on both formal and informal organizations and aimed at management staff and customers.

In order to have adequate coverage, the study selected SMEs spread across the six geo-political zones in Nigeria.

**Table 1: Population Frame**

<i>GEO-Political Zones</i>	<i>States</i>	<i>Number of SMEs to be studied</i>
South- West	Lagos	12
South - East	Enugu	6
South - South	Rivers	6
North - West	Kano	6
North - East	Taraba	4
North - Central	Kogi	4
	FCT	2
<b>Total</b>		<b>40</b>

The target population for the study was 5,000 from the forty (40) selected small and medium scale enterprises (SMEs) in the productive and service sub-sector in the six geo-political zones of Nigeria. As a study with infinite population, a sample to population ratio of 1:50 was used. Giving a population size of 5,000 SMEs, the total sample to survey was 500 from forty (40) SMEs, which is 0.1% of operators of SMEs in all the six geo-political zones selected across Nigeria. This percentage compares favourably with similar surveys with 250 enterprises in Enugu urban, which is about 0.033% of estimated 75,000 enterprise in Enugu State. Sookram, [21] used 570 households, which is equivalent to 0.0005% of the study population. A random sampling

method which was judgmental was used to select the SMEs to be covered.

TQM is represented by variables such as Customer Focus, Top Management Commitment, Supplier Relationship, Employee Involvement and Empowerment, Work Environment and Benchmarking. A linear multiple regression model was used to analyse the data collected. The following model was developed for the study:

$$NP = \beta_0 + \beta_1 TMC + \beta_2 CF + \beta_3 SR + \beta_4 EIE + \beta_5 WE + \beta_6 BE + \varepsilon$$

Where:

NP = Non-financial performance

$\beta_0$  = Constant of proportionality

TMC = Top management commitment

CF = Customer focus  
 WE = Work environment  
 SR = Supplier relationship  
 BE = Benchmarking  
 EIE = Employee involvement and empowerment  
 ε = Error term

**ANALYSIS OF DATA AND DISCUSSION**

**Table 2: Determinants of Total Quality Management (TQM) in Nigeria SMEs**

Variables	SD	SD%	D	D%	A	AV%	AG	AG%	SA	SA%	Total	Total %
MGT. QLTY.	18	4%	0	0%	36	8%	10	24%	28	64%	445	100%
EDU & TRAIN	0	0%	3	8%	54	12%	14	32%	21	60%	445	100%
CUST. FOCUS	0	0%	1	4%	54	12%	10	24%	27	60%	445	100%
MGT PROCESS & STRATEGY	18	4%	0	0%	90	20%	10	24%	23	52%	445	100%
HUMAN RESOURCES MGT	0	0%	1	4%	36	8%	21	48%	18	40%	445	100%
SUPPLIERS QM	18	4%	0	0%	72	16%	10	24%	25	56%	445	100%

Source: Field survey (2013)

Table 2 shows the determinants of TQM variables in Nigeria. The analysis shows that, the effect of these variables speaks volume of how TQM will definitely ensure quality control target. Management quality capacity according to respondents has 64% strongly agreed (SA). The finding here implies that the major determinant of TQM practices among the SMEs owners

in Nigeria is that of management quality capacity with responses of about 64%, while we have a low mixed responses in other TQM determinants areas, like education and training of employees, customers focus, management process and strategy, human resources management, and suppliers quality management.

**Table 3: The Customers Views on Aspect of TQM in Nigeria SMEs**

Variables	SD	SD%	D	D%	AV	AV%	AG	AG%	SA	SA%	Total	Total %
Quality Assurance Evidence	216	48%	181	40%	18	4%	18	4%	18	4%	445	100%
Customer's Relations	198	44%	90	20%	90	20%	36	8%	36	8%	445	100%
Repairs	190	42%	90	20%	90	20%	30	6%	42	9%	445	100%
Qualitative Product	216	48%	215	48%	10	2%	10	2%	0	0%	445	100%
Speedy service	36	8%	36	8%	198	44%	10	2%	90	20%	445	100%

Source: Field survey (2013)

Table 3 above shows the views of customers on TQM practices. On quality

assurance, 216 out of 445 representing 48% strongly disagree (SD) that quality

assurance aspect of TQM is practiced among SMEs in Nigeria. 40% of the

that quality assurance practice is absent. On the whole, 88% debunked the existence of quality assurance aspect of TQM practice among Nigeria SMEs. On customer's relations, 44% strongly disagreed its practice, while 29% disagree amounting to 64% out of 100%. The analysis is that customer's relation aspect of TQM is not operationalized among SMEs in Nigeria. Repairs and qualitative product equally failed the customer's attestation. 42%, 20% and 48%, 48% stood for strongly disagree (SD) and disagree (D) for repairs and qualitative product

respondent equally indicated disagree (D)

respectively aspect of TQM practice among Nigeria SMEs. However it was speedy services that have average dominants response of the customers of 44%. This implies that on the aggregate, apart from the speedy service aspect of TQM practices, all other aspect is not in operation in Nigeria. The finding here is consistent with the finding of [24], that in Nigeria as far back as in the 80s to date, only a handful of SMEs has been able to practice and implement the concepts of TQM successfully and as such, its practice in Nigeria is very low.

**Table 4: The SMEs Management and Employees Responses on the Effect of TQM Practices on Customers Satisfaction**

Effect of TQM on Customer's Satisfaction	F	$\bar{x}$	%
All the time	53	0.11	12%
Most of the time	71	0.15	16%
Sometime	107	0.23	24%
Not at all	215	0.48	48%
	446		100%

Source: Field Survey 2013

Table 4 shows that TQM practice lead to customer satisfaction all the time with mean of 0.11 (12%), most of the time with mean of 0.15 (16%), some time with mean of 0.23 (24) and not at all with mean of 0.48 (48%). The analysis reveals that TQM practice has no effect on the customers' satisfaction. The dominant score of 48% signifies the non-applicability of TQM by Nigerian SMEs. The finding of responses

on the effect of TQM practices among SMEs in Nigeria on customers satisfaction as reviewed here is however contrary to the finding of [25], that TQM has a great effect on satisfaction of customer as it is seen as a factor that can improve quality, as well as holistic approach in continuous improvement in all organizations. Moreso, the finding here is also contrary to the finding of [26], TQM if effectively

implemented can bring about both customers and organizations satisfaction, as it can lead to improvement in quality which brings about decreases in waste, reduction in cost of production, increases customers satisfaction and raises productivity. The finding is also contrary to the find of [27] in his study that the

application of TQM can increase the satisfaction of customer by providing preeminent products and services. The finding is also contrary to the finding of [28], which stated that firms (SMEs) which have high quality of practicing TQM will achieve greater customer's satisfaction.

**Table 5 (a) (b) (c): The Paired T-Test**

a. Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1:	TQM	208093.3750	6	265386.72840	108343.67818
	Non-TQM	45135.8817	6	33219.93580	13561.98200

Source: Field Survey, 2013.

b. Paired Samples Correlations

		N	Correlation	Sig.
Pair 1	TQM & Non-TQM	6	.087	.132

Source: Field Survey, 2013.

c. Paired Differences

Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			
				Lower	Upper		
Pair 1 TQM - Non-TQM	162957.4933	243757.38160	99513.53433	-92850.19040	418765.17707	1.638	5 162

Source: Field Survey, 2013.

Analytically, a comparison of the Mean value of the TQM adopter SMEs 208093.375 (108343.68 standard error mean) is essentially higher than the mean value of non-TQM adopters SMEs of 45135.882 (33219.94 standard error

mean). This implies that TQM has positive and significant effect on the SMEs that adopt it in Nigeria despite the negligible proportion of the numbers of SMEs that are currently adopting it. This finding align with the view of [29] that firms



(SMEs) which have high quality by practicing TQM will achieve greater customers satisfaction.

Results of the tests and analysis above in the tables iv (a) (b) and (c) reveals that 44% of the respondents agreed that below 10% customers were retained over the past two years; 32% attested that between 20-30%; 12% said it is between 40-60%; 8% agreed it is between 61-80%; while 4% said its between 81-100% of the customers that they were able to retained. This analysis shows on the aggregate that TQM practices at the moment among the Nigeria SMEs has no capacity to influence the retention of customers as 10% is insignificants to dominate SMEs management response. Meanwhile, results of the test as to whether TQM practices can influence customers loyalty, 79% of the respondents with a mean value of

0.70 were of the opinion that TQM practices has no significant effect on customers loyalty among SMEs in Nigeria. Essentially, it confirmed that customers are evidently not loyal to SMEs firm in Nigeria partly because TQM is not even in practice as confirm by previous responses. This finding is however contrary to the finding of [30], that implementation of TQM brings about increase in customer loyalty, which is evident in their market shares increases. The above results are also confirmed from the tests results obtained in table iv (a) (b) (c) with pair t-test (SD) of 33219.93580; pair samples correlations of 0.087 and pair differences of 1.638. All the above results shows weak magnitudes, meaning that TQM practices among these SMEs at presents cannot influences customers retention and loyalty.

## CONCLUSION AND RECOMMENDATIONS

### CONCLUSION

Management quality capacity is highly critical to the practice of TQM. Finding proves that management quality capacity is the major determinant of TQM practices among the SMEs owners in Nigeria. Though, other determinants are education and training of employees, customers focus, management process and strategy, human resources management and suppliers' quality management.

The quality assurance, customer's relations, repair, qualitative product and speedy service are found missing in the operational activities of SMEs in Nigeria. These aspects of TQM practice in Nigeria

SMEs are probably affected by owners' orientation. Though, speedy service aspect of TQM practice appears to be embraced by some of these SME owners while other aspects are ignored.

The empirical result of this study ascends from the avoidance of TQM practice. Factually, it will have been expected that TQM practice enhances customer satisfaction all the time. Based on the empirical investigation, TQM practice is seen to have no effect on the customers' satisfaction. To other firms, particularly the large ones, TQM is strategic to enhancing customers' satisfaction. The

effective implementation of TQM can lead to customer's satisfaction. In addition, it can also lead to improvement in quality, decreased waste, reduction in cost of production and increased productivity. Furthermore, findings has proven that

TQM has positive and significant effect on the SMEs (in terms of customers retention) that adopt it, but generally, TQM practices among many SMEs at presents cannot influences customers retention and loyalty.

### RECOMMENDATIONS

The following recommendations are made that:

1. Quality education is imperative for the sources of TQM. The SMEs owners should be properly educated on the importances of TQM practices and awareness.
2. For the SMEs owners in Nigeria that try to practice TQM at the level of their own understanding and knowledge of TQM, their emphasis should not only be on the management of quality (like management by objective, leadership style etc) as the only TQM determinants but should also incorporate training, customers focus, teamwork, suppliers quality, process and strategy management, as well as human resources management as part of their TQM policies and practices determinants.
3. The work of TQM should not only be for management of these SMEs owners, but also for all employees, suppliers and others who deals with these firms either directly or indirectly, including the customers of these SMEs owners.
4. The government should stimulate and assist individuals and parastatals, non-governmental organisations to participate in improvement activities that will lead to excellence in customers' satisfaction.
5. SMEs owners should setup on appropriate feedback mechanisms to check the functioning of the TQM programme.

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