



## **Effect of Total Quality Management on Organizational Performance of Deposit Money Banks in Nigeria**

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### **ABSTRACT**

This study determined the effect of Total Quality Management on organizational performance of deposit money banks in Nigeria. The specific objectives are to: ascertain the extent to which the application of total quality management practices affect customer satisfaction in Nigerian deposit money banks; find out the effect of total quality management practices on customer's continuous loyalty in Nigerian deposit money banks and examine if the application of Total Quality Management practices has assisted in achieving improved quality output and reduced cost. Survey research design was employed and data were collected through the use of questionnaires and was presented in a tabular form and t-test was used with the aid of Statistical Package for Social Science (SPSS) version 20.0. the outcome of the result shows that the application of total quality management practices affect customer satisfaction in Nigerian deposit money banks; also total quality management practices affect customer's continuous loyalty in Nigerian deposit money banks and that the application of Total Quality Management practices has assisted in achieving improved quality output and reduced cost. Based on the findings, it was recommended that employees involvement requires should be allowed, this will creates a work environment where people have the ability and confidence, to obliged and initiate necessary steps to satisfy customer requirements in order to achieve organizational values and goals.

**Keywords:** Total Quality Management, customer satisfaction, customer's continuous loyalty and Nigerian deposit money banks

### **INTRODUCTION**

During the last few decades, organizations all over the world have been working hard to cope with the rapidly changing business environment in which management have to strive in finding a lasting solution to sustain or gain competitive advantage. Marcel and Ayankeng (2015) opined that to withstand new global challenges, majority of the manufacturing businesses have adopted new philosophies such as Concurrent Engineering, Lean Production, Just-In-Time (JIT) strategies, Total Quality Management (TQM), Business Process Re-engineering (BPR) and others, to become more effective in the way they conduct business. The main driver behind these philosophies is the optimization of the organization's performance both internally and externally within its respective market targets.

Total Quality Management (TQM) is a management tool, philosophy, and a set of principles which can be applied to all functions and processes of an organization to continuously improve the quality of

products and services, to exceed customer satisfaction at any given period, as well as continuously reduce the cost of production (Prajogo & McDermott, 2005). Total Quality Management is generally referred to as the business process and management practices which are concerned with how to improve the effectiveness and efficiency of an organization (Mahmud & Hilmi, 2014).

According to Evans (2005) there are six basic management concepts of the philosophy of TQM which includes: customer focus, process orientation, continuous improvement, empowerment and teamwork, management by fact, and visionary leadership. Customer focus means that TQM philosophy considers a customer as the one who judges and drives quality.

Corredor and Goñi (2011) posited that the core objective of TQM is to meet and exceed customer expectation by “do it right the first time and every time, for customer satisfaction” meanwhile TQM is aimed at achieving customer needs through quality product and services. Hence, understanding and translating customer needs and expectations into organizational action plans is a key point of TQM implementation (Kriengsak & Thanh, 2017). Furthermore, TQM practices also involve employees in all levels of activities for continuous process by using top down and bottom up approach especially on the quality implementation stage (Saleem, Khan, Hameed & Abbas, 2012).

The ever improving global competition and increasing requests for more qualified products by customers have caused organizations to understand that the only way of survival in the market is to deliver better quality products to meet customers’ needs. Many organizations, therefore, spend considerable amounts of their funds in activities related to improving products and services. The vast applicability of Total Quality Management (TQM) has made it to earn recognition as one of the most popular continuous improvement systems for quality. TQM increases customer’s satisfaction through the participation of all personnel (Demirbag, Tatoglu, Tekinkus & Zaim, 2006). The main aim of TQM is to implement a management system and organizational culture that ensures customer satisfaction since customers who are more sensitive to quality standards improve their expectations continuously (Eriksson & Hansson, 2002).

Successful TQM could be achieved when a company is focusing in continuous improvement as one of the fundamental dimension (Egwu, 2014). One of the best known practices of continuous improvement which promotes creative thinking is *Kaizen*. *Kaizen* is a Japanese word which simply means “improvement” or “change for better” Customers are usually concerned on the product quality, cost and delivery time. Companies are needed to introduce a quality system that increase and improve both productivity and quality continuously (Jadhav, Jamadar, Gunavant & Gajghate, 2014).

The very first Total Quality Management concepts was propounded by Deming (1986) who created 14 management principles which are; creating of constancy purpose for improvement of product and service, adopt quality management as the new policy, stop dependence on mass inspection, ending the emphasizing on the production cost in improving the system of production and service, new method of training, new method of supervision, drive out of fear, cooperation between staff areas, elimination of numerical goals for the workforce, elimination of numerical quotas, removing the barriers that hinder the hourly worker, new program of education and training and top management involvement of quality management, (Temtime and Solomon 2002). Juran (1995) further explained that the management was responsible for the establishment of a quality council, management also should establish the quality policy, the management has to include the time frame for quality goal and lastly management has to provide all necessary resource needed to achieve the quality goal. In the same vein, Crosby, (1984) has also contributed to the development of Total Quality Management by introducing the following concepts; zero defects, do it right at the first time, the system of prevention and the focusing on the measurement of quality. Using the idea of Juran and Deming, Ishikawa (1985) influenced the Japanese understanding of Total Quality Management concept. Ishikawa’s concern is on four aspects of Total Quality Management, which included quality circle, continuous training, quality tools such as fish bone diagram and quality chain. In the 1980s and 1990s, many companies in the US, EU and Japan followed the quality management approach in order to improve their products and service. As a result, the companies that implemented the Total Quality Management practice can save cost of production and services. In recent decades, Total Quality Management has become the buzz word in the management practice, (Egwu, 2014).

Diverse researchers have conducted works on Total Quality Management but a comprehensive look at the literature of Total Quality Management reveals that the effect of implementation of Total Quality Management practices on the banks has been greatly neglected (Al-Swidi & Mohmood, 2011). Hence,

only limited work has been conducted to investigate the level of Total Quality Management implementation and its impact on organization performance in the banking sector ( Eyuboglu, 2001, Almarn, 2007, Peschel, 2008, Selvaraj, 2009).

However, to measure quality of service is more difficult for customers than quality of goods manufactured. Meanwhile, users of a service have a few attributes in mind they use as a basis for comparison among alternatives. But lack of one attribute in a bank may make the customers to prefer another. For survival of a bank, it is mandatory to provide best service quality as pre-requisite to success of banking system. In the banking system, there is more than one bank trying to woo customers for patronage. The rate of interest (price) may be a critical factor for patronage, but another factor is the quality of the service.

Furthermore, quality is often the major issue and poor quality service can lead to erosion of goodwill, which could be very costly for any bank (Islam & Haque et al, 2012). From the above, it can be deduced that despite the attention given by banks to Total Quality Management, banks customers still feel unhappy in most cases judging from series of complains in day to day interaction with banks customers, comments from deposit money bank customers on social media, commentaries on electronic and print media (Olabode, 2003). This leaves the researcher to wonder whether the attention given to quality by these banks translates to better service delivery or not. Specifically, deposit money bank customers also often complain of service issues like delayed ATM cards, retraction of cards, unauthorized withdrawals, long queues in banking halls and the poor attitude of bank staff in attending to customers and resolving such complains among others. These and more are among the numerous problems encountered in Nigerian banks in our modern day life.

More so, majority of the studies previously done on Total Quality Management were carried out in manufacturing firms while only few foreign authors studied banks (Ali & Abedalfattah, 2013; Carolyne & Bichanga, 2014; Onyango, 2016). It is in this respect or sequel to the above highlighted problems that the researcher attempts to assess the effect of Total Quality Management on organizational performance of Deposit money banks in Nigeria.

The specifically, the study intended to:

1. Ascertain the extent to which the application of total quality management practices affects customer satisfaction in Nigerian deposit money banks.
2. Find out the effect of total quality management practices on customer's continuous loyalty in Nigerian deposit money banks.
3. Examine if the application of Total Quality Management practices has assisted in achieving improved quality output and reduced cost.

## **REVIEW OF RELATED LITERATURE**

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

The emergence of Total Quality Management Quality Management (TQM) has been one of the most significant recent developments in U.S. management practice. The focus on the development of TQM in the U.S. appears to have begun around 1980 in response to global competition, primarily in U.S. manufacturing companies facing competition from Japan (Easton & Jarrell, 1998). There are several term in TQM including continuous enlightening process, understanding customer expectation, minimize rework, encouraging employee's involvement, redesign procedure, build a reliable relationship with suppliers, measure the outcomes and direct to benchmarking. These guidelines (terms) are widely used to implement TQM by most of the organization (Valmohammadi & Roshanzamir, 2015). Moreover, a supportive environment for TQM is essential such as supportive management, structure and culture to move toward the competitiveness (Mosadeghrad, 2014).

TQM can be defined as a holistic management philosophy that strives for continuous improvement in all functions of an organization, and it can be achieved only if the total quality concept is utilized from the acquisition of resources to customer service after the sale. TQM practices have been documented extensively in measurement studies as well as in the studies that have investigated the relation of TQM practices to various dependent variables (Hale, 2003). Total Quality Management (TQM) is a management philosophy which focuses on the work process and people, with the major concern for satisfying customers and improving the organizational performance. It involves the proper coordination of work processes which allows for continuous improvement in all business units with the aim of meeting or surpassing customer's expectations. It emphasizes on totality of quality in all

facets of an organization with the aim of reducing waste and rework to reduce cost and increase efficiency in production (Oluwatoyin & Oluseun, 2008). Total Quality Management is a combined effort of both top level management as well as employees of an organization to formulate effective strategies and policies to deliver high quality products which not only meet but also exceed customer satisfaction. Total Quality Management enables employees to focus on quality than quantity and strive hard to excel in whatever they do.

Total Quality embraces not only the quality of a specific product or service, but everything an organization does, might or should do to determine the opinion not only of its immediate customers or end-users, but its reputation in the community at large (Shahin & Dabestani, 2011). TQM has six concepts as aforementioned asserted by Evans et al (2005). Drawing from Islam et al, (2012) perspective, TQM is based on eight pillars which are: Creation of quality management environment; Development of Teamwork; Practice of quality control tools and techniques; focus on customer; focus on supplier relationship; Benchmarking; continuous improvement of processes; and involvement of employees. This study however focused on six pillars (Practices) for the banking sector and they include as proposed by Islam et al, (2012): Top Management commitment, Customer Focused organization, Training and Education, Effective Communication, Teamwork and Continual Process Improvement. This study, however, focused on the six pillars highlighted below because they are the basic foundation, the rudiments, the fulcrum, the building blocks upon which if TQM is erected it will be unshaken.

### **Top management Commitment**

The definition of “Commitment” is “a force that binds an individual to a course of action of relevance to one or more targets” (Meyer & Herscovitch, 2001). For TQM implementation to be successful, top management should champion its implementation by providing leadership and engage all employees in the work of satisfying the customer with a continuously improved quality. This means that continuous improvement should be practiced everywhere in the processes and that the involvement of all employees at every level should be facilitated. Secondly, the work is based on the skills and participation of every employee and his or her understanding of what are required. Top management should champion training of all the employees to provide the knowledge needed on the mission, vision, direction, and strategy of the organization as well as the skills they need to implement TQM and resolve problems. (Witjaksono, 2012).

### **Customer Focused Organization**

A central core value in TQM is that all products and processes should always have a customer focus. Quality should be valued by the customers and should always be put in relation to their needs and expectations (Nagaprasad & Yogesha, 2009). To focus on the customer means, therefore, that one tries to find out the customers’ needs and values by conducting market analyses and then trying to fulfil the market expectations. Every employee has customers within the organization, internal customers, and in order to do a good job their needs also have to be fulfilled (Nagaprasad et al, 2009).

### **Team Work**

Doorewaard (2002) defined teamwork as a “process to fulfil the employee’s need or control over their work environment”. It holds a common task requiring interdependent work and action (Thompson, 2011). Subsequently teamwork is a set of behavioural skills working together to generate best outcomes (Hughes & Jones, 2011).

Teamwork is an essential aspect for the success of the organization to communicate with the goal and mission of the organization, encourages creativity, shares information, builds trust and openness and empowers employees (Griffin et al., 2001).

Teamwork helps maintain competitive advantage in the face of challenges caused by several world events and also by international marketplaces (Salas, 2010).

### **Organizational Performance**

The concept of organizational performance is based upon the idea that an organization is the voluntary association of productive assets and those providing the assets expect to receive value in exchange (Barney, 1991). Hence the provider of the resource is the one who defines value as the essential overall performance evaluation criteria. Organizational Performance is a multidimensional concept that encompasses aspects including financial performance and market performance (Richard, Devinney, Yip & Johnson, 2009).

is (Richard et al., 2009). The idea of Organizational Performance is based upon the possibility that an association is the wilful relationship of beneficial resources and those giving hope to get value in return.

TQM is often used as a multidimensional approach to measuring organizational performance, where both financial and non-financial measures assume equal importance (Sila, 2007).

For measurement performance, many scholars used financial as well as non-financial performance (Choi & Eboch, 1998; Forza & Filippini, 1998). This study anchored more on qualitative variables vis-à-vis: customer satisfaction, customer's continuous loyalty as well as reduced cost and improved output to measure organizational performance. This is because the term "quality" is subjective.

### **Customer Loyalty**

Customer loyalty is both a predetermined attitude and behavioural tendency which a customer's exhibit by favouring one brand or product over all similar brands or product. This could be as a result of satisfaction derived, convenience, performance, comfort familiarity etc.

To appreciate customer loyalty, one must recognize the different types and degrees of loyalty. They include:

- Monogamous loyalty vs Polygamous loyalty: Monogamous loyalty deals with buying solely from a particular brand whereas Polygamous loyalty has to with giving some percent of purchase to some particular brand and some to others.
- Behavioural vs Attitudinal loyalty: Behavioural loyalty has to do with buying for the particular customer regardless of reason whereas attitudinal loyalty has to do with ones psychology.

There is a great need to examine the type of loyalty exhibited by most customers and the perceived influence. Thus the need to examine the effect of Total Quality Management practices on customer's continuous loyalty as well as the type and degree of loyalty exhibited by them too.

### **Review of Empirical Studies**

Chin, Fang, Hung and Yen (2007) empirically examined the extent to which total quality management and firm performance are correlated and how total quality management impact various levels of firm performance. Questionnaire was distributed to 95 small and medium enterprises. The research model and hypotheses were tested with descriptive statistics using data collected from information-related small and medium size enterprises operating in Taiwan. The findings of the research showed that an effective management leadership can positively influence human resource management, supplier management, and design management.

Robins and Judge (2007) carried out a ten (10) year study on Total Quality Management by selecting a group of 600 publicly traded organizations that had won awards for effectively implementing TQM. A control group similar in size and industry to the award winners was also used for the study. The performance of both groups was compared during the five (5) years prior to the award and five years after winning the award. No difference was noticed between the two groups prior to winning the award.

Oluwatoyin and Oluseun (2008) highlight the benefit of TQM implementation in the Nigerian Airline industry by examining the basic principles of TQM in the airlines. The impact of TQM implementation of the three performance indicator was assessed. Primary data were collected from the airline companies through the use of questionnaires and interview. Secondary data were also gotten from articles, journals and online resources. The study used a T-test hypothesis to measure the difference in mean of TQM airline and Non-TQM airlines using the three performance indicator. The research findings confirmed the benefits that ensued from the implementation of TQM. It showed that TQM is a strategic tool industry can employ in the quest to remain competitive. It was also discovered that for the TQM to be properly implemented, everybody in the organization must be involved from the management to the employees and even the customers.

Masood, Aamna, Saif and Sidra (2012) examined association between total quality management (TQM) practices and performance, i.e. quality, business, and organizational performance. The quantitative data were obtained through a survey from 171 quality managers of Pakistan's manufacturing industry. Data analyzed with the help of SPSS by using Principal Component Analysis and Varimax Rotation. The

st their study, the main implication of the findings for managers is that with TQM practices, manufacturing organizations are more likely to achieve better performance in customer satisfaction, employee relations, quality and business performance than without TQM practices.

Ali and Abedulfattah (2013) empirically examined the extent to which Quality Management Practices (QMPs) and Organizational performances are correlated and how QMPs impacts on organizational performance. Questionnaire was used to collect data from banks in Jordan and was tested model. The Statistical Package for the Social Sciences (SPSS) has been used to analyze the data. The Preliminary analysis was conducted to check for any violations in normality, equality of variances and linearity. The data from the sample fulfilled all the assumptions allowing for parametric tests to be conducted. Correlation analysis and multiple regressions Analysis were used to test hypotheses. From the managerial perspective, the results of this study showed that there was a significant relationship between quality management dimensions (leadership, strategic planning, customer locus, and employee relation) and Organizational Performance.

Chukwu, Adeghe and Anyasi (2014) investigated the impact of total quality management on performance of Nigerian Brewery Plc and Nigerian Bottling Company Plc. Enugu state, Nigeria. It also emphasized error prevention in place of error correction that increases cost. The data collected from the questionnaire instrument were analyzed using percentage and multiple regressions. The research findings showed significant and positive relation lie between the independent variable, error prevention, quality improvement, cost reduction, fewer delays and the dependent variable organizational performance.

Carolyne and Bichanga (2014) established TQM practices employed by National Bank of Kenya (NBK) and examine their effect on the financial performance of the bank. The objective of this study was to establish the effect of total quality management on financial performance of NBK. The study was descriptive in nature and the researcher used case study method. The target population of the study comprised of NBK employees. The researcher used stratified random sampling in selecting respondents. The t-test and a weak coefficient of determination were used. The findings indicated a positive relationship between top management involvement, process and supplier relationship and financial performance.

Abd El-Moneim and Atef (2015) investigated the impact of applying TQM on the overall hospital effectiveness in the accredited governmental hospitals in Jordan that accredited from Health Care Accreditation Council (HCAC). The study population represented all health care professionals working in the five HCAC accredited governmental hospitals who were working for more than three years in the same hospitals. Study sample included 1290 employees. The response rate was 83.6 % of the total questionnaires distributed. TQM principles were: Leadership commitment to quality. Study findings showed a significant impact of all TQM principles on the overall hospital effectiveness ( $p < 0.05$ ). Using multiple linear regression analysis showed that TQM is a strong predictor of hospital performance (Beta =0.818,  $t=46.613$ .  $R^2= 0.669$  and  $p$  value = 0.000). Taken together, applying the principles of TQM increases the overall hospital effectiveness in the HCAC accredited governmental hospitals in Jordan.

Marcel and Ayankeng (2015) investigated the impact of Total Quality Management Organizational Performance. Data were collected from manufacturing firms in the republic of Cameroon. Variables used to capture Total Quality Management (TQM) were management commitment through leadership, Quality control, inspection, employee training, customer focus, benchmarking as the basis for enhancing product quality. Organizational performance was measured by Customer Satisfaction, Cost Reduction, and Employee Satisfaction. Multiple regressions were used. The results showed that only employment training and empowerment has a significant impact on financial performance and corporate social responsibility; leadership commitment, quality control and inspection have a significant impact on cost reduction. However, none of the TQM practices appear to have a significant effect on customer satisfaction.

Ayandele and Akpan (2015) examined the practice, challenges and benefits of TQM in Nigerian manufacturing firms and discovered among others that while a significant reduction in operating expenses and manufacturing costs were recorded, workers were also found addressing different issues in the name of TQM. In analyzing the data obtained in this study, the simple percentage

Product Moment Correlation Co-efficient Analysis. The study concludes that careful and objective implementation of TQM will enhance the innovative and technological capability of the firm thereby boosting her goodwill.

Shanl. Ahmad and Nor (2016) assessed the relationship between TQM and business performance with a mediator's effect of Kaizen. The proposed model attempted to create knowledge to both academicians and company players to acquire a better understanding among the TQM and Kaizen practices. Consequently, the Structural Equation Modelling (SEM) techniques were applied to identify and evaluate the relationship among TQM, Kaizen and business performance in developing a new TQM model. According to the study, the relationship resulted between TQM and Business Performance indicated inconsistent.

Onyango (2016) examined the relationship between TQM practices implementation and performance of commercial banks in Kenya. In the study, all the 43 commercial banks in Kenya were used. The study depended on information gathered through an organized poll to meet the goals of the study utilizing five point Likert scale. The surveyed questions concentrated on the relationship between TQM practices implementation and performance of commercial banks in Kenya with the inquiries being shut finished. Regression model was used with aid of Package for Social Sciences (SPSS 21.0). Different relapse measurements were utilized to set up a factually huge connection between the 'TQM practices and performance of commercial banks' in Kenya. Based on the study, it demonstrated a factually irrelevant relationship between TQM practices and performance of commercial banks' in Kenya.

Monirci (2016) established quality management practices among manufacturing firms in Nairobi City County; to establish the performance of firms in manufacturing industry in Nairobi City County; to determine the relationship between quality management and performance of firms in the manufacturing industry in Nairobi City County. The research design used was descriptive survey method. A sample of 70 manufacturing firms in Nairobi County was selected which is 12.75% of the target population. Both descriptive and inferential statistics was used to analyze the data. From the data collected the respondents reported that continuous quality improvement is practiced between a very large extent and large extent. From the findings all activities show that customer focus practices have been adopted in the respective organizations at large extent. All activities showed that top management commitment practices have been adopted in the respective organizations at large extent. It was established that Quality management was embraced in the vision of the company to a large extent as shown by a mean of 4.02.

Mukhtar (2016) measured the relationship between some total quality management dimensions and business performance on small and medium enterprises (SMEs). The study advanced the understanding of TQM and also resolved some arguments that appear in the literature concerning the relationship between TQM dimensions and performance relationship. A questionnaire survey was undertaken. The data for the study was drawn from 359 service SMEs operating in Kano, Nigeria, Multiple regression technique was used for the data analysis. The findings indicated that management leadership has a significant effect on business performance of SMEs, whereas, ^B-customer focus and continuous improvement to business performance relationship were found not significant. The findings of this study is of benefits to SME owner / managers and regulators of small firms, hence, future research directions were provided and explained.

Kriengsak and Thanh (2017) examined the relationship between organizational culture and Total Quality Management within the context of the Vietnamese construction industry- A survey was conducted with 104 respondents from Vietnamese construction firms, using validated survey instruments developed in past research. Analysis techniques include cluster analysis and Structural Equation Modeling. Findings showed that Vietnamese construction firms are dominated by clan and hierarchy cultures rather than adhocracy and market cultures according to Competing Value Framework (CVF) of OC classification. Furthermore, it was discovered that organizations dominated by either clan or adhocracy cultures could provide a favourable environment for successful TQM implementation, whereas this is not the case for those dominated by both market and hierarchy cultures.

In a nutshell, studies have examined the relationship between total quality management and various levels of business performance but the impact of Total Quality Management on

or conducted to investigate the level of Total Quality Management implementation and its impact on organization performance in the banking sector. Furthermore, majority of these studies were carried out in manufacturing firms while only few studied banks in US and UK (Almarn et al 2007, Peschel et al, 2008; Ali and Abedalfattah et al, 2013; Carolyn & Bichanga et al, 2014; Onyango, 2016). Moreso, assessing the effect of TQM on bank performance had not specifically received attention in Nigerian context, hence the significant of this study.

**METHODOLOGY**

This study adopted survey research design. According to Nworgu (2004), this design involves the gathering of data through questions and interviews from few people or items considered to be the representative of the entire group. This design was selected for this study because the study seeks to sample the opinion of respondents and draw inferences based on their views.

The population of this study comprises of bank staff and customers of banks of the fifteen (15) quoted deposit money banks quoted on the Nigeria Stock Exchange. While the customers are users of the bank’s services, the staff also uses the service of the bank in their capacities as staff and customers. The staff and customers comprising the population are expected to have sufficient knowledge of the issues related to services offered by the bank within the scope of Total Quality Management. The banks quoted in the Nigerian Sock Exchange are as follows:

Access bank plc; Diamond bank plc; First bank plc; Skye bank plc; First City Monument Bank (FCMB) plc; GurantyTrustBank(GTB) plc; Zenith bank plc; Sterling bank plc; United Bank of Africa (UBA) plc; Fidelity bank plc; Stanbic IBTC; Union Bank plc; Unity Bank Plc; Wema bank plc; Eco bank Plc.

The impossibility of including all the members of the population makes sampling imperative. As a result the researcher sampled five (5) of the banks.

**Sample of the study**

The sample size of this study consists of staff of five (5) banks quoted in the Nigerian Stock Exchange and customers of banks. The banks includes two (2) old generation bank: United Bank for Africa, First bank, and three (3) new generation bank: Zenith bank, Diamond bank and GTB bank in Awka metropolis, Anambra state. These banks are classified as old generation and new generation as to when it came into operation.

The population being infinite, the researcher used Cochran’s equation of infinite population to determine the sample of the study. The formula is stated below:

$$n_0 = \frac{Z^2 pq}{e^2 N}$$

Where; n – sample size

Z – Z value of confidence level. Abscissa of the normal curve that cuts off an area  $\alpha$  at the tail (found in statistical tables which contain area under normal curve)

P – Estimated proportion of an attribute present in the population

q – 1-p

e – Desired level of precision expressed in decimal.

N- Population size.

Using a 90% confidence interval; Z = 1.645

e =  $\pm 10\%$  = 0.1

p = 0.5 (maximum variable)

q = 1- 0.5 = 0.5

N = 0.5

$$n_0 = \frac{(1.645)^2 (0.5) (0.5)}{(0.10)^2}$$

**= 135.30**

Our sample size therefore will be one hundred and thirty-five (135) bank staff of the five (5) selected banks as well as 135 customers of banks.\



**Method of Data Collection**

The researcher used primary data. The primary data was supplied by staff of five (5) banks who participate in the process of quality formulation and quality service rendering and customers of banks who are learned. The data was collected through structured questionnaire administered on the respondents. These questionnaires addressed various issues of the research and how Total Quality Management affects customer satisfaction, Customer continuous loyalty, reduced cost and improve quality.

The questionnaire was designed in a structured form and made up of fifteen (15) general questions to be answered hypothetically and was restricted to the responses made of strongly agree (SA), agree (A) undecided (U) strongly disagree (SD) and disagreed (D).

**Method of Data Analysis**

The data collected was presented in a tabular form and t-test was used with the aid of Statistical Package for Social Science (SPSS) version 20.0. The research result was further interpreted, discussed and analyzed in line with the research problem, hypotheses and relevant literature and experience. Conclusion shall be drawn, recommendations made and suggestions for further studies proffered.

**DATA PRESENTATION AND ANALYSIS**

**Data Distribution and Returned**

From table I above, out of 88 copies of questionnaires was distributed, and 78 were returned, this represent 89%.

**Data Presentation**

**Table 1: Summary of bank staff Responses using five point Likert’s scale**

S/N	STATEMENTS	SA	A	UN	D	SD
1	The banks are prompt in responding to customer.	37	48	1	5	0
2	There are no delays in posting of transactions by the bank.	44	40	1	4	2
3.	I am satisfied with the quality of services rendered by the bank	33	41	0	8	9
4.	The bank is customer focused	40	35	2	9	5
5	There are no delays in issuance and usage of the Automated Teller Machine (ATM).	30	49	2	10	0
6	Charges on customer accounts are significantly moderate.	32	48	0	9	2
7	The bank employees are friendly and dedicated to service.	34	42	0	11	4
8	Interest given to customers is impressive.	31	47	2	11	0
9	The bank environments are neat, conducive and adequate or business.	31	47	4	5	4
10	Working time/ Queuing are not frustrating.	41	39	0	11	0
11	The bank has greatly improved in the overall quality of services rendered to their customer.	36	44	0	11	0
12	Quality is the key word of my bank.	39	43	0	7	2
13	Every member of the bank staff are committed to maintaining high standard of work in every aspect of the banks’ operation.	33	46	0	12	0
14	.There is increase in the quality of products / services provided by the bank to customers.	35	46	1	9	0
15	There is need to improve on the quality of services rendered by the bank to the customers.	36	50	2	3	0

**Table 2: Summary of Customers Responses using five point Likert’s scale**

S/N	STATEMENTS	SA	A	UN	D	SD
1	There is flow of information among departments.	39	41	0	12	9
2	Existence of regular programs to improve customer service.	41	34	2	19	5
3.	Strategic plans are customer driven.	40	43	2	16	0
4.	Working time in the banking hall is laborious	40	48	0	11	2
5	Remuneration to an extent is commensurate to services rendered.	34	50	0	13	4
6	Sufficient incentives and allowances are provided by the bank.	34	35	2	20	10
7	Top management of the bank are committed to quality improvement programmes.	41	47	4	5	4
8	Promotions are as regular and as appropriate as possible.	41	39	0	13	8
9	Increase in teamwork and co-operation among employees within departments and different departments.	36	52	2	11	0
10	The rate of job turnover is moderately low.	41	48	0	10	2
11	Work environment are conducive and job-friendly.	40	46	0	12	3
12	The quality targets and strategies are regularly reviewed.	32	50	0	19	0
13	There is increase in quality product/ services provided by one department to another.	40	56	2	3	0
14	Policies are installed for making continuous improvement on products quality for every individual in the Nigerian banks.	41	50	1	9	0
15	Monthly or periodic <u>quality</u> audits are regularly conducted	33	60	1	7	0

*Thanks for your patience and response*

**Test of Hypothesis**

**Hypothesis One**

Total Quality Management does not have significant effect on customer satisfaction in Nigeria deposit money banks.

In testing this hypothesis question 1 to 5 that contain in table 2 is used.

**One-Sample Statistics**

Questions	N	Mean	Std. Deviation	Std. Error Mean
1	5	38.4000	28.23650	12.62775
2	5	38.4000	32.43917	14.50724
3	5	37.8000	32.72155	14.63352
4	5	38.4000	31.34167	14.01642
5	5	38.4000	33.97499	15.19408

**One-Sample Test**

Questions	Test Value = 0					
	T	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
1	3.041	4	.038	38.40000	3.3398	73.4602
2	2.647	4	.057	38.40000	-1.8786	78.6786
3	2.583	4	.061	37.80000	-2.8292	78.4292
4	2.740	4	.052	38.40000	-.5158	77.3158
5	2.527	4	.065	38.40000	-3.7855	80.5855

Decision: accept alternate hypothesis. However, looking at the result, all the responses show positive results; the t-value has up to 13.538 as against sig value of 0.273 in all the questions raised. This indicates that the Total Quality Management has significant effect on customer satisfaction. We therefore reject null hypothesis and accept alternative hypothesis which state that Total Quality Management have significant effect on customer satisfaction in Nigeria deposit money banks.

**Hypothesis Two**

There is no significant influence from the application of Total Quality Management practices on customers' continuous loyalty.

In testing this hypothesis, questions 6 to 10 that contain in table 2 is used.

**One-Sample Statistics**

Questions	N	Mean	Std. Deviation	Std. Error Mean
6	5	38.4000	32.62361	14.58972
7	5	37.8000	33.57380	15.01466
8	5	38.4000	32.95148	14.73635
9	5	40.4000	32.60828	14.58287
10	5	36.4000	29.56856	13.22346

**One-Sample Test**

Questions	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
6	2.632	4	.058	38.40000	-2.1076	78.9076
7	2.518	4	.066	37.80000	-3.8874	79.4874
8	2.606	4	.060	38.40000	-2.5147	79.3147
9	2.770	4	.050	40.40000	-.0885	80.8885
10	2.753	4	.051	36.40000	-.3142	73.1142

Decision: If t-value is equal or greater than “Sig” value there is significant effect, we reject Null and accept alternate hypothesis. However, looking at the result, all the responses show positive results; the t-value has up to 13.279 as against sig value of 0.285 in all the questions raised. This indicates that the application of Total Quality Management practices on customers' continuous loyalty. We therefore reject null hypothesis and accept alternative hypothesis which state that there is significant influence from the application of Total Quality Management practices on customers' continuous loyalty.

**Hypothesis Three**

Application of Total Quality Management practices has not significantly brought about improved quality output and reduced cost.

In testing this hypothesis, questions 11 to 15 that contain in table 2 is used.

**One-Sample Statistics**

Questions	N	Mean	Std. Deviation	Std. Error Mean
11	5	38.4000	33.73870	15.08841
12	5	38.6000	32.44688	14.51069
13	5	38.4000	33.79793	15.11489
14	5	38.4000	34.97571	15.64161
15	5	38.4000	30.90793	13.82245

**One-Sample Test**

Questions	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
11	2.545	4	.064	38.40000	-3.4921	80.2921
12	2.660	4	.056	38.60000	-1.6881	78.8881
13	2.541	4	.064	38.40000	-3.5657	80.3657
14	2.455	4	.070	38.40000	-5.0281	81.8281
15	2.778	4	.050	38.40000	.0227	76.7773

Decision: If t-value is equal or greater than “Sig” value there is significant effect, we reject Null and accept alternate hypothesis. However, looking at the result, all the responses show positive results; the t-value has up to 12.979 as against sig value of 0.304 in all the questions raised. This indicates that the Total Quality Management practices has brought improved quality output and reduced cost. We therefore reject null hypothesis and accept alternative hypothesis which state that application of Total Quality Management practices has significantly brought about improved quality output and reduced cost.

**DISCUSSION OF FINDINGS**

From the result of the three hypotheses tested, the study found that Total Quality Management has significant effect on customer satisfaction in Nigeria deposit money banks, also that there is significant influence from the application of Total Quality Management practices on customers’ continuous loyalty. Another finding is that the Application of Total Quality Management practices has significantly brought about improved quality output and reduced cost.

This result is in line with Chin, Fang, Hung and Yen (2006) who showed that an effective management leadership can positively influence human resource management, supplier management, and design management. Oluwatoyin and Oluseun (2008) also confirmed the benefits that ensued from the implementation of TQM. It showed that TQM is a strategic tool that industry can employ in the quest to remain competitive.

Masood, Aamna, Saif and Sidra (2012) supported the hypothesis that TQM practices positively impact on performance. Ali and Abedulfattah (2013) showed that there was a significant relationship between quality management dimensions (leadership, strategic planning, customer locus, and employee relation) and Organizational Performance. Chukwu, Adeghe and Anyasi (2014) also showed significant and positive relation lie between the independent variable, error prevention, quality improvement, cost reduction, fewer delays and the dependent variable organizational performance.

**CONCLUSION**

However, this study only examines the effects of TQM on Nigerian deposit money banks. From the findings, Total Quality Management has significant effect on customer satisfaction and significant influence from the application of Total Quality Management practices on customers’ continuous loyalty in Nigeria deposit money banks. Application of Total Quality Management practices has significantly brought about improved quality output and reduced cost.

The findings of this study indicate that an effective management leadership can positively influence human resource management, supplier management, and design management. The findings state that TQM practices have direct effects on operating performance. Then improving operating performance brings in the rise of customer satisfaction and improvement of financial performance.

## RECOMMENDATIONS

Based on the findings, this study recommended thus;

1. Employees involvement requires should be allowed, this will creates a work environment where people have the ability and confidence, to obliged and initiate necessary steps to satisfy customer requirements in order to achieve organizational values and goals.
2. Members in the TQM implementation process must be trained in communication skills, quality awareness and specific problem solving techniques such as Statistical quality control, safety, and technical aspects of the job.
3. It is necessary to involve front line employees in decision making at their workplace as they are the ultimate actors for producing quality products.

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