Effects of Total Quality Management Practices On Customer Satisfaction In Nigerian Airlines

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Abstract

This study evaluates the effects of Total Quality Management (TQM) practices on customer satisfaction in Nigerian Airlines. A review of TQM literature and the survival of Airlines in Nigeria revealed that there is need for further research on identifying indicators that can best measure the TQM practices. A survey research design was adopted. Copies of questionnaire were administered to 628 employees of Arik Air and Aero-Contractors and selected 300 passengers of both Airlines. Using simple random sampling technique, the data collected were analyzed using descriptive statistics, correlation and regression analysis. The questionnaire for this study was validated using content validity while the reliability was confirmed using Cronbach Alpha values. It was revealed that all the TQM practices adopted in this study (top management commitment, process control and improvement, customer focus, employee participation, and reward and recognition) have positive relationship with customer satisfaction though and a varied levels. It was therefore recommended among others that there is the need for more commitment from the top management of the airlines in order to help in driving quality values and culture into the way of life of the Airlines by encouraging employee's participation in the quality efforts of the Airlines. The managerial implication of this study include the adoption of the findings by the Airlines Managers as a tool for formulating and devising management strategies that will enhance the satisfaction of the passengers and subsequently improved performance.

1.0 INTRODUCTION

In the present globally competitive and economically liberalized business environment, quality has become one of the most important factors for achieving competitive advantage. Gupta & Belokar, (2014) observed that a good quality product or service enables an organization to add and retain customers. Poor quality leads to discontented customers, so the costs of poor quality are not just those of immediate waste or rectification but also the loss of future sales. Juran (2001) wrote that the benefits and goals of total quality are lower costs, higher revenues, delighted customers, and empowered employees. Costs can be lowered by reducing errors, reducing rework, and reducing non-value added work. Higher quality can also equate to higher revenues through satisfied customers, increased market share, improved customer retention, more loyal customers, and premium prices. Customers continue to demand higher quality goods and services. Delighted customers purchase over and over again, advertise goods and services for the company, and check first when they are going to buy anything else to see what is offered by the company they are loyal to. Nowadays, the complexity of business environment has increased and the marketplace has changed from mere local to global. Based on the challenges being faced by the business environment, constant pressure is applied on the management to improve competitiveness by lowering operating cost and improving logistic. The availability of wide range of products and services to customers are making them to become more increasingly aware of rising standards, and this revolution had forced organizations to invest substantial resources in adopting and implementing total quality management strategies.

The empirical reports from business world show that application of principles of Total Quality Management (TQM) have proven very valuable to individuals, groups of people and organizations and many organizations have now discovered a relationship between quality management and business performance (Alejandro, 2011). Total Quality Management is a management approach that originated in the 1950's and has steadily become more popular since the early 1980's. Total Quality is a description of the culture, attitude and organization of a company that strives to provide customers with products and services that satisfy their needs. The culture requires quality in all aspects of the company's operations, with processes being done right the first time and defects and waste eradicated from operations (Gupta & Belokar, 2014). Tharmarajah (2010) opined that the main essence of TQM in Airlines industry is to provide services which will make customer satisfied, this in turn bring

about repeat purchase thus increasing sales and profitability of the organization. The root of providing a good customer satisfaction is by providing and ensured safe journey. Airlines such as KLM, Emirates, Delta have well-developed quality management programs that focus on employee performance, behaviour, and training. These Airlines design their TQM programs to treat employees well as if they were customers. Using TQM not only eliminates product and service defects, but it as well enhances product design, speed service, reduces costs and above all, changes the culture of organizations and improves quality of work life (Ernst & Young, 1991). Total Quality Management, TQM, is a method by which management and employees can become involved in the continuous improvement of the production of goods and services. It is a combination of quality and management tools aimed at increasing business and reducing losses due to wasteful practices.

Zhang (2001) observed that TQM has been implemented in many organizations worldwide and many of them have arrived at the conclusion that effective TQM implementation can improve their competitive abilities and provide strategic advantages in the marketplace. Several studies have shown that the adoption of TQM practices can allow firms to compete globally (e.g., Adediran & Adediran, 2008; Waqas, Mahmood, & Shahab, 2011; Gupta & Belokar, 2014; Sadikoglu & Olcay, 2014).

While several researches have been carried out on effects of TQM on business performance and also on service quality in the airline industry (Waqas, Mahmood, & Shahab, 2011; Karani & Bichanga, 2012; Chikwendu, Ejem, & Ezenwa, 2012; Okeudo & Chikwendu, 2013; Gupta & Belokar, 2014), few researches have been carried on the effects of TQM implementation in the airline industry in general and the Nigerian airline industry in particular (Adediran & Adediran, 2008). Mostly, the empirical studies about the effects of TQM practices on customer satisfaction have been carried out in the developed countries such as USA, EU, Japan and Australia. However, there is little empirical study in Nigeria and other developing countries. The effects of TQM on customer satisfaction need to be investigated more extensively, because of the limitation of empirical research especially in Nigeria. Therefore, the major objective of this study is to evaluate the effects of TQM practices on customer satisfaction in local Airlines operating in Nigeria. The following specific objectives are based on the identified indicators by this study for measuring TQM. The specific objectives are to:

i. Determine the relationship between top management commitment and customer satisfaction in Nigerian airlines
ii. Assess the relationship between process control and improvement and customer satisfaction in Nigerian airlines
iii. Determine the relationship between customer focus and customer satisfaction in Nigerian airlines.

Based on the stated objectives, the following research questions were asked:

i. What is the relationship between top management commitment and customer satisfaction in Nigerian airlines?
ii. To what extent is the relationship between process control and improvement and customer satisfaction in Nigerian Airlines?
iii. What is the relationship between customer focus and customer satisfaction in Nigerian Airlines?

From the above research questions, the following hypotheses were developed:

i. Ho: There is no relationship between top management commitment and customer satisfaction in Nigerian airlines.
ii. Ho: There is no relationship between process control and improvement and customer satisfaction in Nigerian airlines.
iii. Ho: There is no relationship between customer focus and customer satisfaction in Nigerian airlines.

2.0 AIRLINE INDUSTRY IN NIGERIA

Air Travel in Nigeria commenced during World War II (1939-1945) when it become necessary to move troops and supplies fast across the country. Several air strips were built then which were converted after the war, to Civilian use (Ileoje, 2003). Nigerian Airways was established in October, 1958 as a Joint Venture between the Nigerian Government, Elder Dempster Lines and the British Overseas Airways Corporation (BOAC). The Airways took over the operation of domestic flights from the disbanded West African Airways Corporation (WAAC) which had been operating commercial aircraft within the country since 1946 (Filani, 1983). In 1976 Nigeria Airways operated a fleet of nineteen aircraft consisting of two each of Boeings 707 and 737 and one DC 10-30 aircraft used mainly for international flights. There were Seven F.28 Jets and Seven Folder F.27 propeller aircrafts used mainly on domestic routes (Filani, 1983). There were also other major international airlines which operate flights to Nigeria, thereby linking Nigeria with the World's major socio-economic and political centers. Within Nigeria itself, several charter

companies operate additional flight in small aircraft from Lagos to the main economic centers in the Southern parts of the country. During the 1980s and 1990s, many airports were built, existing ones were modernized and more services and facilities added, all under the management of Nigerian Airports Authority. Ileoje (2003) states that it was estimated that by the year 2003, over four million Nigerian fly and use the airports each year. However, private domestic air carries began to win business at the expense of Nigeria, Airways, the government-owned national airline and it was declared bankrupt in 2004.

Currently, the following local airlines have an Air Operator Certificate issued by the Civil Aviation Authority of Nigeria (NCAA); Aero contractors,. Air Peace, Allied Air, Arik Air, Associated Aviation, Azman Air, Capital Airlines, Dana Air, Dornier Aviation, First Nation Airways, IRS Airlines, Kabo Air, Max Air, Med-View Airline, Overland Airways, Pan-Africa Airlines, TAT Nigeria, and Wing Aviation

3.0 LITERATURE REVIEW

THEORETICAL FRAMEWORK

3.1 System approach to Total Quality Management

The first approach to the understanding of TQM is from a systems perspective. System thinking developed in the 1950s as an alternative to traditional management thinking (McElyea 2003). The systems school grew out of the 'general systems theory' developed by the biologist Bertalanffy (McElyea 2003, Mirvis 1996) and the quantitative techniques- operations research and systems analysis—that were developed during the Second World War. Further, Simon's contributions on bounded rationality, satisficing, and incremental decision making recognised the complex environment in which post-war managers made decisions. System thinking school is aware that traditional management thinking does not have a full picture of situations in organizations. The system school views organizations as complex interrelationships amongst input, throughput (process), output, and feedback. From a systems point of view, an organization is an open and complex system with varying degrees of process flexibility and many feedback loops which are used adaptively by an organization for its survival.

Thus from the point of view of system theorists, the quality judgment is a judgment made at the boundary between the supplier system and the user system about what passes across it. Further, whether an output is a product or

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waste is a judgment on its quality. A satisfactory output is a product. An output which cannot be used by the user system is a waste. Waste can collect in the production system, or in the user system or both. Nature often becomes the user system of the waste. Cusine (1994) further defines 'dynamic quality factors' and 'static quality factors'. The dynamic quality factors are individual and unique and situation dependent. Their addition will create an image of high quality. The static quality factors are general and common to all customers. They are not situation dependent. Their absence will create an image of poor quality. (Cusine, 1994).

In the context of TQM, systems approach has made a lasting impact. According to McElyea (2003) the birth of most management models like TQM, HPO (High Performance Organization), etc stems from a systems view of organization. Deming who is the father of TQM, also developed what he called 'the system of profound knowledge' (Bauer, Reiner & Schamschule 2000).

System thinking suggests that instead of reductionist approaches to management, a holistic view should be adopted (Taiwo 2001). Taiwo adds that while there is no single model which can capture an organizational situation fully, some of the methodologies which can be used to capture the inter-relationship and intra relationship of an organization are classified as 'hard', 'soft', 'cybernetic' or 'emancipatory' depending on the effectiveness of their feedback loop. These methodologies, if used adequately, complement the customer focus, process improvement and employee involvement principles of TQM. From the point of view of systems theory, TQM fits within the open and the rational systems perspective. Thus TQM process is a system with interactive components. Committing to just one part of the system is unlikely to produce the desired effects. Therefore, from systems theory point of view, TQM is more than leadership; it is more than culture, or training or teams. It is all of these factors together.

EMPIRICAL CLARIFICATIONS

3.2 Top management commitment

Leadership is the ability to inspire confidence and support among those needed to achieve organizational goals (DuBrin, 1995). Anderson, Claes, & Donald (1994) explained the concept of leadership as: The ability of top management to establish, practice, and lead a long-term vision for the firm, driven by changing customer requirements, as opposed to an internal management

control role. Leadership is thus exemplified by clarity of vision, long-term orientation, coaching management style, participative change, employee empowerment, and planning and implementing organizational change. According to Juran and Gryna (1993), certain roles of top management can be identified as: Establish quality policies, establish and deploy quality goals, provide resources, provide problem-oriented training, and stimulate improvement. Sadikoglu & Olcay (2014) observed that top management commitment and participation in TQM practices are the most important factors for the success of TQM practices. Managers should demonstrate more leadership than traditional management behaviors to increase employees' awareness of quality activities in TQM adoption and practices. Hassan, Hassan, Shaukat, & Nawaz (2013) observed that top management commitment is considered as an important tool of TQM as it examines the senior executives, leadership and personal involvement to provide direction for maintaining and building a system that enhances organizational performance. Furthermore, Alejandro (2011) provided that leadership guides the people to meet the goals and targets. Moreover, the core purpose of leadership is to give support, encouragement, and deals with the problems from the front end in the organization.

3.3 Process Control and Improvement

According to Juran and Gryna (2003) as explained by Zhang (2001) Process refers to certain unique combinations of machines, tools, methods, materials, and people engaged in production. Process control and improvement connotes a set of methodological and behavioral practices, which are implemented to control and improve processes that produce products and services. In fact, process control and improvement can make the manufacturing process operate as expected, without breakdowns, missing materials, fixtures, tools, etc., and despite workforce variability (Flynn, Schoeder, & Sakibaba, 1994). et al., 1994). Process management deals with how organization designs and introduces the product and services. It integrates production and delivery requirements that include relationship management with the suppliers (Hassan *et al,* 2013; Brah and Tee, 2002). Deming (1986) said that improvement in the quality lies in the handling and controlling of the process. Many organizations found major improvement in the performance through the process redesigning and reengineering. Within the philosophy of TQM, having a process oriented approach underlines the necessity of having processes designed to meet quality requirements. Furthermore, it is essential that critical and core processes are

recognized and supported, in order to ensure an appropriate resource allocation to map, inspect and improve these processes.

Alejandro (2011) said that an important matter in process control and improvement is the maintenance of process capability to meet production requirements. Process capability is largely independent of specification tolerances for parts to be manufactured within the process. It is important to determine these capabilities as fundamental to product-control standards setting. A firm should try to design its process to be "foolproof" in order to minimize the chance of employee error. Fool proofing describes methods, which ensure that activities or operations can only be performed the correct way. Fool proofing methods can be divided into two types: Alarms and controls. Alarm devices may light a red lamp, sound a buzzer, or flash an alarm light if a mistake is detected. Control devices may interrupt work by activating a clamp, stopping a machine, or halting a conveyor if a mistake occurs so that a defect does not move on to the next process (Slack, Chambers, Harland, Harrison, & Johnston, 1995). Statistical process control is the application of statistical methods to the measurement and analysis of variation in any process (Juran and Gryna, 1993). Statistical process control can be used to achieve process stability, provide guidance on how the process may be improved by the reduction of variation, assess the performance of a process, and provide information to assist with management decision-making (Dale, 1999). Without statistical control, the process is in chaos, the noise of which will mask the effect of any attempt to bring improvement (Deming, 1986).

3.4 Customer Focus

Customer focus can be defined as the degree to which a firm continuously satisfies customer needs and expectations. A successful firm recognizes the need to put the customer first in every decision made. The key to quality management is maintaining a close relationship with the customer in order to fully determine the customer's needs, as well as to receive feedback on the extent to which those needs are being met. The customer should be closely involved in the product design and development process with input at every stage so that there is less likelihood of quality problems once full production begins (Flynn *et al.*, 1994). Deming (1986) suggested that the customer is the most important part of the production line; product should be aimed at the needs of the customer. Obtaining customer complaint information is to seek opportunities to improve product and service quality. Quality complaints have different problems that require different actions. Based on customer complaint

information, it is important to identify the "vital few" serious complaints that demand in-depth study in order to discover the basic causes and to remedy those causes (Juran and Gryna, 1993). To improve customer focus efforts, customer complaints should therefore be treated with top priority. Records and analyses of customer complaint reports from the field furnish useful product-control information. Such information reflects the effectiveness of control programs and highlights those nonconformities upon which more aggressive corrective action must be initiated (Feigenbaum, 1991).

3.5 TQM AND CUSTOMER SATISFACTION

Customer satisfaction should be one of firms' key performance measures. The attainment and maintenance of satisfactory levels of customer satisfaction is today fundamental determination for business health, growth, and economic viability (Selvaraj, 2009). The Malcolm Baldrige National Quality Award (1999), a case in point, considers customer-focused results the most important. For the European Quality Award (1994), customer satisfaction is the most important in terms of points assigned. According to Khan (2011), customer satisfaction is a new type of market-based performance measure for firms. It provides an important measure of the firm's past and current performance, as well as future financial health. Customer satisfaction represents a new means of evaluating performance for the modern firm and the modern economy. Marketing scholars and practitioners have long recognized that customer satisfaction is an important and central concept, as well as an important goal of all business activities. To yield highly satisfied and loyal customers, organizations throughout the world are striving to produce products and services of superior quality. For decades, Customer satisfaction is considered to be the key success factors for every profit-oriented organization as it affects companies' market share and customer retention. In addition, satisfied customers tend to be less influenced by competitors, less price sensitive, and stay loyal longer (Dimitriades, 2006). Agus (2004) in his study in Malaysia service sector finds that there is a strong and positive association between TQM and customer satisfacation. Saravanan and Rao (2006) found the statistically significant correlation between the implementation of TQM practices and customer satisfaction and business. Tanninen *et al.* (2010) on his empirical study prove that the TQM approach affected the customer satisfaction results positively, so the business units that had started to apply TQM earlier had more satisfied customers than their less experienced counterparts.

An empirical study conducted by Arumugam, Chang, Ooi, & Teh, (2008) explored the relationship between TQM practices and customer satisfaction on ISO9001:2000 certified manufacturing organizations in Malaysia. Analyzing empirical data drawn from 122 Malaysian organizations through correlation and multiple regression analyses, the finding revealed that TQM practices were found to be partially correlated with customer satisfaction. They further found that customer focus and continuous improvement were perceived as dominant TQM practices in quality performance.

Muhammadi (2013) conducted a study on the influence of quality management on productivity improvement and customer satisfaction in Iranian Automotive Industries. Simple random sampling technique method was used in selecting 320 individual and 300 questionnaires were analyzed. Data collection tool was a questionnaire with reliability coefficient of 0.869 that was calculated by Cronbach's alpha formula. Computer software LISREL was utilized for information analysis and hypotheses examination. Due to studies on hypotheses testing, it is specified that leadership, public management and customer-orientation have positive effect on productivity improvement and customer satisfaction, strategic planning and information analysis are positively effective on productivity improvement but they do not affect customer satisfaction and process management has positive influence on productivity improvement and customer satisfaction.

4.0 RESEARCH METHODS

The study covered two leading airlines operating locally in Nigeria and their customers (Arik Air Nigeria and Aero-contractor Nigeria). The two Airlines were selected because of their level of operations and safety records. They are actually considered as the two major carriers and operators in Nigeria (Okeudo & Chikwendu, 2013). Currently, there are 18 local airlines in Nigeria with Air Operator Certificate (AOC) issued by Nigerian Civil Aviation Authority (NCAA); out of these number, Muritala Muhammed International Airport (MMIA) serves as hub for 13 while the remaining five have Abuja, Kaduna and Kano international airports as their respective hubs. Questionnaires were administered to the members of staff of the two airlines and their customers. Furthermore, to determine TQM instrument, various studies have been carried out and different instruments were developed by individual researchers and institutions such as Malcolm Baldrige Award, EFQM (European Foundation for Quality Management), and the Deming Prize Criteria. Based on these

studies, a wide range of management issue, techniques, approaches, and systematic empirical investigation have been generated.

However, in the present research the TQM constructs are reduced to three based on the impression of the researcher during the pilot study and the peculiarity of the Airlines operations in Nigeria. The independent variable (TQM) was measured by top management commitment, process control and improvement, and customer focus. Customer satisfaction was measured on a five point numerical scale of 5 for high extent, 4 for average extent, 3 for low extent, 2 for undecided, and 1 for no extent using customer satisfaction measurement items developed by Okeudo & Chikwendu, (2013).

This study covered all the Eighteen (18) local airlines operating in Nigeria as certified by Nigerian Civil Aviation Authority (NCAA). Two (2) out of the 18 airlines were studied; Arik Nigeria and Aero-Contractors. Arik Air has over 2000 employees across its offices in Nigeria and outside the country while Aero-contractors has 1300 employees across its offices in Nigeria and Ghana. Simple random sampling technique was used for selecting 624 members of staff from corporate safety and security department, Engineering department, Administration, flight operations, marketing and commercial department, and logistics and planning. This technique was also used in selecting 300 customers cutting across the two airlines selected for this study. Judgemental sampling technique method was adopted for the purpose of selecting the two airlines. The sampling size for this research was determined using the formula below with 5% error margin (Toto, 2002).

$$n = \left\{ z^2 \times \sigma^2 \times \left\{ \frac{N}{(N-1)} \right\} \right\} / \{ME^2 + \{z^2 \times \sigma^2/(N-1)\}\}$$

Where Z = z-score; confidence level = 95% or 0.95; ME = Margin of error = 5% or 0.05; z-score = 1-alpha/2 and Alpha = 1- confidence level.

There were five scales for measuring TQM in Nigerian Airlines in this research. For each of the scale, there were a number of items to measure it (see appendix 1). After all data were entered into a computer, the SPSS 20 Reliability program was performed separately for the items of each scale. Table 1 lists Cronbach's alpha for different TQM practices scales. This table shows that the reliability ranged from 0.933 to 0.982 indicating that some scales were more reliable than others. Accordingly, the instrument developed for measuring TQM practices in Nigerian Airlines was judged to be reliable.

Table 1: Internal consistency Analysis

S/N	SCALES	NUMBER OF ITEMS	CRONBACH'S ALPHA
1	Top management commitment	6	0.976
2	Process control & improvement	6	0.969
3	Customer focus	6	0.982
4	Customer satisfaction	10	0.971

Source: Data analysis 2014

In this research, however, it was argued that the three (3) scales for measuring TQM practices constructs and customer satisfaction had content validity since the development of these measurement items was based mainly on an extensive review of the literature and detailed evaluations by academics and practitioners. Data collected were edited, coded and analyzed with both descriptive and inferential statistics using Statistical Package for Social Sciences (SPSS). Parametric statistical tool such as Correlation was used to test the relationship between the TQM practices and customer satisfaction.

5.0 DATA ANALYSIS AND INTERPRETATION

HYPOTHESIS ONE

i. Ho: There is no relationship between top management commitment and customer satisfaction in Nigerian airlines.

TABLE 2: Correlations of customer satisfaction on top management commitment

		Customer satisfaction	Top management
Customer satisfaction	Pearson Correlation	1	.643**
	Sig. (2-tailed)		.000
	N	219	219
Top management	Pearson Correlation	.643**	1
	Sig. (2-tailed)	.000	
	N	219	219

**. Correlation is significant at the 0.01 level (2-tailed).

The relationship between top management commitment and customer satisfaction was investigated using Pearson product-moment correlation coefficient. There is a strong, positive correlation between the two variables, $r = .643$, $n = 219$, $p < .000$. Therefore, there is a strong positive relationship between top management commitment and customer satisfaction. This is not far-fetched considering the fact that top management support is very important in implementing TQM practices. It is also the prerequisite to all strategies and actions plan that are related to TQM. Juran (1994) observe that effective leadership system creates clear values that respect the capabilities and requirements of employees and other company stakeholders and sets high expectations for performance and performance improvement. These findings are in line with the results of some previous studies such as Karani & Bichanga (2012) and Arumugam et al.(2008). Karami & Bichanga (2012) study revealed that top management commitment has a positive impact on TQM implementation in service sector in Kenya. They explained that this was expected given the fact that managerial decisions directly affect the implementation processes of TQM. Arumugam *et al* (2009) discovered that top management commitment significantly affects the quality performance and is also the fundamental driver of business excellence.

HYPOTHESIS TWO

Ho: There is no relationship between process control and improvement and customer satisfaction in Nigerian airlines.

TABLE 3: Correlations of customer satisfaction and process control and improvement

		Customer satisfaction	Process control
Customer satisfaction	Pearson Correlation	1	.562**
	Sig. (2-tailed)		.000
	N	219	219
Process control	Pearson Correlation	.562**	1
	Sig. (2-tailed)	.000	
	N	219	219

**. Correlation is significant at the 0.01 level (2-tailed).

The value of 0.562 indicates that there exist a positive correlation between customer satisfaction and process control and improvement. There is a medium, positive correlation between the two variables, $r = .56$, $n = 219$, $p < .000$. This shows that the airlines paid much attention to process control and improvement to ensure that their services meet the expectation of their customers. Fuentes-Fuentes *et al* (2004) explained that organizations operating in a competitive and dynamic business environment are liable to carry up process control and improvement in its operation and activities; because nowadays changes in customers' needs and competitors' activities call for more proactive service improvement to yield improved value to customers. The findings is in line with the findings of Toto (2002) where it was revealed that quality of any organization's products and services is determined by processes that create them. If the chain of processes is made effective and efficient, then the resulting products and services will also be effective and efficient. The study however concluded that process improvement in airline business has a significant impact on the delivery of services to the customers.

HYPOTHESIS THREE

Ho: There is no relationship between customer focus and customer satisfaction in Nigerian airlines.

TABLE 4: Correlations of customer satisfaction and customer focus

		Customer satisfaction	Customer focus
Customer satisfaction	Pearson Correlation	1	.728**
	Sig. (2-tailed)		.000
	N	219	219
Customer focus	Pearson Correlation	.728**	1
	Sig. (2-tailed)	.000	
	N	219	219

**. Correlation is significant at the 0.01 level (2-tailed).

The value of 0.73 indicates that there exist a positive correlation between customer satisfaction and customer focus. There is a high, positive correlation between the two variables, $r = .728$, $n = 219$, $p < .000$. It was discovered in this study that the airlines conducted market research, market survey and customer satisfaction investigations in order to improve their quality of services. They established formal feedback systems in order to collect customer complaint

information and provide quality warranty and feedback mechanism for effective customer satisfaction. All these customer-oriented measures put in place contributed to customer satisfaction in so many ways. This finding conforms with Malik *et al* (2012) in which it was observed that customer focus has a very strong relationship with non-financial performance of some selected service organizations in Pakistan.

6.0 CONCLUSION AND RECOMMENDATIONS

The findings of this research attest to the benefits that can be accrued from the implementation of Total Quality Management. It has shown that it is a strategic tool for an organization to employ in the quest to remain competitive. If adequately deployed, the TQM practices bring about added value to an organization in terms of efficiency in operation, improvement in process control, customer satisfaction, which in the long run can bring about profitability. The findings also revealed that the relentless pursuit of improvement in service delivery through TQM practices bring about added value to the customer by focusing on satisfying the needs of the passengers, while employees training and reward and recognition empower the workforce for the quality and continuous improvement drive of the Airlines.

From the results of this study, it was observed that quality issues must be taken seriously by the Airlines in order to remain competitive, as the maintenance of high and consistency of high quality service will ensure that passengers will continue to patronize the Airlines based on the perceived service quality and the trust built over time. The positive relationships discovered among some TQM practices and passengers' satisfaction shows the importance of these practices to improve sustainability and profitability. This may guide the Airlines Managers and Administrators on which of the TQM variables to focus more in order to improve performance by giving optimum satisfaction to the passengers.

Consequently, it was recommended that there is need for more commitment from the top management of the Airlines. This will go a long way in driving quality values and culture into the way of life of the Airlines by encouraging employees' participation in quality efforts of the Airlines. Also, all the processes involved in Airlines operations should be standardized, improved and updated. There is the need to upgrade the various facilities, equipments and other processes used in delivering Airline services to ensure efficient functioning and effective operations of the Airlines. Lastly, Airlines should be

flexible enough to implement TQM practices so as to avoid the problem of lack of commitment from the employees, resistance to change, and cascading the TQM implementation to the bottom of pyramid.

References

Adediran O. & Adediran O. (2008). *TQM: a test of the effect of TQM on performance and Stakeholders' satisfaction* (Master's thesis). Submitted to School of Management, Blekinge Institute of Technology.

Agus, A. (1994). TQM as a focus for improving overall service performance and customersatisfaction: an Empirical study on a Public Service sector in Malaysia. *Total Quality Management*, *15*(5-6), 615-628.

Alejandro, M. C. (2011). *Total Quality Management: Quality, culture, leadership and motivation.* A Master's thesis submitted to Politecnico Di Milano, Italy.

Anderson, E.W.; Claes, F.; & Donald, R.L. (1994). Customer satisfaction, Market share, and Profitability: Findings from Sweden. *Journal of Marketing*, 58(3), 53-66.

Arumugam, V., Chang, H.W., Ooi, K.-B. and Teh, P. L. (2009). Self-assessment of TQM practices: a case analysis. *The TQM Journal*, 21(1), 46-58.

Bauer, A., Reiner, G. & Schamschule, R (2000), 'Organisational and quality systemdevelopment: an analysis via a dynamic simulation model', *Total Quality Management*, 11(4/5&6), 410-416.

Brah, S.A. & Tee, S.S.L. (2002). Relationship between TQM and performance of Singapore companies. *International Journal of Quality & Reliability Management*, 19(4), 356-379.

Chikwendu, D. U.; Ejem E, & Ezenwa A. (2012). Evaluation of service quality of Nigerian Airline using SERVQUAL model. *Journal of Hospitality Management and Tourism*, 3(6), 117-125.

Cusine, P. (1994). Understanding Quality through Systems Thinking. *The TQM Magazine*, (6)5,19-27.

Dale, B.G. (1999). *Managing quality*. 3rd edition. Oxford: Blackwell Publishers Ltd.

Deming, W.E. (1986). *Out of the Crisis.* MIT Center for Advanced Engineering. Cambridge University Press

Dimitriades, A. S. (2006). Customer satisfaction, loyalty and commitment in service organizations: some evidence from Greece. *Management Research News, 29*(12), 782-800.

DuBrin, A.J. (1995). *Leadership: Research Findings, Practice, and Skills.* Boston: Houghton Mifflin Company.

Ernst & Young, C. (1991). *International quality Study: The Definitive Study of the best International Quality Management Practices.* Retrieved from http://www.academia.edu/7669075/Total_Quality_Management_in_Aviation_Maintenance.

Feigenbaum, A.V. (1991). *Total Quality Control.* Third edition. New York: McGraw-Hill, Inc.

Filani, M.O (1983). Air Transportation in Oguntoyinbo, J.S., Areola. O.O., Filani M., eds *A Geography of Nigerian Development.* Second edition. Heinemann Education (Nigeria) Ltd.

Flynn, B.; Schoeder, R. & Sakibaba, S. (1994). "A framework for quality management research and associated measurement instrument", *Journal of Operations Management,* 11, 339-66.

Fuentes-Fuentes, M., Albacete-Saez, A. and Llorens-Montes, J., (2004). 'The Impact of Environmental Characteristics on TQM Principles and Organisational Performance', *International Journal of Management Science Omeg,* **32**(6), 425-442.

Gupta C. & Belokar, R. M. (2014). Applications of TQM in Indian Airline industry. *International Journal of Science Research* (IJSR) 3(5).

Hassan M; Hassan S.; Shaukat S; Nawaz M. S. (2013). Relationship between TQM elements and organizational performance: An empirical study of manufacturing sector of Pakistan. *Pakistan Journal of Commerce and Social sciences*, 7(1), 1-8.

Ileoje, N.P. (2003). *A New Geography of Nigeria* Fifth edition. Lagos: Longman Nigeria Plc.

Juran, J.M. and Gryna, F.M. (1993). *Quality planning and analysis,* Third edition. New York: McGraw-Hill, Inc.

Karani S.R. & Bichanga W. O (2012). Effects of TQM implementation on business performance in services institutions. *International Journal of Research Studies in Management*, 1(1)

Malcolm Baldrige National Quality Award (1999). *Criteria for Performance Excellence*, National Institute of Standards and Technology, United States Department of Commerce, Gaithersburg, MD.

Malik S A, Iqba, M.Z., Shawkat R., & Yong, J. (2010). TQM practice and organizational performance: evidence from Pakistani SMEs. *International Journal of Engineering and Technology.* 10(4), 20-25.

McElyea, B. E. (2003). Organizational change models. *Futurics*, 27(1/2), 57-64.

Mirvis, P. H. (1996). Historical foundation of organisation learning. *Journal of Organisational Change Management*, 9(1), 13-27.

Mohammadi, M. R. (2013). The effect of Total Quality Management aspect on customer satisfaction and productivity in Iranian Automotive industries. *Journal of Social issues and Humanities;* 1(6).

Okeudo G. & Chikwendu D. U. (2013). Effects of airline service quality on airline image and passengers' loyalty: findings from Arik Air Nigeria. *Journal of Hospitality management and Tourism,* 4(2), 19-28.

Sadikoglu E. & Olcay, H. (2014). The effects of TQM practices on performance and the reasons of and the barriers to TQM practices in Turkey. *Advances in Decision Sciences.* 1(2014), 1-17.

Saravanan, R., & Rao, K. S. P., (2006). An Analysis of Total Quality Service Dimensions in Service Sector–A Case Study. *International Journal of Management and Systems,* 22(8), September-December, 261-267.

Selvaraj, M. (2009). Total Quality Management in Indian commercial banks: a comparative study. *Journal of Marketing & Communication, 4*(3), 59-70.

Slack, N.; Chambers, S.; Harland, C.; Harrison, A.; & Johnston, R. (1995). *Operations Management.* London: PITMAN Publishing.

Taiwo, J. (2001). Systems approaches to total quality management. *Total Quality Management.* 12(7&8), 967-973.

Tanninena, K.; Puumalainen, K. & Sandstrom, J. (2010). The power of TQM: analysis of its effects on profitability, productivity and customer satisfaction. *Total Quality Management,* 21(2), 171-184.

Tharmarajah, P. (2010). *Total Quality Management in Aviation Maintenance* (Final Year Project Technical paper). Submitted to School of Aerospace, Mechanical and Manufacturing Engineering RMIT University.

Toto H. S. (2002). *Quality management practices in the South East Asian Airlines operations function* (PhD thesis). Submitted to College of Aeronautics, Cranfield University, UK.

Waqas, R.; Mahmood, A.B.; & Shahab, A.M. (2011). Evaluating the effect of Total Quality Management Practices on Business Performance: A study of manufacturing firms of Pakistan. *International Journal of Business & Social Science,* 2(9), 110-117.

Zhang, Z. (2001). *Implementation of TQM: an empirical study of Chinese manufacturing firms* (Doctoral thesis). Submitted to Faculty of Management and Organization; University of Groningen, The Netherlands.