

Total Quality Management (TQM) and Organizational Performance

A Case of Arik Air, Nigeria Limited

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Introduction

Background to the Study

The current trend of globalization has transformed the landscape of commercial enterprises worldwide. In order to survive in this hyper-competitive environment, companies are being forced to increase their comparative advantage in three major areas: quality, price and delivery (Yusof, 2003). When using pricing as the sole basis for competition, the organization with the lowest price will gain the greatest market share, provided that it delivers a product or service of comparable quality to its competitors (Yusof, 2003). Rather than taking this approach, many companies have opted to use quality management as a competitive strategy in order to avoid competing through price reduction. One way organisations do this is through total quality management (TQM).

TQM practices can be utilized as a method for securing competitive advantage by helping organizations to use their resources efficiently and to provide quality products that meet the needs of their customers. Khan (2003) asserts that in the long term companies that implement TQM effectively can offer more effective products and can increase profitability and market share. When evaluating organizational practices, it has been suggested that productivity should not be considered only in terms of efficiency. Rather, value should also be placed on effectiveness (Khan, 2003). For example, manufacturing firms can objectively measure the efficiency of their resource usage. However, if their products are not meeting the needs of customers, they are not considered “effective”. Hence, the organization’s resources may be used efficiently, but not effectively. In order to be profitable, companies must have both knowledge of, and the ability to meet, customer expectations. Total Quality Management (TQM) provides organizations with the framework to be both efficient and effective, providing a broad competitive advantage in all three areas of quality, price and delivery.

TQM is an integrative organizational philosophy concerned with continuously improving the quality of products, services and internal processes in order to meet or exceed customer expectations (Baird, Hu and Reeve, 2011). TQM is based on embedding a customer focus in all organizational practices and processes, leading to the provision of high quality services and products that meet clients’ needs. TQM proposes that customer satisfaction leads to loyal customers who repurchase. As the number of loyal customers that are acquired by a company increases, so does that company’s chances of long-term success in the market. Khan (2003) researched on the impact of TQM on productivity and concluded that organizations that correctly embrace the TQM philosophy can expect significant improvements in its financial performance

as well as customer and employee satisfaction. In this way, TQM can provide businesses with a long-term sustainable competitive advantage in a fiercely competitive environment (Khan, 2003).

Over the last three decades, there has been increasing acceptance of TQM as a philosophy and an approach of management (Yusof, 2003). The implementation of TQM requires companies to adopt a number of specific quality practices, such as top management commitment, continuous improvement and quality training and education. These practices are commonly referred to as critical success factors (CSFs) of TQM. In this study, the term critical success factors (CSFs) can be defined as the critical areas of accomplishment for an organization in order to achieve high quality performance; they are crucial to the successful implementation of TQM (Antony et al., 2002).

Effective implementation of TQM requires a strong commitment from all members of an organization to the CSFs. Thus, identification of these factors is a key component of successfully implementing TQM. A review of literature suggests that the key CSFs for TQM implementation, as put across by several scholars, include availability of visionary managers in the firm; commitment of all members to valued TQM philosophies; encouragement of team work; increased employee involvement; provision of effective quality training programs; use of good performance measurement systems; process focus orientation; effective communication systems; customer focus; well performing, quality suppliers; and use of continuous improvement methodologies and tools. For avoidance of overlap, Klopp, Kelvin and Knotter (2014) condensed the above mentioned CSFs into six which are top management commitment and leadership; customer orientation; supplier quality management; employee involvement, process management; and effective communication system. These six, they say, are applicable to both the manufacture and service organisations.

In the aviation industry, service quality is essential as it is a major determinant of competitiveness. Airlines that pay strict attention to service quality will be outstandingly differentiated from others and will consequently gain competitive advantage. Though it has been argued that price is a major determinant of choice of airline by customers and most airlines will rather compete on it and overlook quality. However not managing quality will mean no added value to the airlines (Adediran & Adediran, 2008). The use of a strategic approach to quality management by airlines will improve their competitiveness (Ghobadian et al. 1994) in (Adediran & Adediran, 2013). Total quality management is an effective system for integrating the quality development; quality maintenance and quality improvement efforts of various aspects in a system, so as to enable services at the most economical level and derive full satisfaction (Guptar & Belokar, 2014).

Arik Air is one of the major players in the Nigerian Airline industry for over a decade now. They have claimed many times that Total Quality Management (TQM) philosophy is part of their success story. This study is structured to assess the roles of Total Quality Management's Critical Success Factors in the operation of Arik Air Limited.

Statement of the Problem

Total Quality Management (TQM) application in the aviation industry is considered by many practitioners and scholars as the universal remedy for a range of problems in this sector. To improve competitiveness, an organization looks for a higher level of effectiveness across all functions and processes and have chosen TQM as a strategy for managing quality and staying in business. TQM is generally understood as an integrated organizational strategy for improving product and service quality, (Ghobadian et al. 1994). Today, successful companies understand

that quality provides an organisation with competitive advantage. They consider the customer first and define quality as meeting or exceeding customer expectations through superior quality management.

The proper application of TQM can assist an organisation to improve the quality of her products and in the process, better serve its customers. According to (Trevor,2011) this has enhanced several scholarly interest in TQM. However, only a few scholars have carried out empirical studies on CSFs for TQM, with a greater proportion of these studies focusing on either descriptive or qualitative study on TQM or basically studying TQM and its effect on performance.

The available empirical studies on CSFs for TQM concentrated mostly on identifying those CSFs for TQM. None of the studies revealed the relative contribution of the factors to the successful application of TQM. Furthermore, none of these studies have been conducted in the Nigerian aviation industry. Therefore, this study seeks to fill this gap by examining the relative contribution of the above mentioned CSFs for TQM by Klopp, Kelvin and Knotter (2014) to the successful application of TQM in the Nigerian aviation industry and to Arik Air Nigeria in particular with this question; What is the role of the Critical Success Factors in the operations and performance of Arik Air Limited.?

Objectives of the Study

Generally, the objective of this study is to assess the relationship between the critical success factors of total quality management and organizational performance in Arik Air Nigeria. To realise this major objective, specific objectives are set for this study. They include to:

- i. Examine the relationship between Top management commitment and organizational performance in Arik Air Nigeria;
- ii. Examine the relationship between customer orientation and the organizational performance of Arik Air Nigeria;
- iii. Assess the relationship between supplier quality management and organizational performance of Arik Air Nigeria;
- iv. Examine the influence of employee involvement and organizational performance of Arik Air Nigeria;
- v. Investigate the relationship between process management and organizational performance of Arik Air Nigeria; and
- vi. Assess the extent of relationship between effective communication system and organizational performance of Arik Air Nigeria.

Research Questions

The following research questions would guide the researcher in carrying out the study.

- i. Is there any relationship between top management commitment and the performance of Arik Air Limited?
- ii. Does customer orientation influence the performance of Arik Air Nigeria?
- iii. Does supplier quality management affect performance of Arik Air Nigeria?
- iv. Does employee involvement influence the performance of Arik Air Nigeria?
- v. Does process management affect the performance of Arik Air Nigeria?
- vi. Does effective communication system affect the successful application of TQM in Arik Air Nigeria?

Research Hypotheses

The following hypotheses were formulated as a guide to this study:

- i. Top management commitment does not have any significant positive effect on the performance of Arik Air Nigeria Limited.
- ii. Customer orientation has no significant positive influence on the performance of Arik Air Nigeria Limited.
- iii. There is no significant positive relationship between supplier quality management and the performance of Arik Air Limited.
- iv. There is no significant positive relationship between employee involvement and the performance of Arik Air Limited.
- v. There is no significant positive relationship between process management and the performance of Arik Air Limited.
- vi. There is no significant positive relationship between effective communication system and the performance of Arik Air Limited.

Significance of the Study

The change in consumer behaviour has made most producers of goods and services to tailor their products to meet the requirement of potential buyers. Most organisations are now concerned about how to satisfy their customers through improved services which is tailored to meet or exceed the expectation of customers. Thus, this study will help organisations in the aviation industry to know the factors that are critical to the success of TQM in the industry. The result of this study will help managers in the aviation industry to develop appropriate strategies for meeting and exceeding customers' expectation thereby enhancing their competitive advantage and inducing sustainable growth. Furthermore, the study will aid in expanding the frontiers of knowledge by revealing the major causes of customer preference/choice of airline in the Nigerian Aviation industry. In the immediate, this study is part of the requirement for the award of a Ph.D degree in Business Management and so the successful completion of the work will aid this purpose.

Scope of the Study

This study centred on the factors that are critical to the successful application of TQM in Arik Airline. The study is structured to examine the relationship between factors like top management commitment, customer focus, supplier quality management, employee involvement, process management and effective communication system as critical success factors (CSFs) and the operations of Arik Air Nigeria Limited. The study will measure the relative contribution of these factors to the operations of Arik Air Nigeria. Contextually, this study is domiciled in strategic management. Geographically, this study is focused on Arik Air operations in Nigeria.

Limitations of the Study

This research was focused on the application of TQM in the Nigerian Aviation Industry by investigating factors that are critical to the success of Arik Air Limited. Therefore, further research in other industries may be necessary before generalization can be made based on the results of this study. Also, future research efforts may be targeted at other TQM dimensions such as showing financial impact of TQM on service organizations.

Definition of Terms

Total quality management: a system of management based on the principle that every member of staff must be committed to maintaining high standards of work in every aspect of a company's operations.

Performance: the management of employees, departments, and organizations to ensure that goals and objectives are reached efficiently and effectively.

Management Commitment: Management's ability to assume responsibility for maintaining a positive work atmosphere by motivating each of their employees and showing good leadership

Customer Orientation: is seen as a commitment to satisfying customers, the integration of customer satisfaction into the organization's goals and vision, knowledge of customers' needs and expectations and use of customer feedback to provide a new level of interaction with customers.

Supplier Quality Management: depends on the efficient production of materials while minimizing adverse events. It is an integral part of the total cost of quality. Quality supplier partnerships are measured by considering supplier selection criteria, the number of suppliers, the exchange of information and services, the involvement of suppliers in the development of new products and the duration of the relationships with suppliers

Employee Involvement: is the direct participation of staff to help an organization fulfil its mission and meet its objectives by applying their own ideas, expertise, and efforts towards solving problems and making decisions.

Process Management: is an ensemble of activities of planning and monitoring the performance of a business process. It usually refers to the management of business activities. It is the application of knowledge, skills, tools techniques and systems to define, visualize, measure, control, report and improve processes with the goal to meet customer requirements profitability.

Effective Communication: is a key interpersonal skill that helps in deepening connections to others and improve teamwork, decision making and problem solving. It helps in communicating even negative or difficult messages.

Aviation Industry: is the industry supporting aviation by building aircraft and manufacturing aircraft parts for their maintenance. It is the practical aspect of aeronautics, being the design, development, production, operation and use of aircraft especially heavier than air aircraft.

Review of Related Literature - Conceptual Framework

Concept of Total Quality Management (TQM)

There is a plethora of definitions of Total Quality Management (TQM) as well as researchers on the topic. However, common definition elements are the presence of a structure and a focus on customer satisfaction. For instance, Hellsten and Klefsjo (2000) define TQM as a constantly evolving management system consisting of values, methodologies and tools. The system aims to increase external and internal customer satisfaction with an improvement in organization efficiency. Similarly, TQM can be defined as an integrated approach consisting of principles and practices whose goal is to improve the quality of an organization's goods and services through continuously meeting and exceeding customer's needs in most competitive ways focusing on TQM's requirement for continuous improvement in all aspects and activities in organizations (Talib, Rahman and Qureshi, 2011).

Despite the varied proposed definitions of TQM, a significant amount of commonality can be seen. TQM definitions can be categorized into various perspectives:

- i. TQM as a continuously evolving management system consisting of values, methodologies and tools.
- ii. TQM as a management revolution, a revolutionary philosophy of management and competitive management.
- iii. TQM as a management philosophy concerned with corporate culture as a main principle; however with an ultimate focus on increasing external and internal customer satisfaction effectively and efficiently. This achievement requires the involvement of all satisfied employees, each of whom are committed to TQM values.

In this paper, TQM is defined as an evolving version of quality management approaches, which encompasses many management concepts and mechanisms. It includes efficient and effective process management, quality philosophy, methods and tools. The focus is on how to effectively and efficiently satisfy all customers.

According to Ellis (2013), strong competitive pressure has forced organizations to offer higher quality products and services as a way to attract and keep their customers. Therefore, many organizations have implemented TQM in order to improve their positions in the market place. As long as TQM is adopted fully and practiced effectively in an organization many advantages will be delivered (Evans and Lindsay, 2008). To implement TQM more effectively, management should study the factors that can contribute to success. CSFs are the factors that contribute to the success of TQM implementation within organizations. CSFs can be defined as the critical areas in which organization must accomplish to achieve high quality performances. CSFs can be identified as being crucial to the successful implementation of TQM (Antony, 2002). Thus, in the current study they are viewed as those things that must go right in order to ensure the successful implementation of TQM.

Critical Success Factors (CSFs) of TQM

i. Top management commitment and leadership

TQM literature recognizes the importance of significant top management support as one of the major determinants for successful TQM implementation. Once top management has provided a high degree of commitment, members of the organization tend to become involved in the TQM effort (Moghaddam and Moballeghi, 2008). Top management must assume responsibility for maintaining a positive work atmosphere by motivating each of their employees and showing good leadership (Das, Paul and Swierczek, 2008; Evans and Lindsay, 2008). Moreover, previous studies emphasize the critical role of top management in driving overall quality systems in the organization (Andersson, Eriksson and Torstensson, 1995).

Top management is the major driver of quality systems that affect organizational performance and profitability. According to Javier, Antonio and Mignel (2003), top management at the Chief Executive Officer and senior manager levels are important in TQM. Senior managers shape the direction of the organization as well as its values. Also, top management support, as one of the elements in TQM practices, contributes to better market orientation in an organization (Litton, 2001 cited in Samat, Ramayah and Saad, 2006). It is interesting to note that Tsang and Antony (2001) determined that top management commitment does not have a direct

effect on business performance; instead its effect is mediated through process management and customer orientation.

Leadership is conceptualized as senior management's personal involvement, acceptance of responsibility, visibility, and shared vision and goals (Zu, 2009). The crucial role of top management leadership is to create the goals, values and systems to satisfy customer expectations and to improve performance of organizations. Top management then need to be held responsible for the organization's strategic quality planning, the integration of quality management and customer satisfaction into organizational plans as a long-term vision for achieving quality, and the understanding and deployment of quality management. These are some of the ways that top management directs the creation and maintenance of the organizational culture (Waddell et al., 2009). The absence of sound strategic planning by top management has often contributed to ineffective quality improvement (Whalen and Rahim, 1994).

A TQM program will succeed only if top management is fully committed, rather than participating only in public announcements (Whalen and Rahim, 1994). Ellram (1991) emphasized top management commitment as an enabler, while lack of top management commitment is a barrier. It is evident that the lack of top management commitment to quality improvement can have a severe impact on TQM implementation and contributes to the failure of TQM adoption (Antony, 2002; Talib, Rahman and Qureshi, 2011). Reasons for lack of top management commitment include lack of experience and training, resistance to change and hesitation in initiating improvement programs. According to Brigham (1993), lack of proper managerial commitment is a common barrier for both the manufacturing and service industries when implementing TQM. Kanji (1996) identified management's failure to lead as the primary obstacle to successful TQM. Van der Wiele and Brown (2002) found management-related factors as the core factors that affect the long-term sustainability of quality management.

ii. Customer orientation

Customer orientation is seen as a commitment to satisfying customers, the integration of customer satisfaction into the organization's goals and vision, knowledge of customers' needs and expectations and use of customer feedback to provide a new level of interaction with customers (Zu, 2009). Leadership in the global market place belongs to those organizations that meet or exceed customers' requirement. Customer focus is usually one of the key factors that make TQM effective and efficient, because it increases customer satisfaction and considers customer involvement (Zu, 2009). In recent years, research has shown that customer satisfaction, which is one of the goals of TQM has a significant positive impact on market value, accounting returns, financial results and customer loyalty (Andersson, Eriksson and Torstensson, 2006). Customer satisfaction can be seen as a decisive measure of company performance as it can determine the success or failure of an organization (Das, Paul and Swierczek, 2008).

Customer satisfaction requires not only understanding of customers' requirements but also determination of the extent to which those requirements are being met based on feedback. Therefore improved customer satisfaction can be a consequence of TQM implementation. Within TQM, it is necessary to define a culture that supports the constant attainment of customer satisfaction through an integrated system of tools, techniques and training.

iii. Supplier quality management

Supplier quality management is an important factor in TQM implementation success. Quality supplier partnerships are measured by considering supplier selection criteria, the number of suppliers, the exchange of information and services, the involvement of suppliers in the

development of new products and the duration of the relationships with suppliers (Zu, 2009). Quality raw materials are constantly needed in many manufacturing companies (Talib, Rahman and Qureshi, 2011b). In service organization such as hospitals and universities, suppliers can include pharmaceutical companies, hospital equipment providers, high schools, scientific lab providers, educational equipment providers and building companies. The quality of these incoming materials is important because poor quality materials can lead to extra costs and may affect the quality of the organization's image. Selecting high quality suppliers can ultimately improve the quality of products and services because this reduces the quality related problems associated with materials and spare parts (Jamali, Ebrahimi and Abbaszadeh, 2010). By maintaining a good relationship with suppliers, the costs of raw materials may reduce. Thus, the collaborative and cooperative relationships with quality suppliers are important in TQ companies. Organizations that manufacture products of the highest quality must focus on maintaining a reliable flow of quality raw materials instead of cheaper lower quality raw materials. Feedback about all raw purchased materials should be given to the supplier so a constant standard for the material quality can be maintained (Das, Paul and Swierczek, 2008).

iv. Employee involvement

Employee involvement should be promoted throughout TQM organizations (Antony, 2002). Successful employee empowerment and involvement are essential components of TQM journeys (Moghaddam and Moballeghi, 2008). TQ firms should seek an approach that maximizes the benefits of employees' skills and abilities (Jamali, Ebrahimi and Abbaszadeh, 2010). Employees should be allowed to participate in quality and procedure improvement activities. Feedback from all employees is vital because they know how the business runs on a day-to-day basis so they are well qualified to identify where improvements should be made. When employees assist the organization, they feel a sense of accomplishment which can then improve the work atmosphere, and a sense of importance which can lead to improvements in work output. If employees' opinions are not heard, this is likely to negatively affect their work ethic. Employees will become even more motivated to reach a set goal if there is a reward attached to it. Encouraging employees to suggest improvements to work procedures is a good way to get them involved in decision making. After contributing their own opinions, employees tend to feel more committed to the success of the company (Das, Paul and Swierczek, 2008).

v. Process management

The underlying idea behind process management, is that an organization should be seen as a set of interrelated processes and that continuous improvement of each process is a step towards performance improvements. Crosby (2009) stated that every activity within the organization may be broken down into underlying processes, defined as the transformation of a set of input into output. This processes according to him are combined into a quality chain. All processes will thus exert influence on one another.

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 to inspect and improve these processes.

Process improvement is grounded in statistical process control theories and has developed to comprise practices aiming at eliminating waste by continuous improvement. Preventive actions, such as waste reduction and error prevention is thus highlighted as an essential premise when designing TQM processes (Kanji, 2002). The importance of applying

adequate statistical methods to secure a high level of process control and in continuation thereof using the assessment results to gain knowledge of the processes, is likewise emphasized as important factors (Claver & Tari, 2003).

vi. Effective communication system

Effective communication is important for TQM implementation. To communicate more effectively and achieve quality improvement, the development of information systems is necessary. Access to and availability of a quality information system can improve productivity performance and process improvement. Information and analysis is conceptualized as the availability of data, timeliness of data and use of data (Evans and Lindsay, 2008). Quality information should be collected and made available to management to enhance managerial decision making in quality improvement (Zu, 2009). Monitoring best industry practices along with the information obtained from competitors will help an organization to improve its operations and processes, accordingly enhancing internal and external quality results (Parast, Adams and Jones, 2011).

Ineffective communication is one of the major barriers that hinders TQM efforts (Talib, Rahman and Qureshi, 2011). The main enabler of TQM implementation is communication between managers, supervisors and staff (Talib, Rahman and Qureshi, 2011). Lack of communication across the organization often results in unsatisfied customers, unfulfilled customer requirements and an environment of distrust (Talib, Rahman and Qureshi, 2011). If management does not want to share important information with employees, an environment of distrust and conflict among management and employees can be observed.

Theoretical Framework

This study is founded on the system theory. The system theory is an interdisciplinary theory about every system in nature, in society and in many scientific domains as well as a framework with which we can investigate phenomena from a holistic approach (Capra, 1997). Systems thinking comes from the shift in attention from the part to the whole considering the observed reality as an integrated and interacting unicuum of phenomena where the individual properties of the single parts become indistinct. In contrast, the relationships between the parts themselves and the events they produce through their interaction become much more important, with the result that system elements are rationally connected towards a shared purpose (Golinelli, 2009). A systems theory is hence a theoretical perspective that analyses a phenomenon seen as a whole and not as simply the sum of elementary parts. The focus is on the interactions and on the relationship between parts in order to understand an entity's organization, functioning and outcomes.

When discussing quality issues, the firm is seen as a holistic system, characterized by a high degree of integration between the factors intervening in the process of quality creation. The firm's quality can be expressed as the "potentiality of existence, development and evolution (Vicari, 1992). Quality creation is related both to the sub-system (through quality management, R&D activities, internal auditing, feedback daily research, etc.) and to the supra-system (through cooperation logics and asset improvement in terms of technical, cognitive, relational and adaptive aspects). In TQM, the systemic conception of the firm is strengthened by its emphasis on the importance of the relationships of the parts to the quality goal to be reached and how the individual parts work together, inter-dependently and inter-relatedly, towards achieving the organisation's quality goal.

Empirical Framework

Some research have been carried out in the area of TQM. This section will review some of these studies.

- i. Ayandele and Akpan (2015) studied the practice, challenges and benefits of total quality management (TQM) in manufacturing firms in Nigeria. The study adopted a survey research design. The population of the study was made up of all the staff of Nigerian Breweries Plc. A sample size of one hundred and thirty-seven (137) staff of Nigerian Breweries Plc was selected, cutting through the entire hierarchy in the organization. Copies of a structured questionnaire were administered to respondents and data collected were analysed using the Pearson Product Moment Correlation. The finding of the study, among others, revealed that there is a significant positive impact of TQM on the corporate image of the organization. They recommended among other things that the principles of total quality management should be internalized and practice by Nigerian manufacturing firms who are pursuing innovation, the TQM way.
- ii. Mitsu and Mitsu (2006) carried out a study on enhancing product quality through total quality management (TQM) in Malaysia manufacturing firms. The study adopted the survey research design. A sample size of 635 respondents of managerial cadre was selected from a population of 1221 using the convenient sampling method. The study adopted the Pearson Product Moment Correlation and multiple regression methods for analysis to test hypotheses formulated for the study. The study revealed that there is significant relationship between TQM, and the production of qualitative products in manufacturing firms in Malaysia. Consequently, the study concluded that TQM is an essential ingredient in organisational quality output. The study recommended that organisations that have decided to implement TQM should encourage and motivate its employees to key into the concept to be able to achieve maximum result
- iii. Adediran and Adediran (2008) examined the effect of total quality management on performance and stakeholder satisfaction. The study was carried out in the Lagos, Nigeria. The survey research design was used and 30 copies of questionnaire were distributed to the operations managers of six (6) service organisations. Data collected for the study were analysed using descriptive statistics and hypotheses were tested using the t-test. The study revealed that that organisations that implement TQM have a higher degree of employee satisfaction than organisations that do not implement TQM. Also, that organisations that implement TQM will register a greater amount of customer satisfaction than organisations that do not implement TQM. Based on the findings, it was recommended that quality issues must be taken seriously by any organisations in order to remain competitive, as the maintenance of high and consistent quality service will ensure that customers continue to patronize the organisation based on the trust built over time.

Methodology

This study adopted the survey research design. The study was carried out in Arik Air Limited at the Murtala Mohammed International Airport, Lagos, Nigeria. The population for this study was made up of all the one hundred and ninety eight employees of (198) employees of Arik Air Limited. The Taro Yamane formula for sample size determination was used to derive a sample size of 132 employees for the study.

The main research instrument used in the study was the Total Quality Management and Employee Performance Questionnaire (TQMEPQ). The questionnaire was divided into two parts. The first part included a number of demographic questions while the second part concerned itself with issues on TQM and employee performance. It measured the six critical success factors (CSFs) dimensions from Klopp, Kelvin and Knotter (2014), namely top management commitment and leadership; customer orientation; supplier quality management; employee involvement, process management; and effective communication system.. Part three included employee citizenship behaviour in the aviation sector. All items were measured on the basis of responses on a four-point Likert scale of agreement with statements, ranging from 4 = strongly agree to 1 = strongly disagree. All constructs measured in this work were obtained from extant literature.

The Cronbach (Alpha) model was employed to test the reliability of the instrument used in the survey. A Cronbach alpha reliability coefficient of 0.81 was derived as shown in Table 1.

Table 1: Reliability Scale: All Variables

Case Processing Summary			
		N	%
Case	Valid	20	100.0
	Excluded ^a	0	0
Total		20	100.0

a. Listwise deletion based on all variables in the procedure

Reliability Statistics	
Cronbach's Alpha	N of Items
.811	21

One hundred and thirty two copies of the questionnaire were administered to the respondents at their workplace during official hours. One hundred and eleven copies of the questionnaire representing 84.1% were dully completed and returned. For this study the descriptive statistics were used to analyse data and hypotheses were tested using Pearson Product Moment Correlation Coefficient.

Data Presentation and Analysis

Table 2: Number of copies of the questionnaire administered and returned

Number of questionnaires administered	132
Number of questionnaire returned	111
Percentage returned	84.1

Source: Field Survey, 2015

Based on the statistics in Table 2, a total of 111 respondents representing 84.1% completed and returned the copies of the questionnaire that were administered. This percentage was seen to be enough representative of the population.

Table 3: Respondents' Profile

S/N	Sample Characteristics	Number of Respondents	Respondents (%)
1	Sex		
	Male	59	53.1
	Female	52	46.9
2	Age		
	21-30	13	11.7
	31-40	68	61.3
	41-50	27	23.3
	Above 50	3	2.7
3	Education		
	FSLC	0	0
	SSCE	11	9.9
	ND/NCE	38	34.2
	HND/B.Sc.	57	51.4
	M.Sc./MBA/MA	5	4.5
	PhD	0	0

Source: Field survey 2015

From the results of analysis in Tables 3, male and female respondents constituted 53.1% and 46.9% respectively; 11.7% were aged between 21 and 30 years, 61.3% of the respondents were aged between 31 and 40 years, 23.3% were aged between 41 and 50 and 2.7% were above 50 years of age. Also, 9.9% were holders of SSCE, 34.2% were holders of NCE/ND, while holders of HND/B.Sc were 51.4%, holders of M.Sc/MBA. None of the respondents had FSLC nor Ph.D. This indicate that the respondents were mature and knowledgeable enough to be able to respond appropriately to the questions put across in the questionnaire.

Test of Hypotheses

H₀₁: There is no significant positive relationship between top management commitment and leadership and the Performance of Arik Air Nigeria.

Table 4: PPMC Analysis Between Top Management Commitment and Performance of Arik Air

			Performance Of Arik Air	Top management commitment and leadership
Pearson's r	Performance of Arik Air	Correlation coefficient	1.000	.642**
		Sig. (2 tailed)	.	.000
		N	111	111
	Top management commitment and leadership	Correlation coefficient	.642**	1.000
		Sig. (2 tailed)	.000	.
		N	111	111

**correlation is significant at 0.05 level (2 tailed)

From Table 4, the correlation (r) value of 0.642 indicates that there is significant relationship between top management commitment and performance in Arik Air. Also, since the p-value (0.000) is less than the level of significance ($\alpha = 0.05$), we therefore, reject the H_{01} and conclude that there is significant relationship between top management commitment and the performance of Arik Air Nigeria.

H₀₂: There is no significant positive relationship between customer orientation and the performance of Arik Air Nigeria.

Table 5: PPMC Analysis Between Customer Orientation and the Performance of Arik Air

			Successful application of TQM	Commitment
Pearson's r	Performance of Arik Air	Correlation coefficient	1.000	.477**
		Sig. (2 tailed)	.	.000
		N	111	111
	Customer orientation	Correlation coefficient	.477**	1.000
		Sig. (2 tailed)	.000	.
		N	111	111

**correlation is significant at 0.05 level (2 tailed)

From Table 5, the correlation (r) value of 0.477 indicates that there is a strong relationship between customer orientation and the performance of Arik Air. Also, since the p-value (0.000) is less than the level of significance ($\alpha = 0.05$), we therefore, reject the H_{02} and conclude that there is significant relationship between customer orientation and performance in Arik Air Nigeria.

H₀₃: There is no significant relationship between supplier quality management and performance in Arik Air Nigeria.

Table 6: PPMC Analysis Between Supplier Quality Management and The Performance of Arik Air

			Success of TQM	Supplier quality management
Pearson's r	Performance of Arik Air	Correlation coefficient	1.000	.448**
		Sig. (2 tailed)	.	.000
		N	111	111
	Supplier quality management	Correlation coefficient	.448**	1.000
		Sig. (2 tailed)	.000	.
		N	111	111

**correlation is significant at 0.05 level (2 tailed)

From Table 6, the correlation (r) value of 0.448 indicates that there is a strong positive relationship between supplier quality management and the success of. Also, since the p-value (0.000) is less than the level of significance ($\alpha = 0.05$), we therefore, reject H_{03} and conclude

that there is significant relationship between supplier quality management and the performance of Arik Air Nigeria.

Ho4: There is no significant relationship between employee involvement and the performance of Arik Air Nigeria.

Table 7: PPMC analysis between employee involvement and the Performance of Arik Air

			Success of TQM	Employee involvement
Pearson's r	Performance of Arik Air	Correlation coefficient	1.000	.595**
		Sig. (2 tailed)	.	.000
		N	111	111
	Employee involvement	Correlation coefficient	.595**	1.000
Sig. (2 tailed)		.000	.	
N		111	111	

**correlation is significant at 0.05 level (2 tailed)

From Table 7, the correlation (r) value of 0.595 indicates that there is a strong relationship between employee involvement and the performance of Arik Air. Also, since the p-value (0.000) is less than the level of significance ($\alpha = 0.05$), we therefore, reject Ho₄ and conclude that there is significant relationship between employee involvement and the performance of Arik Air Nigeria.

Ho5: There is no significant relationship between process management and the performance of Arik Air Nigeria.

Table 8: PPMC Analysis Between Process Management and the Performance of Arik Air

			Successful application of TQM	Process management
Pearson's r	Performance of Arik Air.	Correlation	1.000	.599**
		Sig. (2 tailed)	.	.000
		N	111	111
	Process management coefficient	Correlation	.599**	1.000
Sig. (2 tailed)		.000	.	
N		111	111	

**correlation is significant at 0.05 level (2 tailed)

From Table 8, the correlation (r) value of 0.599 indicates that there is a strong relationship between process management and the performance of Arik Air. Also, since the p-value (0.000) is less than the level of significance ($\alpha = 0.05$), we therefore, reject Ho₅ and conclude that there is significant relationship between process management and the performance of Arik Air Nigeria.

Ho6: There is no significant relationship between effective communication system and the performance of Arik Air Nigeria.

Table 9: PPMC Analysis Between Effective Communication System and The performance of Arik Air

			Success of TQM	Effective communication system
Pearson's r	The performance of Arik Air	Correlation coefficient	1.000	.512**
		Sig. (2 tailed)	.	.000
		N	111	111
	Effective Communication system	Correlation coefficient	.512**	1.000
		Sig. (2 tailed)	.000	.
		N	111	111

**correlation is significant at 0.05 level (2 tailed)

From Table 9, the correlation (r) value of 0.512 indicates that there is a strong relationship between effective communication system and the performance of Arik Air. Also, since the p-value (0.000) is less than the level of significance ($\alpha = 0.05$), we therefore, reject H_0 and conclude that there is significant relationship between effective communication system and the performance of Arik Air Limited.

Discussion of Findings

This study was designed to examine the application of total quality management (TQM) in Arik Air Limited. Proxies for TQM were the critical success factors (CSFs). These CSFs as glean from literature were top management commitment and leadership, customer orientation and supplier quality management. Others are employee involvement, process management and effective communication system. Results from Tables 4, 5, 6, 7, 8 and 9 indicate significant positive relationship between the studied variables and the success of Arik Air. This implies that these variables are critical for the success of Arik Air Limited. This position is corroborated by Talib, Rahman and Qureshi (2011); Des, Paul and Swieczek (2008); Ellis (2013) and Zu (2009) who also found that these variables are critical to the successful application of TQM. According to Talib, Rahman and Qureshi (2011), top management commitment is significantly related to the successful application of TQM in that top management charts the course of an organisation. All strategic decisions are made by them. Ellis (2013) opined that when top management show reasonable commitment in their quest for quality management, the entire organisation will key into the policy. In his study, Zu (2009) found that top management commitment and leadership and employee involvement in decision making were more related to the Success of TQM than other variables as such he concluded that these two variables are more critical to the success of TQM in organisation. Zu (2009) findings is in line with the findings of this study as top management commitment ($r = 0.642$) and employee involvement ($r = 0.595$) are all highly related to employee citizenship behaviour in Arik Air, Nigeria. However, this study found a third variable that is also critically important to the success of Arik Air, Nigeria, this variable is process management with a correlation coefficient of 0.599.

Conclusion

Based on the findings of this study, we hereby conclude that the variables (i.e. top management commitment, customer orientation, supplier quality management, employee

involvement, process management and effective communication system) are all critical success factors to the operations of Arik Air Nigeria. However, top management commitment, employee involvement and process management are found to play more significant role to the successful operations of Arik Air Nigeria.

Recommendations

Based on the findings of this study, it is recommended that:

- i. top management should lead the way in quality management and show leadership by making and implementing policies that will encourage total quality management;
- ii. customers demand for quality should be incorporated in the quality management process;
- iii. channels of communication should be properly spelt out to aid the timely flow of information that will aid quality management in the organisation; and
- iv. management should continue to encourage employees involvement in quality management processes and procedures as this will act as motivation to employee.

Limitations and Recommendations for Future Research

This research was focused on the application of TQM in the Nigerian Aviation Industry by investigating factors that are critical to the success of Arik Air Limited. Therefore, further research in other industries may be necessary before generalization can be made based on the results of this study. Also, future research efforts may be targeted at other TQM dimensions such as showing financial impact of TQM on service organizations.

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