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## TOTAL QUALITY MANAGEMENT AND ORGANIZATIONAL PERFORMANCE IN NIGERIAN PETROLEUM DEVELOPMENT COMPANY

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### ABSTRACT

*Total quality management can be considered as a comprehensive integration between several models, procedures, individuals and communication processes to cover all customer demands. It is a management strategy that enables an organization to continuously meet customer requirements by consistently achieving planned and continuous improvement in the quality of all activities, processes and results at the lowest overall cost. This study examined the relationship between total quality management practices and organisational performance. The specific objectives of the study were to examine the impact of top management, strategic planning, process management, customer focus, employee relation on organisational performance. The study adopted a survey research instrument through the administration of questionnaires to two hundred and fifty-five (255) employees of the Nigerian Petroleum Development Company Limited (NPDC), Benin City. Data for the study were analyzed using descriptive statistics, Pearson correlation and multiple regression. The results of the study showed that different TQM practices have different impact on organizational performance. The multiple regressions results revealed that top management, and employee relations have significant relationships with organisational performance, whereas strategic planning, customer focus, and process management have insignificant relationships with organisational performance. The study recommends that the commitment of top management as component of total quality management practices would significantly enhance organisational performance.*

**Keywords:** Organisational Performance, Total Quality Management, Nigerian Petroleum Development Corporation

### INTRODUCTION

Organisations all over the world have been trying to cope with a rapidly changing business environment, globalization, intense worldwide competition, and ever-changing customer demands such that management needs to be more and more astute in finding ways to sustain or gain competitive advantage (Ngambi&Nkemkiafu, 2015). With the rapid

global economic growth, changes in technologies, market competitions, and an ever changing business environment, organisations have to struggle to maintain profitability, growth and improve performance. To withstand new global challenges, most business organisations 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 (Ngambi&Nkemkiafu, 2015).

Imran, Abdul-Hamid and Aziz (2017), emphasized that market orientation serves as a platform for creating a clear understanding of total quality management and organisational performance relationship. Therefore, the main driver behind these philosophies is the optimization of the organisation's performance both internally and externally within its respective target market (Lee, 2012). Total quality management (TQM) is a firm-wide management philosophy of continuously improving the quality of the products/services/processes by focusing on the customers' needs and expectations to enhance customer satisfaction and firm performance (Sadikoglu & Olcay, 2014). Quality advocates have identified several critical principles for successful TQM practices which among others include: top management commitment, customer focus, supplier relationship, benchmarking, quality-oriented training, employee focus, zero-defects, process improvement and quality measurement, among others (Gharakhani, Rahmati, Farrokhi & Farahmandian, 2013).

Of course, this is achieved through cooperation between organisational members.

Horsfall, Ukoha and Alagah (2018), argued that the persistent wave of technological change and environmental turbulence have pushed many firms into becoming bystanders of the future and has made their structures, processes and skills become progressively less attuned to the ever-changing realities of the demands and expectations of present day customers. Therefore, organizations must adopt a quality management practices focused on achieving and sustaining a high quality outputs with management practices as the inputs and quality performance as the outputs (Flynn, Schroeder & Sakakibara, 1994). On this premise, the pioneers in TQM, such as Deming, Juran, Cosby and Feigenbaum, highlighted the importance of the quality philosophy as an essential competitive weapon for the transformation of an organisation (Jaafreh& Al-abedallat, 2013).

Although there are several researches that directly handled total quality management practices, these practices are still considered vague and unclear (Dean & Bowen, 1994). This could be explained due to the fact that total quality management has different definitions (Al-Qahtani, Alshehri& Aziz, 2015). Previous studies have reported mixed and ambiguous results of the relationship between TQM practices and organizational performances. For instance, Jaafreh and Al-abedallat (2013) and Zu (2009) have claimed that a proper implementation of TQM practice in any organisation, in any sectors of the economy (manufacturing or service) can generates improved products and services, more satisfied customers and employees, reduced costs, improved financial performance, enhanced competitive, and increased performance. Likewise, Horsfall, Ukoha and Alagah (2018), Abeykoon & de Alwis (2015) and Kathaari (2014) have identified relationships among total quality management practices and examine the effects of these practices on performance, but the findings are inconsistent and conflicting. Based on the foregoing, this study sought to bridge the gap by examining the significant relationship between total quality

management practices and organisational performance with regards to Nigerian Petroleum Development Commission located in Sapele road in Oredo Local Government Area of Edo state.

### **Research Objectives**

Specifically, this research paper came to find out the following key objectives which are to:

- i. Examine the relationship between top management as a component of total quality management and organizational performance;
- ii. Determine the relationship between strategic planning as a component of total quality management and organizational performance;
- iii. Ascertain the relationship between customer focus as a component of total quality management and organizational performance;
- iv. Investigate the relationship between process management as a component of total quality management and organizational performance; and
- v. Examine the relationship between employee relation as a component of total quality management and organizational performance.

### **LITERATURE REVIEW**

#### **Meaning and Measurement of Organisational Performance**

Organizational performance means the actual output or results of an organization as measured against its intended outputs (goals and objectives). It is a vital part of monitoring the organisation's progress. It involves the recurring activities to establish organisational goals, monitor progress toward the goals, and make adjustments to achieve those goals more effectively and efficiently. According to Nwadukwe and Court (2012), organisational performance is the ability of the organisation to effectively manage the available resources within the firm to predetermined goals and objectives. Organisational performance is the level of organisational achievement with regard to organisation regulations, expectation and requirement in meeting its goals and objectives (Folorunso, Adewale&Abodunde, 2014). Amadi and Ndu (2018), add that organisational performance is usually seen as a medium of assessing, observing, monitoring, reporting and evaluating organisational progress. In the view of Armstrong (2017), organisational performance is the extent of the effective and efficient utilization of resources to achieve objectives for which managers are responsible. Therefore, it can be said that organisational performance is concerned with work related activities, especially those activities expected of an employee and how well such were executed. Organisational performance can be adopted as a tool for influencing detailed actions taken by the firm and the extent to which the firm intends to achieve its stated objectives and goals as defined in its corporate mission and strategies.

#### **Concept of Total Quality Management**

Total quality management (TQM) is a firm-wide management philosophy of continuously improving the quality of the products/services/processes by focusing on the customers' needs and expectations to enhance customer satisfaction and firm performance (Sadikoglu, et al, 2014). Total quality management (TQM) is a systematic quality improvement approach for firm-wide management for the purpose of improving performance in terms of quality, productivity, customer satisfaction, and profitability (Gharakhani, Rahmati, Farrokhi, & Farahmandian, 2013). Al Ali (2007) sees TQM as the interaction of input including individuals, methods, policies and instruments to achieve high

quality output. Al- Damen (2017) defines TQM as a culture adopted by the organisation and deployed to all employees in the organisation, in order to achieve the customer satisfaction. It is a management philosophy with a comprehensive set of tools and approaches to the purposes of implementation. This is the highest level of quality management. It is concerned with the management of quality principle in all the facets of a business including customers and suppliers (Adediran & Adediran, 2009). The concept allows the combination of quality and management tools, aimed at increasing business activities and reducing losses due to wasteful practices (Kosgei, 2014). As a generic management tool, total quality management is infinitely variable and adaptable. It is the foundation for activities which includes commitment by senior management and all employees, meeting customer's requirements, reducing development circle times, just in time/demand flow manufacturing, improvement teams, reducing products and services cost, systems to facilitate improvement, line management ownership, employee involvement and empowerment, recognition and celebration, challenging quantified goals and bench marking, focus on processes/improvement plan and specific incorporation in strategic planning (Wani&Mehraj, 2014).

The introduction of total quality management (TQM) has played an important role in the development of contemporary management (Hoang, Igel & Laosirihongthong, 2010). Subsequently, quality management has been recognized widely in several international standards such as in the ISO 9000 and the idea of quality management was largely accepted by these standards (Al-Qahtani, Alshehri, & Aziz, 2015). Total quality management also engages all organisational staff members in the process of covering customers' expectation through utilizing problem solving methods to enhance the quality of all organisational products and services (Al-Qahtani, et al, 2015). The main focus of total quality management philosophy is to achieve a comprehensive integration among organisational staff and their functions in order to gain better enhancement, progress and preservation of products and services quality to achieve customer satisfaction (Talib, 2013). This managerial philosophy is directly focused on improving business quality and satisfaction of customers through enhancing the employee's involvement in decision making processes by utilizing teams of quality improvements and quality circle strategies (Yusuf et al., 2007). Many literature ((Talib et al., 2012) provide various concepts on TQM; however, all of them share similar basic elements. One example is that all TQM considered customer as the key focus in this managerial strategy. Therefore, we define total quality management as a managerial strategy that is focused on enhancing organisational performance and efficiency through an enhancement of the quality of products or services rendered by the organisations.

The interest in total quality management practices was largely enhanced in the last two decades and it is considered as an essential field to study for many scholars (Arumugam, Oai, & Fang, 2008). Gharakhani et al. (2013) indicated that total quality management was largely accepted at different services sectors as a managerial strategy that essentially aims to enhance performance of organisations. Moreover, total quality management is considered as a comprehensive integration between several models, procedures, individuals and communication processes to cover all customer demands (Van Ho, 2011). Talib and Rahman (2010) proposed a total quality management model which is recognized as the component of TQM model. TQM practices include commitment of top-management, focus on customers, training and education, continuous improvement, supplier management, involvement and encouragement of employees, benchmarking, and

quality information and performance. The outputs are the enhanced productivity and quality, the achievement of high level customer satisfaction, the improved customer loyalty and on-time delivery. Generally, all TQM models indicated that each managerial action consists of planning, implementing and evaluating processes. This study however focuses on TQM practices of top management, strategic planning, customer focus, process management, and employee relations.

### Top Management

Top management is responsible for the establishment of a quality service standard, good internal control process, quality policy, creating a time frame for achieving quality goal, as well as efficiently distributing the resources needed to achieve the quality goal (Tanninen, Puumalainen & Sandstrom, 2010). Senior management must act as a driver of TQM implementation, establishing values, goals, and systems to satisfy customers' needs and expectations and improve organisational performance (Ahire et al., 1996). In order to achieve their goals and objectives, people need to learn how to work together through identifying and understanding the importance of organisational culture and policies especially those at the helm of affairs of corporate organisations (Cascio, 2006). Ojo (2009) claims that the management of corporate organisations need to explain and imbibe its culture in managerial employees to enable them to be familiarized with the organisational system. The commitment approach of top management, involvement, participation, and long-term orientation are considered to be the significant means of increasing human resource productivity and positive outcomes (Arthur, 1999). Previous studies have found that leadership improves operational performance (Ahire, et al., 1998). Based on the literature reviewed we propose the following hypothesis:

*H<sub>01</sub>: There is no significant relationship between top management as a component of total quality management and organisation performance.*

### Strategic Planning

Organisations today face a continuous barrage of requests to improve quality (Al-Damen, 2017). Planning involves determining what the main objectives of the organisation and the allocation of resources towards the achievement of the set objectives (Ferreira & Proença, 2015). That is, planning is the systematic process of establishing a need and then working out the best way to meet the need, within a strategic framework that enables the individual to identify priorities and determines the operational principles of the organisation. Strategic planning is a process that quality departments, quality managers and quality professionals undertake in their organisations to identify the "right" quality initiatives to best manage quality today and on into the future. It includes the following criteria: external and internal environmental analysis, development of quality mission, development of quality policy, development of quality strategic objectives, development of strategic quality plan, implementation of quality strategy and monitoring and evaluation of quality strategy (Al-Damen, 2017).

Previous studies have found that strategic quality planning is positively associated with operational performance, inventory management performance (Phan, Abdallah, & Matsui, 2011). Therefore, our second hypothesis is stated as:

*H<sub>02</sub>: There is no significant relationship between strategic planning as a component of total quality management and organisation performance.*

### Customer Focus

Organisations depend on their customers and therefore should understand current and future customer needs, should meet customer requirements and strive to exceed customer expectations (Saleh & Mohammed, 2013). This is achieved through continuous research and understanding the needs and expectations of the customer in terms of products, services and delivery date, price and reliability. Also, the established goals of the organisation must be linked with the needs and expectations of the customers, as well as ensuring a balance between the needs and expectations of customers and other stakeholders (owners, employees, suppliers and the community). Customer focus also includes informing employees at all levels of this needs and expectations of customers, measuring customer satisfaction and acting according to the results, as well as customer relationship management to achieve the common interest (Al-Damen, 2017). Customer focus is a component of total quality management practice. Dale, Boaden, and Lascelles (1994) add that customer focus is a philosophy that involves embracing all activities through which the needs and expectations of the customer and the community, and the objectives of the organisation can be satisfied in a most efficient and cost effective way while maximizing the potentials of all employees in a continuing drive for improvement. Previous studies have found that customer focus positively affects operational performance (Ahire, *et al.*, 1998). on the basis of the literature therefore, our third hypothesis is stated below as:

*H<sub>03</sub>: There is no significant relationship between customer focus as a component of total quality management and organisation performance.*

### Process Management

Process management is seen as a desired outcome achieved more effectively and efficiently when resources and activities are managed as process-related (Al-Damen, 2017). Horsfall, Ukoha, and Alagah (2018) see process management as a procedure or set of procedures intended to ensure that a product or service under development (before work is complete, as opposed to afterwards) meets specified requirements. The focus should be on how best to design, manage and improve processes in order to fully satisfy, and generate increasing value for customers and other stakeholders (Al-Damen, 2017). Previous studies have found that process management improves operational performance (Phan, Abdallah, & Matsui, 2011). Therefore, our forth hypothesis is stated as:

*H<sub>04</sub>: There is no significant relationship between process management as a component of total quality management and organisational performance.*

### Employee Relation

According to Cambra-Fierro, Melero and Sese (2014) employee relation focusing on customer satisfaction is the essence of improving quality and imputing motivational factors have a way of enhancing customer satisfaction. One major factor in employee relations is training. With effective training, employees know the industry and the structure of the organization. In addition, effective training will improve employees' loyalty to the organisation, motivation, and work performance. If employees are trained on producing reliable and high quality products and/or services, their full participation in the production stage would be more fruitful. Thus, customer satisfaction will increase and customer complaints will reduce. Some studies report that employee relations is positively related to operational performance (Sadikoglu, 2004). Subsequently, we propose the hypothesis that:



*H<sub>05</sub>: There is no significant relationship between employee relation as a component of total quality management and organisation performance.*

## REVIEW OF RELATED THEORIES

A few of the theories that relate to total quality management practices and organisational performance will be discussed below:

### Deming Theory of Total Quality Management

The Deming theory of total quality management is based on the concept of customer and the satisfaction the customer derives from consuming quality product and receiving quality services (Deming, 1986). Deming in his theory, he encourages American managers to produce quality product and rendering quality in order to satisfy the customer. More so, quality can be assessed by looking at performance, reliability, conformity to standards, durability, service ability, aesthetics and complying with customer requirements. According to the theory, to achieve customer satisfaction, the quality process must be improved upon by organisation in the quest of meeting the customer demands and continuous process improvement management in producing quality goods and services in customer-focused organisations (Deming, 1986). However, Edward Deming contribution has been reviewed and criticised by recent studies. One of such criticisms is the work by Hunter, (2012.) Hunter disagreed with Deming on his views of the elimination of evaluation of performance, merit rating or annual appraisal scheme.

Hunter (2012) opines, performance appraisal is a “who-based” approach to problem solving. Luce, (2015) also disagreed with Deming on the elimination of appraisal. To Luce, (2015), appraisals are not only used as a veritable compensation tool but they are also intended to collectively drive the organisation to his goal and unto financial success as they only move in one direction upward. Contrary to the views of Luce, Brent, (2016) bought into Deming’s views of appraisal elimination by his proclamation that Deming’s advice is right on since his views were based on decades of experience and convictions. Again, the idea that the system the people work and their interaction with people may account for 90-95% of performance by Deming was also criticised by Stickle, (2012) as he claimed that there is no evidence to show that this is true in practice either in multiple industries and businesses. He argued that 90 or 95% of performance means nothing without data attached. Leveraging on this line of logic, Hunter, (2012), affirmed that Deming’s claims were based on decades of experience rather than on a set of data instead. Furthermore, the idea that management should focus on system improvement rather than searching for what people did wrong by Deming’s theory was also criticized by Dowd (2012) when he argued that individual impact has a relative percentage contribution to output and that the value or amount of such is not zero. He argued that individual contribution may vary from situation to situation but cannot be separated from the system contributions.

### Juran Theory of Total Quality Management

Juran theory of total quality management is based on the practices of quality planning, quality control, and quality improvement carried out by strategic managers (Juran, 1988). Juran was of the opinion that quality product or service will be achieved by organisations when the organisation recognizes the presence of top management commitment, quality planning, training and development of employees. Juran (1989), quality is simply the ability to meet the desire need or fitness for use. Therefore, managers must set out quality standards that assess the cost and effectiveness of the quality improvement program as a

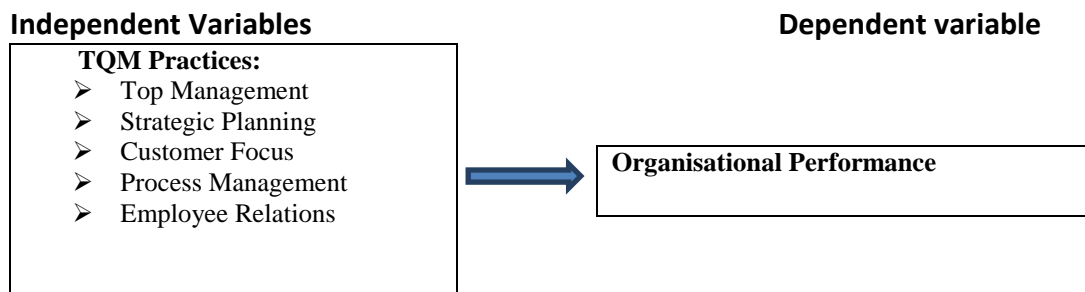
result of implementing the practice of total quality management in the banking industry. Juran ten steps to quality improvement are to build awareness of opportunities and to improve on them, set goals, organize to reach goals, provide training, carry out projects to solve problems, report progress, give recognition, communicate results, keep scores and maintain momentum by making annual improvement part of the systems and processes of the company. Series of criticisms have trailed Juran's contribution to total quality management in recent time.

### Theoretical Framework

This study is based on the postulations of Deming theory of total quality management. The Deming theory of total quality management is based on the concept of customer and the satisfaction the customer derives from consuming quality product and receiving quality services (Deming, 1986). Deming in his theory, he encourages American managers to produce quality product and rendering quality in order to satisfy the customer. More so, quality can be assessed by looking at performance, reliability, conformity to standards, durability, service ability, aesthetics and complying with customer requirements. According to the theory, to achieve customer satisfaction, the quality process must be improved upon by organisation in the quest of meeting the customer demands and continuous process improvement management in producing quality goods and services in customer-focused organisations (Deming, 1986).

A conceptual framework of the study on the relationship between TQM practices of top management, strategic planning, customer focus, process management, employee relations and general organizational performance is given below:

**Figure 1: A Conceptual Framework of TQM Practices and Organisational Performance**



*Source: Adapted framework of Al-Damen (2017)*

### Empirical Review

In reviewing existing empirical studies on total quality management practices and organisational performance, a negative and positive relationship, as well as lack of relationship between the variables were identified. Awolusi (2013) examine the effects of total quality management on customer service management in the Nigerian banking industry. The study adopted the use of Malcolm Baldrige National Quality Award (MBNQA) framework. The result of the Malcolm Baldrige National Quality Award (MBNQA) framework showed that top management commitment was very keen for the successful implementation of total quality management in Nigerian banking industry. In the light of the above, we observed that there is significant relationship that exists between top management commitment and performance. Based on the prior studies, the study utilizes top management commitment as a variable of total management practices by formulating



hypothesis that top management commitment has a significant positive influence on performance of the banking industry.

Horsfall, Ukoha, and Alagah (2018:14), carried out a study on total quality management and organizational success of manufacturing firms in Rivers state of Nigeria. The study made use primary source of data as collected by structured questionnaire and using a sample size of 238 respondents out of a population size of 588. This study used total quality management dimensions such as product improvement, process improvement and customer focus and measures such as employee and customer satisfaction with an encompassing moderating variable which is technology towards integrating the unit of measures of employed variables. However, they found out that a positive and significant relationship was found amongst employed variables showing that a rise in any of the total quality management is very likely to give birth to a corresponding rise in their organizational success status.

Abuzaid (2015) indicated that the Jordanian private hospitals applying the total quality management practices with high degree. The highest focus of private hospitals within total quality management practices is on customer orientation, supplier management, strong support from top management to the quality efforts and a concern from the target hospitals in participation of employees in quality management activities.

This claim is reinforced in the works of Wani and Mehraj, (2014), when their findings showed that successful total quality management implementation results in improving overall organisational performance such as improved employees participation, better communication and improved enrollment of learners, better quality and improved competitive advantage. The improvement in its outcomes may have lent credence to its relevance and general acceptability in the world over.

In a research conducted by Ogbari and Borishade, (2015), the study examined the relationship between total quality management and customers' satisfaction in services industries. The aims among others were to evaluate the relationship between top management commitments and customers' retentions as well as to examine the influence of organisational reputation on customers' continuous patronage. The analysed data also revealed that total quality management and customer satisfaction have increased steadily over a period of time in some service industries but top management still have much to do in order to entrench total quality management and customer satisfaction as policies in their organisation. The authors recommended a holistic adoption of total quality management and customer service tenants and its entrenchment in all organisation for quality customer services and satisfaction.

Talib, Rahman and Qureshi (2013b) conducted a study on the relationship between total quality management practices and quality performance in Indian service companies. They adopted a survey research design by administering structured questionnaires to employees of four service companies (healthcare, banking, ICT, hospitality) for the empirical analysis. The empirical results revealed that there is a strong correlation relationship between TQM practices and quality performance. The result also showed that there is a significant relationship between the variables total quality management practices and performance of the service industry. This means that increase in technological innovation as one of the TQM practice would significantly lead to increase in the performance of the service industry. In the light of the above; we observed that there is a positive relationship

between technological innovation and performance. Based on the prior studies, the study utilizes technological innovation as a variable of total management practices by formulating hypothesis that technological innovation has a significant positive influence on performance of the banking industry.

## **METHODOLOGY**

### **Research Design**

This study adopted the survey research design using the case study approach. This technique was adopted because of its advantages over other methods in terms of coverage of relatively high population and the generalization of the sample selected to the population.

### **Sources of Data**

The nature of this study necessitated the use of primary data, which were collected through the questionnaire administered on members of staff of the Nigerian Petroleum Development Company (NPDC), Benin City. However, the total number of staff of NPDC was obtained from the company's records.

### **The Population and Sampling Technique**

The population of the study includes all employees of NPDC, Benin City, Edo State of Nigeria. The population comprises top managers, middle managers and front line managers respectively. The total number of staff in NPDC Benin is 700 (Personnel Department, 2020). A simple random sampling technique was used in selecting the sampled respondents. The justification for using random sampling technique is that it eliminates the possibility that the sample is biased by the preference of the individual selecting the sample (Bordens & Abbott, 2002). Therefore, the sample size will be obtained using the Yamane (1981) formula:

$$n = \frac{N}{1 + Ne^2}$$

Given the population size of 700 and an assumed significance level of five percent (5%), the sample size is computed as  $n = \frac{N}{1 + Ne^2}$ .

$$n = 254.54$$

Therefore, 255 questionnaires were administered to full time employees of NPDC, Benin City.

The survey questionnaire was divided into two sections: A and B. Section A questions were about the TQM constructs and section B questions are about performance constructs. TQM constructs are: top management, customer strategic planning, customer focus, process management and employee relations. All questions were measured using the 5 point Likert scale method ranging from Strongly Agree to Strongly Disagree. Questions on TQM construct were adapted from the instrument developed by Singh, Kumar and Singh (2018), while performance construct questions were adapted from Adediran and Adediran (2009).

### **Test of Reliability**

The reliability for the internal consistency of the construct items for the dependent variable and the independent variables were from 0.727 to 0.825. The highest reliability of

internal consistency result was top management with a cronbach alpha value of 0.825, followed by organisational performance with a cronbach alpha value of 0.819, followed by customer focus with a cronbach alpha value of 0.782, followed by employee relation with a cronbach alpha value of 0.775, followed by strategic planning with a cronbach alpha value of 0.730 and process management with a cronbach alpha value of 0.727. This means that the Cronbach's Alpha for all the variables is more than 0.70. The variables were considered to be good for internal alpha which is between 0 and 1. This means scales in this reliability analysis were well-established and the result was acceptable for further empirical analyses.

#### **DATA PRESENTATION AND ANALYSIS**

Data collected were analyzed using both descriptive and inferential statistical techniques. A total of two hundred and fifty-five (255) questionnaires were administered to the sampled respondents and one hundred and forty-six (146) was duly returned and usable, and subsequently analyzed. Therefore, the response rate was 57.3%. The gender distribution of respondents who returned usable copies of questionnaire administered of whom, 126 (86.9%) were males and 19 (13.1%) were females. This implies that majority of the respondents were males. The age distribution of the sampled respondents, 7 (4.8%) of respondents were aged 25-30 years, 41 (28.3%) of respondents were aged 31-36 years, 62 (42.8%) of respondents were aged 37-42 years and 35 (24.1%) of respondents were aged 42 years and above. This shows that majority of the respondents were aged 37-42 years. On the issue of marital status of the sampled respondents, 117 (82.4%) of respondents were married, 23 (16.2%) of respondents single, 1 (0.7%) of respondents were separated and 1 (0.7%) of respondents were widowed. This shows that majority of the respondents were married. On highest educational qualification of the respondents who returned valid copies of distributed questionnaires of whom 4 (2.8%) of respondents possessed SSCE certificate, 69 (48.9%) of respondents possessed HND/BSC certificate, 66 (46.8%) of respondents possessed MSC/MBA certificate and 2 (1.4%) of respondents possessed PHD certificate. This means that majority of the sampled respondent's possessed HND/BSC certificate. On the issue of rank, 4 (2.8%) of the respondents were in top management, 99 (69.2%) of the respondents were senior staff, 2 (1.4%) of the respondents were in junior staff, 37 (25.9%) of the respondents were in contract staff and 1 (0.7%) of the respondents were casual staff. This means that majority of the respondents were in senior staff. On the number of years work in the organisation, 21 (14.5%) had work for the period of 0-5 years, 31 (21.4%) had work for the period of 6-10 years, 63 (43.4%) had work for the period of 11-15 years, 20 (13.8%) had work for the period of 16-20 years and 10 (6.9%) had work for the period of 21 years and above. This shows that majority of the respondents had work for the period 11-15 years.

#### **Pearson Correlation**

The Pearson correlation matrix was to the relationship between total quality management practices and organisational performance. It would be revealed from the correlation coefficient that top management (TOPM) and organisational performance (OPF) were positive and moderately correlated (0.56). This means that increase in top management might lead to improved organisational performance. The correlation coefficient also showed that strategic planning (STRP) and organisational performance (OPF) were positive and moderately correlated (0.30). This implies that regular planning might lead to improved organisational performance. It would be revealed from the correlation coefficient that process management (PROSM) and organisational performance (OPF) were

positive and moderately correlated (0.46). This implies that intensive process management might lead to improved organisational performance. Also, the correlation coefficient showed that customer focus and organisational performance (OPF) were positive and moderately correlated (0.30). This implies that more customer focus might lead to increase organisational performance. The correlation coefficient result showed that employee relation (EMPR) and organisational performance (OPF) were positive and moderately correlated (0.44). This means that good employee relation adopted by policy makers might enhance organisational performance. A careful look at the correlation coefficients, a positive and moderate correlation relationship exists between total quality management practices and organisational performance. The correlation results also revealed the absence of multicollinearity problem among the explanatory variables. Multicollinearity between explanatory variables may result to wrong signs or implausible magnitudes, in the estimated model coefficients, and the bias of the standard errors of the coefficients. It would be noted that correlation was a mere relationship until it was significantly significant. The correlation result was presented in Table 1 below:

**Table1: Pearson Correlation Result**

VARIABLE	OPF	TOPM	STRP	PROSM	CFOS	EMPR
OPF	1					
TOPM	0.56	1				
STRP	0.30	0.47	1			
PROSM	0.46	0.64	0.59	1		
CFOS	0.30	0.34	0.27	0.40	1	
EMPR	0.44	0.45	0.28	0.41	0.72	1

Source: Author's Compilation (2020)

### Multiple Regressions Analysis

The study employed multivariate regressions analysis technique to test the formulated hypotheses given the individual significance of the variables. The multiples regressions result between total quality management practices and organisational performance was empirically tested and the results were presented in table 2 below:

**Table 2: Multiple Regressions Results**

Variable	Coefficient	t-test	P-value
C	1.61	5.94	0.0000
TOPM	0.30	4.11	0.0001
STRP	-0.02	-0.27	0.7873
PROSM	0.14	1.57	0.1176
CFOS	-0.05	-0.81	0.4168
EMPR	0.14	2.71	0.0075

R-Square = 0.378240

Adjusted R-Square = 0.356035

F-Statistic = 17.03349

Prob. (F-Statistic) = 0.000000

Durbin Watson Statistic = 1.344464

Source: Author's Compilation (2020)

It would be observed from table 2 that the coefficient of determination (adj.  $R^2$ ) value of 0.356035 that about 36% of the systematic variations in organisational performance were jointly explained by top management, strategic planning, process management, customer focus and employee relation. The remaining 64% was captured by the error term. The F-statistic value of 17.03349 showed that there was a significant linear relationship between

total quality management practices and organisational performance. The Durbin Watson value of 1.344647 revealed the presence of serial autocorrelation in the regression results it was irrelevant in this study due to the nature of data employed.

Following the above, it would be revealed from the multiple regressions results that top management (TOPM) had a significant positive relationship with organisational performance (OPF) at 1% level of significance. This means that we were 99% confidence level that increase top management would significantly lead to increase organisational performance. This implies that the positive coefficient value of top management (0.30) accounted for 30% increase in organisational performance. The significant relationship of top management was because it passed the individual test of significance.

The results showed strategic planning (STRP) had an insignificant negative relationship with organisational performance (OPF) even at 5% level of significance. The negative coefficient value of strategic planning (-0.02) accounted for 2% decrease in organisational performance but it was statistically insignificant. The insignificant of strategic planning was because it failed the individual test of significance.

The results also showed process management (PROSM) had an insignificant positive relationship with organisational performance (OPF) even at 5% level of significance. This implies that the positive coefficient value of process management (0.14) accounted for 14% increase in organisational performance but it was statistically insignificant. The insignificant of process management was because it failed the individual test of significance.

The variable, customer focus (CFOS) had an insignificant negative relationship with organisational performance (OPF) even at 5% level of significance. This implies that the negative coefficient value of customer focus (-0.05) accounted for 5% decrease in organisational performance but it was statistically insignificant. The insignificant of customer focus was because it failed the individual test of significance.

The results also showed employee relation (EMPR) had a significant positive relationship with organisational performance (OPF) at 1% level of significance. This means that we were 99% confidence level that good customer focus adopted would significantly lead to increase organisational performance. This implies that the positive coefficient value of leadership (0.14) accounted for 14% increase in organisational performance. This therefore means that good customer focus adopted by management would significantly enhance organisational performance. The significant of customer focus because it passed the individual test of significance.

## DISCUSSION OF FINDINGS

The multiple regressions results revealed that top management had a significant positive relationship with organisational performance at 1% level of significance. The finding was consistent with the findings of Alghamdi (2018) and Awolusi (2013) that there is significant relationship that exists between top management and organisational performance. This study therefore suggested that we should reject the null hypothesis that top management has no significant relationship with organisational performance. Strategic planning had an insignificant negative relationship with organisational performance. The finding was inconsistent with the findings of Owolabi and Makinde (2012) and Muogbo (2013) that a significant positive relationship exists between strategic planning and organisational performance. The finding of Ferreira and Proença (2015) was inconsistent

with the results that strategic planning has a positive influence on organisational performance. This study therefore suggested that we should accept the null hypothesis that strategic planning has no significant relationship with organisational performance. Process management had an insignificant positive relationship with organisational performance. The finding was inconsistent with the findings of Horsfall, Ukoha and Alagah (2018) that a positive and significant relationship between process management and organisational performance. This study therefore suggested that we should accept the null hypothesis that process management has no significant relationship with organisational performance. Customer focus had an insignificant negative relationship with organisational performance. The finding was inconsistent with the findings of Horsfall, Ukoha and Alagah (2018) that a positive and significant relationship between customer focus and organisational performance. The findings of Asaad and Ayman (2019) were inconsistent with the results that customer focus had a significant relationship with organisational performance. This study therefore suggested that we should accept the null hypothesis that customer focus has no significant relationship with organisational performance. Employee relation had a significant positive relationship with organisational performance (OPF) at 1% level of significance. The finding was inconsistent with the findings of Salaheldin (2008) that employee relation and organisational performance was positively and significantly related. This study therefore suggested that we should reject the null hypothesis that employee relation has no significant relationship with organisational performance.

## **CONCLUSION AND RECOMMENDATIONS**

Total quality management engages all organisational staff members in the process of covering customers' expectation through utilizing problem solving methods to enhance the quality of all Organisational products and services. It is considered as a comprehensive integration between several models, procedures, individuals and communication processes to cover all customer demands. Total quality management is a management strategy that enables an organisation to continuously meet agreed customer requirements by consistently achieving planned and continuous improvement in the quality of all activities, processes and results at the lowest overall cost. Total quality management as a tool of strategic management provides relevant information needed by managers in making decisions useful in meeting the organisational goals. The study showed that there is a significant relationship between top management, employee relations and organizational performance and an insignificant relationship between strategic planning, customer focus, process management and organizational performance. However, the insignificant relationship between some TQM variables and organizational performance may imply mediational relationship among TQM practices.

In line with the results of this study, the following recommendations are made:

1. The study recommends that the commitment of top management as component of total quality management practices as this would significantly enhance organisational performance.
2. Given the significant relationship found between employee relations and organizational performance, the study also recommends that management should pay high attention to practicing new methods for improvement and give training programs to the employees in the organization to enable them understand well the philosophy of Total Quality, which will result in positive outcomes for the organization.



Further studies that incorporate the TQM practices measured in this research or other practices of TQM focusing on the private sector should be conducted.

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