

# Effects of Total Quality Control Practices On Employee Retention: A Study of Dangote Group of Company Limited Calabar, Cross River State, Nigeria

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**ABSTRACT:** *This study evaluated the effects of total quality control practices on employee retention of Dangote Group of Company Calabar, Cross River State. The study employed survey research design. The population of the study was two hundred and sixty (260) respondents. The sample size for this study was one hundred and fifty-five (155) respondents from the Dangote Group of Company Limited Calabar, selected for the study using Krejcie and Morgan Table of 1970 for sample size determination. The instrument used for the study was a structured questionnaire using 4-point Likert scales. Simple linear regression analysis model was employed to analyze the data and test the study hypotheses. The study revealed that employee involvement had a significant effect on employees' retention of Dangote Group of Company Limited Calabar, Cross River State. The study revealed that continuous training and education had a significant effect on employees' retention of Dangote Group of Company Limited Calabar. Also, it was found that top management commitment had a significant effect on employees' retention of Dangote Group of Company Limited Calabar. The study also showed that process improvement had a significant effect on employees' retention of Dangote Group of Company Limited Calabar. The study recommended that management should allow workers to participate and contribute to quality problems and decisions in setting quality standard of the organizational products in the organization. The management of the organization should at all times train and educate the employees on new quality standards and other quality related matters or issues in order to maintain quality products and services.*

**KEY WORDS:** total quality control practices, employee involvement, continuous training and education, top management commitment, process improvement and employee retention.

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## **INTRODUCTION**

Total quality control (TQC) is increasingly being perceived as a working tool that provides solutions to a variety of issues affecting organizations today in terms of employees' retention in the workplace (Oloo, 2017). Total quality control is one aspect of the overall control of the production system which in its totality constitutes the management functions of every organization towards quality products and services for workers to be retained. Total quality control refers to an organization's efforts to prevent or correct defects in its goods or services or to improve them in some ways. In this modern world of continually increasing universal or worldwide competition, it is imperative or important for all manufacturing and service organizations to improve the quality of their products (Taher & Alam, 2014). They further stated that quality is the symbol of human civilization, and with the progress of human civilization, quality control will play an incomparable role towards quality products and services to be maintained and sustained in the business environment. It can be said that if there is no quality control, there is no economic benefit in the organization for employee retention to be maintained. Employee retention is the organizational goal of keeping productive and talented workers and reducing turnover by fostering a positive work atmosphere to promote engagement, showing appreciation to employees, providing competitive pay and benefits, and encouraging a healthy work-life balance. Employee retention is important to team building and cohesion in the workplace so workers can come to trust and depend on each other.

Total quality control refers to guidelines formulated by an organization to guarantee that service or product conforms to a specified collection of quality criteria that meets customers' needs or expectations (Oloo, 2017). Providing higher quality products and services has become a strategic requirement that concerns senior management across diverse sectors around the globe. Total quality control is an integrated management view point that aims assiduously in improving the quality of processes and products to ensure customers' satisfaction steadily (Oloo, 2017; Ahire, 2012). Effective total quality control standards enable firms to build reputation for having superior products steadily. Total quality control involves the process of evaluating the actual performance, comparing the actual performance with the objectives, and conducting corrective action to address productivity or performance difference which exists in the organization in order to enhance employees' retention (Werdiningsih & Pudjiarti, 2016).

Many organizations have realized that promoting and retaining talented employees serves as an important part of the business management process. This increased the level of competition in all industries; therefore, all organizations (public and private) need to know the process that will help to retain quailed employees. Employee Retention can be defined as the ability of an organization to retain its employees (Awolaja, 2023). It is also seen as a process, in which employees are motivated and encouraged to stay in the organization for a long time, thereby, ensuring stability of

the organization (Gorde, 2019). The ultimate goal of employee retention is to keep both parties i. e. employees and employer happy. This helps loyal employees to stay with the organization for a long time, which the managers. Employee retention is the main factor leading to competitiveness and productivity of an organization. Retaining key employees is important because it improves customer satisfaction, increases sales, fosters working relationships, improves employee-supervisor relationships and creates valuable succession planning (Awolaja, 2023). In such a system, the knowledge and learning of the system are successfully stored and improved. Failure to retain key employees is costly for any business most especially in the aspects of quality control practices. This is because, in today business environment, increasing employees' turnover has become a serious challenge.

Total quality control as well as quality management system with manufacturing implementation systems develop the strategies and provide complete information about the product development process that help to improve its quality in employees' retention, design, features and customers' requirements in future (Khan et al, 2020). They further stated that this information also helps to achieve production optimization, allowing quicker ramp up in manufacturing, decreasing delivery time and risk, wastage and per-item cost. Namazian and Mohamadjafari (2018) noted that the Deming quality principle highlights the role of quality management and control in business is to create the constancy of purpose for the improvement of products and to create a system that can produce quality products and services continuous. Quality is a control measure and processes to make sure that specific standard and the management of the quality of organizational products and services are achieving and maintain continuously.

Total quality control means the recognition and removal of identifiable causes and defects, and variables from the set standards of organizational products and services. Total quality control is a systematic monitoring and checking of these variables in the manufacturing process which affect the excellence of the end product. These variables result from the application of materials, men, machines and manufacturing condition. The production system possesses those inputs to produce desirable outputs. Only when these variables in the inputs are regulated to the extent that they do not deviate unnecessarily from the excellence of the manufacturing process as reflected in the quality of the finished product, can the control of quality be said to exist. Total quality control are techniques and systems for the achievement of the required quality standard of an organizational products and services, and for the elimination of substandard goods. Total quality control is a system of inspection, analysis and action applied to a manufacturing process so that, by inspecting a small portion of the product currently produced, an analysis of its quality can be made to determine what action is required on the operation in order to achieve and maintain the desired level of quality. This is a technique of scientific management which has the object of improving industrial efficiency by concentrating on better standards of quality and on controls to ensure that these standards are always maintained. It is not intended to show what is wrong with current technology, but rather to establish what can be achieved with existing methods when they are operated correctly. The variables consider in measuring total quality control are employee

involvement, Continuous training and education, top management commitment as well as process improvement.

Employees' involvement is one of the fundamental principles or philosophies of total quality control practices. In order to succeed successfully, manufacturing firms' workers need to be involved and given opportunities to participate actively on quality related issues steadily during production processes. Stanojeska et al (2020) employees' involvement is recognized as one of the main prerequisites for improvement of quality management system that must be given consideration in order to increase productivity as well as profitability steadily.

Continuous training and education are one of the primary practices of total quality control that involves the process of teaching employees on new techniques, skills and methods on quality issues in order to produce quality product and services regularly. Providing training and education on quality issues or matters can enhance skills of employees, especially quality-related skills (Nguyen et al, 2018). Continuous training and education spread the knowledge of continuous improvement and innovation in service process to attain full benefits and business excellence. Continuous training and education form the vital part of total quality control systems of every manufacturing firm.

Top management commitment is one of the main elements of TQM that orientates the implementation of TQM practices towards creating products' values, systems and goals to satisfy customers' expectations and improve organizational productivity. The role of the top management in quality management system is undeniable and emphasized by many scholars (Stanojeska et al, 2020). They further asserted that the top management has a crucial role in establishing quality policies, providing resources, stimulating involvement of the employees for successful operation of ISO 9001 and transition towards total quality control practices. The ultimate responsibility for quality in an organization lies in the hands of the top management. It is only with their enthusiastic and steady support that quality can thrive in an organization. Rehmani et al (2020) stressed that a committed management at the top play a pivotal role by developing a clear organizational vision, mission and policy to achieve continuous improvement to quality, communication, and collaboration amongst the value chain thereby promoting a quality culture throughout the organization.

Process improvement refers to the ways of avoiding from defects and making improvement in the procedure of converting inputs into outputs, and it is one of the most effective quality management initiatives to achieve significant improvement in organizational performance (Mehmood et al, 2014). The focus of process improvement is to find the deficits and sources of inconsistency in managerial, service and manufacturing processes that can detract from the quality output and improve the process to remove unwanted output (Aletaiby, 2018).

### **Statement of the problem**

Total quality control and increased employees' retention are major components of every organization either manufacturing or service. Quality setback is a critical, burning and endeavour issue that organizations make every effort to resolve in order to succeed and survive in the competitive world. Because of the negative consequences of poor quality, organizations try to prevent and correct such problems through various approaches of total quality control in order to maintain employees' retention and achieving success in the business environment. Taher and Alam (2014) stated that the consequences of poor quality are grave and can affect performance such as lower employee retention, lower productivity, loss of productive time, loss of material, loss of business, and liability. Quality objectives are not given much attention in the organization planning, and tasks are not assigned accordingly. This is because, there is lack of strong continuous training and education practices among management and employees, as well as poor top management commitment towards quality issues in Dangote group of Company Limited Calabar, Cross River State.

There are still bottlenecks in top management commitment in the practice of total quality control philosophy of Dangote group of Company Limited Calabar, Cross River State. This has in turn caused a decline in the employees' retention of the organization in Cross River State. There is poor top management commitment on quality related issues when reported in the organization. This has also created a reduction in quality standards and employees' retention, which has also resulted in low profitability as well as low performance among manufacturing firms in the area. The problem of poor top management commitment towards quality of products and services in an organization affects quality performance. Poor leadership practice is also the main problem faced by Dangote group of Company Limited Calabar, Cross River State, Nigeria. This is the basic problem associated with TQC practices that have a dwindling effect on employees' retention is poor top management commitment to quality issues and inadequate customers' focus on quality products.

There is denial of employees' involvement in quality decisions of the organization. Employees are not given the opportunities to contribute during quality decisions on new and existing products of the selected manufacturing firms in the area. There is absolute failure in given room to workers to initiate and contribute to quality decisions towards organizational quality products of the manufacturing firms. Employees are not given the opportunities to contribute during quality decisions on new and existing products of the selected manufacturing firms in the area. The employees of the organization have little or no confidence that the quality manual, other documentation, and records are not kept up to date and provided when needed. The total quality control practices of the organization towards quality outputs are difficult to be defined by management to the employees. Diminished employee retention and competitive advantage are among the biggest losses when talented employees leave an organization. High employee retention rates can harm an organization's ability to carry out its mission due to impairments to continuity,

loss of institutional knowledge, and high costs of replacing departing workers and training new replacements. Employee departures can also lower morale and prompt more employees to leave the organization. Another negative effect of employee retention is the poor impact of process improvement on customers who notice that they are dealing with a continual flow of different people. High turnover typically signals consumers that there is something wrong with the organization or brand. Therefore, it is on this backdrop, this study is important to examine the effects of total quality control on employees' retention of Dangote Group of Company Limited Calabar, Cross River State.

### **Theoretical framework**

The theoretical framework of this study was anchored on Quality Trilogy Management Theory. The Quality Trilogy Management Theory was developed by Joseph M. Juran in 1951. According to Juran Quality control is the regulatory process through which will measure actual quality performance, compare it with standards, and act on the difference. Juran proposed a worldwide approach of conceptualizing quality control and quality improvement. The assumptions of the theory were based on his quality trilogy, in which Juran proposed 10 steps in achieving continuous quality improvement (Beckford, 2010): 1. Build up an awareness for the need to improve quality. 2. Set targets for improvement of quality. 3. Coordinate people so that these targets can be achieved. 4. Deliver training and education at all levels in the organization. 5. Carry out projects to solve quality problems. 6. Report progress. 7. Give recognition. 8. Communicate results. 9. Keep score and assess overall progress, and 10. Make annual reviews a regular feature of policies and procedures in order to sustain the momentum of quality improvement.

The value of this theory is that the theory will help manufacturing firms to set quality standards on continuous process improvement of quality and employees' involvement on quality related decisions and issues affecting employees' retention. The study will also provide continuous training and education on quality standards of the organizational products and services. It will also provide the levels or stages on which new knowledge and practical skills should be given to employees on quality issues and other related matters. The study will also help the management of the manufacturing firms to know how to plan, monitor and control quality problems as well as progress.

### **Managerial implications of the study**

The study can give a potential contribution in total quality control practices and principles, by providing a better understanding of the effect of the practices on continuous improvement of quality products and services towards improve as well as increase productivity of Dangote Group of Company Limited Cross River State. This study will be helpful to the organization to dedicate efforts and allocate resources to get the best long-term results or outputs and to figure out their strengths and weaknesses to develop and implement a new strategy to enhance their competitive position. The study will help top management in adopting good total quality control practices to

create a constant or continuous improvement of quality on the production of quality products and service steadily in Dangote Group of Company Limited Calabar, Cross River State. It will also aid organization to design and create products that are customers' focus oriented with the effective involvement of all employees as well as top management commitment. The research work will also assist top management of the organization to set out good quality standard and quality control framework to monitor and guide quality specifications set in the production processes.

It will also aid employees and top management to develop and imbibe in a quality culture behaviours in producing their products and services. It will also aid top management, government agencies (SON, NAFDAC) in showcasing good quality leadership potential in regulating and monitoring of quality products based on its standard and specification set in the production process. This will also help government agencies, top management and employees in the education and training of workers on quality issues affecting manufacturing firms in the area. It will also assist top management, customers and employees on the education perspective and training of quality practices to all employees as well as customers concerning the contributions of quality products and services. The study will also help management and government agencies to design a communication flows system between top management and employees, or employees and customers as well as the general public. This research will also help to boost the researcher knowledge and to increase her understanding on the effect total quality control on organizational productivity.

### **Total quality control**

Total quality control is a broad term that involves inspection at particular stage but mere inspection does not mean. As opposed to inspection, in quality control activity emphasis is placed on the quality future production. Total quality control aims at prevention of defects at the source, relies on effective feedback system and corrective action procedure. It uses inspection as a valuable tool. Total quality control refers to all those activities or functions that must be performed to fulfill the organizations' quality objectives. Thinking of quality of products and services in manufacturing organizations started with the inspection and then evolved to quality control, and quality control expanded into quality assurance and finally developed as total quality management practices or principles to gained competitive advantage and to increase productivity in an organization (Chaturika & Dileepa, 2016). Total quality control has evolved in four stages such as quality inspection, quality control, quality assurance and total quality management approach itself (Sweis, Ismaeil, Obeidat & Kanaan, 2019). Total quality control is an integrated management view point that aims assiduously in improving the quality of processes and products to ensure customers' satisfaction steadily (Oloo, 2017; Ahire, 2012). Effective total quality control standards enable firms to build reputation for having superior products steadily. Total quality control involves the process of evaluating the actual performance, comparing the actual performance with the objectives, and conducting corrective action to address productivity or performance difference which exists in the organization (Werdiningsih & Pudjiartti, 2016).

A visible and autonomous quality department having direct access to top management and effective coordination with other departments, significantly influence quality of product and organizational outcomes (Gremyr et al, 2019 in Rehmani et al, 2020). Communicating conceptual and practical training to quality department's employees supports them to adequately handle quality-related issues that ultimately or finally lead to quality improvement (Rehman et al, 2020; Gremyr et al, 2019). Use of quality tools and techniques enables quality assurance and control department to ascertain potential improvement areas, resulting in effective monitoring and control over quality variations (Rehmani et al, 2020). Appropriate monitoring and measuring need to be installed and when alterations are made it need to be recognized (Khan et al, 2017). Thus, the introduction of total quality control practices helps manufacturing firms to meet corporate objectives such as meeting customer requirements and maximizing profit and these objectives will in turn increased productivity and quality control practices (Ogunjobi & Akinbogun, 2018). Total quality control is one aspect of the overall control of the production system which in its totality constitutes the management functions (Ojinnaka, 2011). This is because, the success of any quality control system depends to a large extent on the sympathetic interest of the top management of the organization.

Total quality control involves measuring of units and determining if they are within the specifications for particular products and services (Okechukwu, 2020). Taher and Alam (2014) TQC is the process to develop the methods to test the products for quality, and deviation from the standard will require change and improvement (Taouab & Outellou, 2020). TQC refers to an activity in manufacturing industries which aim to establish quality standards check that they are being adhered to take corrective action where necessary and set improved standard where possible (Nnadi et al, 2018). TQC can be defined as that industrial management technique or group of techniques by means of which products of uniform acceptable quality are manufactured. It is indeed the mechanism by which products are made to measure up to specifications determined from customer's demand and transformed into sales, engineering and manufacturing requirements. It is concerned with making things right rather than the discovering and rejecting those made wrong.

Total quality control is the process through which a business seeks to ensure that product quality is maintained or improved. Total quality control requires the company to create an environment in which both management and employees strive for perfection. This is done by training personnel, creating benchmarks for product quality, and testing products to check for statistically significant variations. A significant aspect of quality control is the establishment of well-defined controls. These controls help standardize both production and reactions to quality issues. Limiting room for error by specifying which production activities are to be completed by which personnel reduces the chance that employees will be involved in tasks for which they do not have adequate training. In manufacturing, quality control is a process that ensures customers receive products free from defects and meet their needs. When done the wrong way, it can put consumers at risk.



In the absence of effective control over production operations, desired quality in products to be produced cannot be achieved. Quality control is concerned with the control of quality of the product during the process of production. It aims at achieving the predetermined level of quality in a product. In other words, quality control is concerned with controlling those negative variances which ultimately affect the excellence of a manufacturer in producing the products.

TQC is a process through which a business seeks to ensure that product quality is maintained or improved upon regularly (Hayes, 2021). Quality control requires the company to create an environment in which both management and employees strive for perfection. This is done by training personnel, creating benchmarks for product quality, and testing products to check for statistically significant variations. A significant aspect of quality control is the establishment of well-defined controls. These controls help standardize both production and reactions to quality issues. Limiting room for error by specifying which production activities are to be completed by which personnel reduces the chance that employees will be involved in tasks for which they do not have adequate training. Quality control involves testing units and determining if they are within the specifications for the final product. The purpose of the testing is to determine any needs for corrective actions in the manufacturing process. Good quality control helps companies meet consumer demands for better products. Quality control is a process that ensures customers receive products free from defects and meet their needs.

Quality control inspectors protect the consumer from defective products and the company from damage to its reputation due to inferior manufacturing processes. If the testing process reveals issues with the product, the inspector can fix the problem himself, return the product for repairs, or tag the product for rejection. When issues arise, the inspector notifies supervisors and works with them to correct the problem. Quality control (QC) is a process through which a business seeks to ensure that product quality is maintained or improved. Quality control involves testing units and determining if they are within the specifications for the final product. The quality control used in a business is highly dependent on the product or industry, and several techniques exist for measuring quality. The food industry uses quality control methods to ensure customers do not get sick from their products. Quality control creates safe measures that can be implemented to make sure deficient or damaged products do not end up with customers.

Implementing quality control procedures ensures you are selling the best products to your customers. In addition, practicing quality control has a positive impact on employee conduct. Total quality control can inspire employees to create high-quality goods leading to greater customer satisfaction. The total quality control protocols may help you lower your inspection costs and use your resources in a more cost-effective manner.

### **Employees' involvement practice**

Employees are the most important asset for any firm as they provide support in productivity and performance enhancement. In order to become competitive firms must train their employees to improve their abilities and skills which increases their performance (Mehmood, Qadeer & Ahmad, 2014). And they revealed that employee involvement positively affects organizational performance. Involvement of employees in quality enhancement activities such as teamwork, employee suggestions, and employee commitment (Al-Damen, 2017). Employee involvement is viewed as a way to allow employee participation, the commitment on the part of the management to allow employees participate in decision-making and reflect a change in culture (Sweis, Ismaeil, Obeidat & Kanaan, 2019). Arulrajah (2017) stressed that without employees' involvement and support it is not possible to achieve success of any effort of improving productivity and quality. Improvement of productivity and quality of products and services is dependent upon how employees behave at work place towards commitment and support on quality related matters and decisions (Opatha, 2015 in Arulrajah, 2017).

Jong, Sim and Lew (2019) strongly suggests that encouragement of workforce focus practices such as empowerment, involvement, training, and information sharing are strategic or vital factors of quality programmes, and that manufacturing firms needs to focus in this part if they want to succeed in improving productivity and overall performance.

TQM is a management-based approach with the participation of all members of an organization in improving processes, products, services and the culture in order to achieve higher level of satisfaction of customers and other associated stakeholders (Ismyrlis & Moschidis, 2015; Yeng, Jusoh & Ishak, 2018; Aranda & Márquez, 2015). Boikanyo and Heyns (2019) revealed that work engagement had a positive relationship with the dimensions of TQM, which was used as a measure of quality, which is a non-financial measure of performance. They further stressed that managers need to enable an organization to attract, develop and retain highly engaged employees to ensure a sustainable competitive advantage. Talib, Rahman and Qureshi (2010) emphasized that involvement and participation of employees at all levels of quality decisions is to improve the quality of both current and future products and services of organizations.

### **Training and education practices**

Training and education refers to the learning processes that involves the acquisition of knowledge, skills, and competencies as a result of the teaching of vocational or practical skills and knowledge that relate to specific useful competencies. Training and education are widely recognized by organizational development experts as an important component in successful planned change efforts on quality issues improvement. Training and education are important in preparing an organization for a change, in accomplishing the change itself, and in institutionalizing it as a permanent part of the organization. Training and education of all members spread the knowledge of continuous improvement and innovation in products/service processes to achieve

full benefits as well as business excellence (Talib et al, 2010 in Ele et al, 2023). The significance of education and training cannot be doubted in the organization's success or failure and a successful organization keeps this into consideration (Al-Nasser, Yusoff & Islam, 2013). Training and education will help the employees to perform well in their jobs and expand the knowledge base of all employees, and through the training programme, the employees can able to strengthen the skills and knowledge that each employee needs to improve (Zahari & Zakuan, 2016). Through the continuous training and education, it cannot just improve the skills only but enhance self-esteem and pride. Knowledge and continuous learning are key elements of the infrastructure of TQC system and plays a significant role in its success, but in spite of their importance for the implementation of total quality management initiatives, which are not well regarded by top managers and quality practitioners in modern businesses (Al-Sohaim et al, 2016).

Providing continuous training and education on quality will enhance skills of employees, especially quality-related skills (Nguyen et al, 2018). They further stated that having a good policy on internal human resource is a contribution to social sustainability, and by improving skills, employees will improve the accuracy of the production processes, and in turns, reduce defects and increase the quality performance in general. To guarantee complete awareness and understanding of quality management's concepts, all employees need to be provided with the appropriate training and development since, without employee training, the organization will experience difficult times when solving production problems and also the employees' attitude and behaviour will not be focused towards the transformation to a quality culture (Aletaiby, 2018). Efforts need to be focused on an incorporated method to the instruction process when developing TQC training programmes. Appropriate TQM training of employees and managers will enhance, then develop, a positive attitude towards the process and commitment towards it as they now understand it. Effective training, good health and safety practices, and treating workers as a valuable resource can increase the firm performance (Singh et al, 2018). Talib et al (2013) in Basnet (2018) elucidated that training and education spread the knowledge of continuous improvement and innovation in service process to attain full benefits and business excellence.

### **Top management commitment to quality**

Top management commitment is one of the main elements of TQC or TQM that orientates the implementation of TQM practices towards creating values, systems and goals to satisfy customers' expectations and improve organizational performance as well as productivity of manufacturing companies (Musa & Alawad, 2011). The top management commitment is a strong cornerstone in the total quality management philosophy (Oparinde, 2019). Stanojeska, Minovski and Jovanoski (2020) stated that the role of top management in quality management system is undeniable and they play a crucial role in establishing quality policies, providing resources, stimulating involvement of the employees for successful operation of ISO 9001 and transition towards TQC practices. The ultimate responsibility for quality in an organization lies in the hands of the top management commitment. It is only with their enthusiastic and steady support that quality of

products and services can thrive in an organization. A committed management at the top play a pivotal role by developing a clear organizational vision, mission and policy to achieve continuous improvement to quality, communication, and collaboration amongst the value chain thereby promoting a quality culture throughout the organization (Rehmani, Ahmad, Naseem & Syed, 2020).

Top management level is also responsible for mentoring product design and considering market demands and consumer needs, and the focus of top management is essential for manufacturing firms to produce goods that can be manufacture and meet customers' needs and expectations (Singh & Singh, 2014). This is because top management level plays an essential role in directing organizational operations as well as influencing the decision-making processes and resource allocation processes for supplier management and product design management. Involvement of management in quality management creates a participative environment in the organization which is very important in implementation of TQC practices (Oruma, Mironga & Muma, 2014).

### **Process improvement practice**

Process improvement involves firm's to be involved in functions such as technical design, R&D, manufacturing, management and business process re-engineering (Irungu & Were, 2016). Continuous process improvement drives an organization to be both analytical and creative in looking methods to turn out to be more competitive and more effective by attaining shareholders or customers' expectations. TQC practices requires that an organization persistently gather and analyze data in order to improve decision making accuracy, achieve consensus, and conduct forecast based on earlier antiquity. Continual process improvement needs to be a permanent objective of an organization (Worlu & Obi, 2019).

Khan et al (2017) advice that continual improvements in the firms' overall performance should be a permanent part of the organization's objectives, and improving the organization's goals, products and processes must be an objective for every employee in the organization. Everyone should be given proper education training about the tools of continual improvement. Appropriate monitoring and measuring should be installed and when an alteration is made it should be recognized. The organization should develop a system in which every process and product is constantly checked and evaluated and looked for improvement. This is because continual improvement is a never-ending process which has incremental big or small improvements over time to improve the overall efficiency of total quality management system as well as practices.

Process improvement of quality is the planned, organized and systematic process of continuing, incremental and company-wide change of current practices meant to enhance company performance (Aletaiby, 2018). Continuous improvement can be done by conducting periodic reviews by internal management, and the reviews acted as a medium where they can detect the part of the operation, system or process that can be improved upon (Othman et al, 2019). Process

improvement is based on measuring key qualities and other processes and taking appropriate measurements to improve increasing customer satisfaction and decreasing the cost. The focus of continuous process improvement is to find the deficits and sources of inconsistency in managerial, service and manufacturing processes that can detract from the quality output and improve the process to remove unwanted output (Aletaiby, 2018). TQC focuses on continuous process improvement within organizations to provide superior customer value and meet customer needs (Gharakhani et al, 2013). Jonah et al (2018) stressed that continuous improvement in quality standard, employee's training, and distribution of product, continuous improvement in product and striving for better quality will result in the promotion of organizational growth. TQC is a series of management practices pertinent or significant to the entire organization and configured to guarantee that the firm will continually realizes or exceeds customer needs and expectations steadily (Vasantharayalu & Pal, 2016). Quality improvement is the fundamental business strategy of the new millennium and no business without it will survive in the global market environment (Aluko et al, 2014). Also manufacturing companies that adopt total quality control practices experience an overall improvement in corporate performance. Similarly, manufacturing firms that use total quality control practices achieve better employee relations, higher productivity, greater customer satisfaction, increased market share and improved profitability, among others (Aluko et al, 2014).

### **The concept of employees' retention**

Hira (2011) defined retention as the effort by an employer to keep desirable workers in order to meet business objectives Retention is the ability to hold onto those employees you want to keep, for longer than your competitors. The retention should be analyses at more than just a single level the influence of employee retention can arise at multiple levels. Retention is considered as multifaceted component of an organization's human resource policies. It begins with the hiring of right people and persists with working agendas to keep them involved and devoted to the organization (Hira, 2011). Retaining employees is the key issue in current business environment. Without well incorporated staff in the organization and putting their greatest effort, success can never be long term. Problems existing in the personnel or in a sense human capital, have unforeseen influences that cause troubles with training, planning and decision making. So, it clarifies the reason why employees leave the organizations. When talking about global organizations, multicultural concept has to be considered and it must not be done just with organizations profit, but also with the concerns of the people who structure this valuable workforce.

Employee retention is a significant factor affecting most business fields, and continues to be one of the main challenges driven by company managers. All organization managers and stakeholders have to consider employee retention in their plans and estimate its long-term effect on the organization's behavior and productivity. Employee retention is defined as "the effort by an employer to keep desirable workers to meet business objectives. On the other hand, turnover is a

description used to refer to the unplanned loss of the company employee who voluntarily leaves the company (Al-Kurdia, Alshuridehb & Al-Afaishata, 2020).

### **Empirical reviews**

Nnadi et al (2018) conducted a study on an empirical analysis of quality control techniques and product quality in manufacturing firms in South East Nigeria. The study adopted descriptive survey research design in both quantitative and qualitative data. The population of the study was 9, 285 workers, and the sample size was 564 respondents. The data was collected through the use of a structured questionnaire. The statistical tool used was Pearson Correlation using Statistical Package for Social Sciences (SPSS). The result of the study revealed that inspection technique has a significant positive effect on production control and that quality control technique has a significant positive effect on product designing. The study recommends that inspection technique has to be maintained to facilitate the utilization of best practices, and also because of globalization quality control technique has to gain way for best practices in global manufacturing. The study concluded that there is a significant and positive relationship between quality control techniques and process designing.

Anyango et al (2018) examined the effect of total quality management practices on students' satisfaction in public universities in Kenya. The study adopted descriptive research design. Data was collected through questionnaires and interviews for primary data. Data analysis was done using descriptive statistics (Analysis of Variance) and multiple regression analysis model through the use of SPSS. The study showed that universities that have embraced TQM practices within their operations experience improvement in students' satisfaction. The study also established that a positive relationship exists between TQM practices and students' satisfaction based on the following factors such as management commitment, employees' involvement, process management and customer focus. The study also stressed that employees' involvement was found to be the one offering greatest influence on students' satisfaction followed by process management, customer focus and management commitment respectively. The study recommended that all public universities need to include all the quality management practices in their daily activities and do regular evaluation to ensure continuous improvement. The study concluded that the adoption of total quality management practices such as top management commitment, employee involvement, process management and customer focus is critical in improving quality of education and thereby improving student satisfaction.

Obi and Oparanma (2018) conducted a study to examined quality control measures and organizational effectiveness of cosmetic manufacturing companies in Aba, Abia State, Nigeria. The study adopted descriptive research design involving experimental and quasi experimental design. The source of primary data was structured questionnaire survey, and-personal interview, which generate qualitative and quantitative information. The questionnaire was composed of structured questions and multiple-choice questions that has a 5 point Likert ratings scale of: to a great extent 5 points, to a considerate extent, 4 points, to a moderate extent, 3 points, to a slight

extent, 2 points and very small extent 1 point. The sample size was 60 respondents from the functional cosmetic organizations that were studied as provided by the NAFDAC standards/regulations by the cosmetic organizations and the rate at which employees are involved in participating in the making quality control decisions. Judgmental sampling method was used for study. The spearman ranked correlation coefficient statistical tool was used to analyzed the data and test the hypotheses at a 0.05 level of significance. The study revealed that quality control measures as provide by NAFDAC have improved organizational effectiveness. The study also revealed that most employees participate in strategic quality control decisions in their various organizations. The study recommended that with a good diagnosis, BAFDAC quality control measures are useful for quality products in the marketplace. And that rules, policies, regulations should be constantly reviewed to address quality control measures in this sector, regular visits should be encouraged by the NAFDAC officials and organizations must create research and development department in their organizations. Constant appraisal of the quality control measures established must be done by NAFDAC to ensure effectiveness in usage and meeting with international standards. And concluded quality control measures if adopted and followed religiously will enhance the performance or organizations within the cosmetic manufacturing industry.

Shirandula et al (2018) conducted a study on influence of total quality management practices on the performance of the construction industry in Mombasa County, Kenya. A survey research design was adopted. The population of the study was 377 registered building and construction firms. The sample size of the study was 285 firms. The study used a structured questionnaire to collect primary data. Cronbach's Alpha was used to test the reliability of the instrument. Pearson Product Moment of Correlation and regression (ANOVA) using Statistical Package of Social Science (SPSS) version 22, was used to test the hypotheses. The study revealed that management commitment influenced positively performance of firms in the construction industry. That employee involvement influenced positively performance of firms in the construction industry. That continuous improvement influenced positively performance of firms in the construction industry. That customer focus influenced positively performance of firms in the construction industry. The study recommended that for improved performance in building and construction firms management commitment has to be present in most stages of the construction process. The study also recommended that for building and construction firms to realize best performance, employee involvement should not be ignored.

Sayyad (2017) had a study on the relationship between total quality management practices and effects on firms' performances in Palestine. The study adopted survey design. The population of the study was 57 firms of commerce industry. The sample size was 57 respondents determine through simple random sampling technique. A structured questionnaire using 5 points Likert scale of strongly agreed, agreed, indifferent, strongly disagreed and disagreed with closed questions. The data was analyzed with standard deviation. The variables considered in the work were management commitment, employee involvement, training, education, rewards and recognition.

The study revealed that management commitment and leadership, employee involvement, training, education, communication, customer focus, cultural change, rewards and recognition are significantly positively associated with firms' quality improvement practice. It was also found that employee involvement was a dominant factor for quality improvement and it was also associated with significant improvements in firms' quality improvement. And concluded that leadership commitment from the top management to the employees is equally an important aspect that paves the way for an effective implementation of TQM practices at the organization to facilitate advanced organizational performance.

Oloo (2017) conducted a study on quality control practices and organizational performance of Mobile Telecommunication firms in Kenya. Descriptive survey designed was used. The population was 5 Mobile Telecommunication firms. Primary data was collected using a semi-structured questionnaire. Descriptive statistics and regression analysis model were used to test the hypotheses and analyze data. The study established that there is a statistically significant relationship between quality control practices and organizational performance of mobile telecommunication firms in Kenya. Leadership commitment was also found to be the most influential quality control practice, followed by supplier quality management. These were followed by employee relations, customer focus and process management in that order. The study also established increased performance, enhanced sales, increased market competitiveness and acquisition of a bigger market share, enhanced service delivery in the organization and increased retention as a result of customer satisfaction that were all outcomes of using quality control practices. The study recommended that mobile telecommunication firms should benchmark to borrow the best quality control management systems so as to enhance organizational performance.

Oruma et al (2014) had a study on top management commitment towards implementation of total quality management (TQM) in Construction Companies in Nakuru County-Kenya. A correlational design was employed in the study. The population of the study was 54 construction companies in the area. The sample size was 15 construction companies selected using simple random sampling technique. The study used a structured questionnaire in the collection of data. Multiple regression analysis was adopted for the study. The study revealed that top management leadership has statistically significant positive effect on implementation of TQM. It also revealed that provision of critical resources required in the implementation of TQM positively affects implementation of TQM. It was also found that provision of critical resources required in the implementation of TQM positively affects implementation of TQM. The study recommended that construction companies as well as other organizations who are implementing TQM take strategic measures in ensuring top management participation and commitment to quality initiatives. This study further recommends that top managements commit themselves in providing leadership and key resources needed in quality management.

Oparinde (2019) had a study on top management commitment to total quality management as a correlate of customer satisfaction in the Nigerian Banking Sector. The descriptive survey design



was adopted for this study and primary data was collected with the use of a self-structured questionnaire from one hundred and thirty-six (136) randomly selected respondents among the employees of Access Bank Plc. (27); First Bank Nigeria Limited (35); Guarantee Trust Bank Plc. (30); United Bank for Africa (24); and WEMA Bank (20), in Akoka, Yaba Local Government Area of Lagos State, Nigeria. The sample size was statistically determined through the use of Taro Yamane formula of 1967. The hypotheses were tested using Pearson Product Moment Correlation Coefficient at 0.05 level of significance, with the aid of the Statistical Package for Social Scientists (SPSS 21.0). The study revealed that an increase in the Nigerian Banking Sector top management commitment to total quality management will imply increase in TQM implementation; increase in the involvement of money deposit banks' staff in the TQM implementation process is also tantamount to an increase in the total quality management implementation; and that implementation of total quality management significantly correlates increase in customer satisfaction in the Nigerian banking sector. The study recommended that the top management of the Nigerian banking sector should be committed to total quality management and involve employees in its implementation. The employee should also exhibit the best behaviour and manner in relating with the customers, as this will have a direct impact on the customers' impression concerning the quality of service provided.

## **METHODOLOGY**

The study adopted survey research design. The population of the study is two hundred and sixty (260). The population of this study comprises of the staff of the Dangote Group of Company Limited Calabar, Cross River State. Therefore, the population of the study is two hundred and sixty (260). The study adopted simple random sampling technique. The sample size for this study was one hundred and fifty-five (155) respondents from the Dangote Group of Company Limited Calabar, selected for the study using Krejcie and Morgan Table of 1970 for sample size determination. Structured questionnaire was the major research instrument used in this study. The questionnaire was designed in English following the 4-point Likert scales of strongly agreed (SA), Agreed (A), strongly disagreed (SD), and disagreed (D). linear regression model was adopted in testing for the effect total quality control on employees' retention of Dangote Group of Company Limited Calabar, Cross River State.

### **Test of hypotheses**

#### **Hypothesis one:**

- H<sub>01</sub>: Employee involvement does not have a significant effect on employee retention of the Dangote Group of Company Limited Calabar, Cross River State.
- H<sub>a1</sub>: Employee involvement has a significant effect on employee retention of the Dangote Group of Company Limited Calabar, Cross River State.

**Decision Rule:**

Reject  $H_0$ ; if calculated t-value or f-value >critical table value

Accept  $H_a$ ; if calculated t-value or f-value >critical table value

Reject  $H_a$ ; if calculated t-value or f-value <critical table value

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.730 <sup>a</sup>	.532	.529	.445	.532	168.486	1	148	.000	.107

a. Predictors: (Constant), Employee involvement (EI)

b. Dependent Variable: Employee retention

Source: SPSS output, 2023

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	33.305	1	33.305	168.486	.000 <sup>b</sup>
	Residual	29.255	148	.198		
	Total	62.560	149			

a. Dependent Variable: Employee retention

b. Predictors: (Constant), Employee involvement (EI)

Source: SPSS output, 2023

Since, the f- value of 168.486 is greater than the table value of 6.63, the null hypothesis is rejected, while the alternative hypothesis which stated that employee involvement has a significant effect on employee retention of the Dangote Group of Company Limited Calabar, Cross River State, is accepted. This implies that employee involvement can help to improve employee retention of the organization.

**Hypothesis Two:**

Ho2: Continuous training and education does not have a significant effect on employee retention of the Dangote Group of Company Limited Calabar, Cross River State.

Ha2: Continuous training and education has a significant effect on employee retention of Dangote Group of Company Limited Calabar, Cross River State

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.815 <sup>a</sup>	.665	.662	.377	.665	293.186	1	148	.000	.217

a. Predictors: (Constant), Continuous training and education

b. Dependent Variable: Employee retention

Source: SPSS output, 2023

**ANOVA<sup>a</sup>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	41.574	1	41.574	293.186	.000 <sup>b</sup>
	Residual	20.986	148	.142		
	Total	62.560	149			

a. Dependent Variable: Continuous training and education

b. Predictors: (Constant), employee retention

Source: SPSS output, 2023

Since, the f- value of 293.186 is greater than the table value of 6.63, the null hypothesis is rejected, while the alternative hypothesis which stated that continuous training and education has a significant effect on employee retention of Dangote Group of Company Limited Calabar, Cross River State, is accepted.

### Hypothesis Three

Ho3: Top management commitment does not have a significant effect on employee retention of the Dangote Group of Company Limited Calabar, Cross River State.

Ha3: Top management commitment has a significant effect on employee retention of the Dangote Group of Company Limited Calabar, Cross River State.

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.712 <sup>a</sup>	.507	.504	.457	.507	152.203	1	148	.000	.126

a. Predictors: (Constant), Top Management Commitment (TMC)

b. Dependent Variable: employee retention  
Source: SPSS output, 2023

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	31.718	1	31.718	152.203	.000 <sup>b</sup>
	Residual	30.842	148	.208		
	Total	62.560	149			

a. Dependent Variable: employee retention  
b. Predictors: (Constant), Top Management Commitment (TMC)  
Source: SPSS output, 2023

Since, the f- value of 152.203 is greater than the table value of 6.63, the null hypothesis is rejected, while the alternative hypothesis which stated that top management commitment has a significant effect on organizational output of the Dangote Group of Company Limited Calabar, Cross River State, is accepted. This implies that top management commitment had a significant effect on employee retention of the organization.

**Hypothesis four**

Ho3: Process improvement does not have a significant effect on employee retention of Dangote Group of Company Limited Calabar, Cross River State.

Ha3: Process improvement has a significant effect on employee retention of Dangote Group of Company Limited Calabar, Cross River State.

**Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.871 <sup>a</sup>	.758	.757	.320	.758	464.774	1	148	.000	.302

a. Predictors: (Constant), Process improvement  
b. Dependent Variable: Employee retention

Source: SPSS output, 2023

ANOVA<sup>a</sup>

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	47.450	1	47.450	464.774	.000 <sup>b</sup>
	Residual	15.110	148	.102		
	Total	62.560	149			

a. Dependent Variable: Employee retention

b. Predictors: (Constant), Process improvement

Source: SPSS output, 2023

Since, the f- value of 464.774 is greater than the table value of 6.63, the null hypothesis is rejected, while the alternative hypothesis which stated that process improvement has a significant effect on employee retention of Dangote Group of Company Limited Calabar, Cross River State, is accepted.

## DISCUSSION OF FINDINGS

Based on the hypotheses tested, the study revealed that employee involvement has a significant effect on organizational output of the Dangote Group of Company Limited Calabar, Cross River State. The finding is also in line with the result of Oparinde (2019) which found that the correlation between employee involvement and TQM implementation in the Nigerian banking sector is very strong, direct and significant. Pambreni et al (2019) also revealed that total employee involvement has a positive and significant effects on organization performance. Shirandula et al (2018) also found that employee involvement influenced positively performance of firms in the construction industry. Keinan and Karugu (2018) also found that employee involvement has a significant effect on operational performance of manufacturing firms in the business environment. Sayyad (2017) also found that employee involvement was a dominant factor for quality improvement and it was also associated with significant improvements in firms' quality improvement. And concluded that leadership commitment from the top management to the employees is equally an important aspect that paves the way for an effective implementation of TQM practices at the organization to facilitate advanced organizational performance. Chepkech and Cheluget (2017) revealed that employee involvement had a direct relationship with organizational performance, and agreed that total quality management practices significantly affect organizational performance. Al-Damen (2017) revealed that employees' involvement and customer focus has a significant impact on employees' satisfaction. Shirandula et al (2018) also found that employee involvement had a positive influenced on performance of firms in the construction industry.

The study revealed that continuous training and education had a significant effect on employees' retention of Dangote Group of Company Limited Calabar, Cross River State. The result was supported with the finding of Basnet (2018) which found that training and education has a positive effect on employees' job involvement in an organization. Sweis et al (2019) affirmed that training and education has a significant impact on organizational performance. Sayyad (2017) found that

training and education significantly associated with firms' quality improvement practice of every organization.

The study revealed that top management commitment has a significant effect on organizational output of the Dangote Group of Company Limited Calabar, Cross River State. This finding agreed with the finding of Oparinde (2019) which stated that top management commitment to total quality management will imply increase in TQM implementation; increase in the involvement of money deposit banks' staff in the TQM implementation process is also tantamount to an increase in the total quality management implementation; and that implementation of total quality management significantly correlates increase in customer satisfaction in the Nigerian banking sector. Nnadi et al (2018) also affirmed that inspection technique has a significant positive effect on production control, and that quality control technique has a significant effect on product designing in an organization. Obi and Oparanma (2018) also found that quality control measures as provided by NAFDAC have improved organizational effectiveness. Salah (2018) found that top management commitment also influences positively on performance, but there is need for strategy development and stakeholder involvement to foster performance in an organization. Shirandula et al (2018) also found that management commitment has a positive influenced on performance of firms in the construction industry.

The study also revealed that process improvement had a significant effect on employees' retention of Dangote Group of Company Limited Calabar, Cross River State. The finding is in line with the finding of Irungu and Were (2016) also established that continuous process improvement had a positive effect on the performance of animal feed firm manufacturers. Anam (2018) also found that process management and design have a significant impact on organizational performance of SMEs. Rawashdeh (2018) also affirmed that process management has a positive effect on a firm performance. Betinah et al (2018) also asserted that process improvement as well as product improvement has a significant relationship with organizational success of manufacturing firms in River State, Nigeria. Sutrisno (2019) also affirmed that process management has a positive relationship with organizational performance. Nnadi et al (2018) found that inspection technique has a significant positive effect on production control and that quality control technique has a significant positive effect on product designing. Anyango et al (2018) found that process management has a significant effect on job satisfaction. Shirandula et al (2018) found that continuous improvement influenced positively performance of firms in the construction industry.

## **CONCLUSION**

The contribution of total quality control cannot be over emphasizing since it helps to develop and maintain quality standards of every organizational products and services. Total quality control is one aspect of the overall monitoring and checking of the production system which in its totality constitutes the management functions of every organization towards quality products and services. Total quality control refers to an organization's efforts to prevent or correct defects in its goods or services or to improve them in some ways. It was concluded that total quality control practices

such as employee involvement, continuous training and education top management commitment and process improvement have significant effects on employee retention as well as the total outputs of the organization.

## 1. Recommendations

Based on the findings of the study, the following recommendations were made:

1. The management should also allow the workers to participate and contribute to quality problems and decisions in setting quality standard of the organizational products in the organization.
2. The management of the organization should at all times train and educates the employees on new quality standards and other quality related matters or issues in order to maintain quality products and services.
3. The management of the organization should put in more efforts and commitment on quality issues and decisions in order to have continuous improvement on quality of the organizational products and services to enhance the organizational productivity.
4. The management should at all times employ good continuous process improvement handling quality problems or setback in order to enhance employee retention in the organization continuously.

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