IMPACT OF TQM DIMENSIONS ON THE PERFORMANCE OF JULIUS BERGER NIGERIA PLC

ABSTRACT

The study examined the effect of total quality management on performance of Julius Berger Nigeria Plc. The overall framework this study adopted was the survey research design method. From the 9142 total population, 368 employees were chosen as the sample size. The stratified random sampling technique was adopted for the study. The instrument that was used for data collection is a single set of structured questionnaires. To establish the reliability of the instrument, a test-retest method was employed. In this study, statistical techniques of data analysis were used. The list includes: descriptive statistics, correlation and regression analysis. All analysis was done using the statistical package for social science (SPSS) software version 25. Findings showed that top management (ß = 0.125, p <0.05), strategic planning (ß = 0.117, p<0.05), employee teamwork (ß = 0.182, p<0.05), and continuous improvement (ß = 0.608, p<0.05) have positive effect on performance of Julius Berger Nigeria Plc. Findings showed that 56% of the change in performance of Julius Berger Nigeria Plc. was brought about by the dimensions of total quality management. The study concluded that total quality management has significant positive effect on performance of Julius Berger Nigeria Plc. The study recommended amongst others that to stay competitive, firms must constantly develop their products, services, and processes and maintain an organized workspace that promotes improved functionality, reliability, and productivity. The study established that commitment of the company's top management on an ongoing basis is capable of providing financial support, resource support for companies that use information technology.Moreover, the study indicates that the implementation of the Continuous Improvement methodology not only enhances organizational performance but also fosters innovation within the organization.

Keywords: Total Quality Management, Top Management, Strategic Planning, Teamwork, Continuous Improvement

INTRODUCTION

Background to the Study

The level of competitiveness in the contemporary business landscape is escalating at a faster pace than it did in previous decades. Increased number of sellers offering similar products or

services results in a heightened level of competitiveness within the business environment, necessitating organizations to engage in competition. Hence, it is anticipated that organizations will promptly, proficiently, and effectively address the alterations in the marketplace to attain organizational triumph. The present-day global market conditions have necessitated numerous organizations to implement suitable technological strategies, employ a proficient workforce, and appoint managers who possess the ability to synchronize all facets of these contemporary trading conditions. This has resulted in an unparalleled emphasis on quality and customer satisfaction (Castagena, Centobelli, Cerchione, Esposito, Oropallo, & Passaro, 2020).

The emergence of diverse quality management methodologies has been observed, with Total Quality Management (TQM) being the most notable among them. Gorny (2017) posits that TQM is a comprehensive approach that encompasses both a philosophy and methodology for managing companies. It is designed to facilitate continuous improvement within an organization by providing an overarching framework for enhancing quality. TQM is a crucial element in contemporary business settings due to its managerial methodology that aims to enhance the sustained prosperity of an enterprise while concurrently ensuring customer contentment. TQM is a management approach that involves the participation of all members within an organization to enhance the processes, products, services, and culture of the workplace. TQM employs a range of strategies, data, and communication methods to effectively integrate quality principles into an organization's culture and activities. According to Al- Saffara and Obeidat (2020), the concept of quality is defined as the ability to achieve both efficiency and effectiveness. Shaibun and Anuar (2021) place significant emphasis on customer-centricity, ongoing enhancement, staff empowerment, and data-informed decision-making.

The concept of TQM pertains to a comprehensive management philosophy that encompasses the entire organization. Its primary objective is to consistently enhance and elevate the quality of the products, services, and processes of the organization in question (Pattanayak, Koilakuntla, & Punyatoya, 2017). The correlation between TQM and organizational performance has been a recurring topic in multiple domains of business management and has persisted as a matter of significance for both managerial practitioners and academic scholars. Simultaneously, numerous organizations have reported significant advantages resulting from the adoption of TQM, such as enhanced financial outcomes, improved operational efficiency, heightened customer and employee satisfaction, as noted by Panuwatwanich and Nguyen (2017).

The implementation of TQM enhances organizational management by optimizing efficiency, thereby leading to organizational prosperity. TQM methodology was founded on the principle of implementing structured enhancements to production procedures, resulting in a superior market position for the goods produced. The implementation of TQM methodologies in the manufacturing sector has resulted in the integration of this approach into management practices, with the aim of enhancing organizationalperformance (Wassan, Memon, Mari & Kalwar, 2022). The correlation between total quality management and organizational performance pertains to a quality enhancement methodology for comprehensive management procedures that strive to enhance performance in domains such as customer contentment, service and product quality, and financial gain. The growing adoption of TQM practices in management by numerous firms globally has garnered the interest of scholars in this domain of management practices. Research indicates that TQM methodologies are not transient management trends, but rather effective practices that can enhance organizational performance by providing a competitive edge. TQM methodologies prioritize the enhancement of organizational procedures by delivering exceptional customer value and satisfying customer requirements. The TQM procedures are designed to facilitate perpetual enhancement in the personnel, systems, and procedures of an organization, with the objective of optimizing the efficiency and efficacy of the organization as a whole (Amin, Aldakhil, Wu, Rezaei, & Cobanoglu, 2017).

Statement of the Problem

There exist three primary factors that can lead to the failure of continuous improvement initiatives. According to Naughton, Moran, Kharub, Sa & McDermott (2024), inadequate stakeholder engagement, absence of a culture of continuous improvement, and lack of support from the business management system for continuous improvement are factors that can impede organizational progress. Despite the significant attention given to research on continuous improvement and its widely acknowledged benefits, recent findings suggest that there are still significant gaps in the literature. These gaps have resulted in a high failure rate among companies attempting to implement continuous improvement, leading to a significant waste of resources (Sanchez-Ruiz, Gomez-Lopez, & Blanco, 2020). The literature indicates that the causes of failure are attributed to insufficient understanding of continuous improvement, inadequate measurement and follow-up mechanisms (Sanchez-Ruiz et al., 2020), and misalignment with organizational strategy (Middel, Op-De-Weegh, & Gieskes, 2007).

The research was conducted with the aim of investigating the impact of TQM on the performance of Julius Berger Nigeria Plc. The satisfaction of customers' economic needs is fundamental to the success of a company. Julius Berger Nigeria Plc is dedicated to continuously improving customer satisfaction in order to establish and sustain enduring partnerships through collaborative efforts. In order to attain this objective, the adoption, maintenance, and continuous improvement of a quality management system that adheres to the ISO 9001:2015 standard is implemented. The system offers a guarantee that the expertise and knowledge of the company are delivering solutions for the construction, infrastructure, and industrial sectors with consistently exceptional quality. The establishment of standards is imperative for corporations to attain their desired objectives. The organization, Julius Berger Nigeria Plc, has expressed its dedication to the successful execution of the quality management system. This will be achieved through the creation and maintenance of an atmosphere of consciousness and a value system that is shared, ethical, and characterized by integrity. These efforts will be bolstered by a comprehensive comprehension of the organization's context.

Objectives of the Study

The main objective of the study is to examine the effect ofTQM on the performance of Julius Berger Nigeria Plc. The specific objectives are to:

i. Assess the effect of top management commitment on performance of Julius Berger Nigeria Plc.
ii. Ascertain the effect of strategic planning on performance of Julius Berger Nigeria Plc.
iii. Ascertain the effect of employee teamwork on performance of Julius Berger Nigeria Plc.
iv. Determine the effect of continuous improvement on performance of Julius Berger Nigeria Plc.

Research Questions

The study was guided by the following questions.

i. How does top management commitment affect performance atJulius Berger Nigeria Plc?
ii. To what extent does strategic planning affect performance at Julius Berger Nigeria Plc?
iii. Does employee teamwork affect performance atJulius Berger Nigeria Plc?
iv. To what extent does continuous improvement affect performance atJulius Berger Nigeria Plc?

Research Hypotheses

HO1: Top management commitment has no effect onperformance of Julius Berger Nigeria Plc.

HO2: Strategic planning has no effect onperformance of Julius Berger Nigeria Plc.

HO3: Employee teamwork has no effect onperformance of Julius Berger Nigeria Plc.

HO4: Continuous improvement has no effect onperformance of Julius Berger Nigeria Plc.

REVIEW OF RELATED LITERATURE

Conceptual Review

Total Quality Management

Total Quality Management (TQM) is an approach to management based on the idea that every member of an organization should be actively engaged in the pursuit of quality enhancement and customer delight. To put it simply, "Total" means that it focuses on every possible way to make its customers, both internal and external, happy (Aruoren & Oisamoje, 2023). It broadens the traditional notion of quality by considering not just the final product or service's quality, but also the quality of every step in the process by which it was made (Shaibun & Anuar, 2021). According to Obeidat, Abualoush, Irtaimeh, Khaddam & Bataineh (2018), a TQM workplace is one in which employees have the resources and motivation to increase output, cater to customers' wants and needs, and uphold the company's core values and principles. Total quality

management, as defined by Tonjang and Thawesaengskulthai (2020), is a strategy for ensuring that a business consistently improves its services in order to keep its customers happy. TQM is a set of practices used in manufacturing and production to eliminate or greatly reduce defects in final products and maximize efficiency in service provision (Potkany, Zavadsky, Hlawiczka, Gejdos & Schmidtova, 2022).In order to provide products and services that live up to or surpass customer expectations, businesses are increasingly adopting the concept of quality management (Al-Saffar, & Obeidat, 2020).

For companies to thrive in today's global economy, quality has emerged as a critical differentiator. TQM is a management strategy that uses quality management techniques and tools to increase customer satisfaction and business success. This is accomplished through the participation and cooperation of all stakeholders and the use of teamwork. Organizations are working to improve their overall performance and effectiveness by reaching and maintaining high levels of performance in response to the rapid growth of the global economy. There is an increasing emphasis on quality, customer happiness, productivity, economic unpredictability, and organizational culture, as well as technical innovation, all of which pose challenges for businesses operating on a global scale (Hilman, Ali, & Gorondutse, 2019).

Top Management Commitment

The commitment of top management is of utmost importance in ensuring the realization of an organization's mission, which in turn leads to an improvement in firm performance. The scholarly literature suggests that the attainment of organizational objectives is contingent upon the level of dedication exhibited by its upper echelon of management (Williams, Morrell, & Mullane, 2014). According to Kanwal, Zafar, and Bashir (2017), it is the responsibility of company organizations, under the guidance of top management, to ensure the provision of competent individuals who can effectively and efficiently carry out company operations while maintaining ongoing control over such operations. Several indicators are utilized to measure the variable of top management commitment. These indicators include effective communication, establishment of organizational objectives, allocation of human and financial resources, and implementation of appropriate operational control measures (Leksono, Siagian, &Oei, 2020).

Senior management's implementation of TQM policies that are effective will encompass strategic planning pertaining to quality and improved allocation of resources, with the objective of guaranteeing systematic quality activities in operations and evaluations. The importance of top management in organizations is widely acknowledged as a critical factor in determining the overall success of the firm. The level of commitment demonstrated by senior management teams in organizations is multifaceted, encompassing the formulation of strategic decisions that impact organizational performance, as well as fostering constructive relationships within the organization to enhance performance outcomes. Organizations that possess a dedicated senior management team are more likely to exhibit a greater potential for success, as they are better equipped to withstand external pressures that may impede performance (Bouranta, Psomas, & Pantouvakis, 2017). The aim of implementing total quality management strategies is to facilitate the efficient and ongoing enhancement of the calibre of goods and services provided to clients by the workforce.

Customers play a crucial role in influencing the quality processes that organizations implement to meet their demands. The dimension of customer focus holds significant importance in the implementation of TQMpractices, as it plays a crucial role in determining the quality of products and services (Iqbal & Asrar-ul-Haq, 2018). Mehralian, Nazari, Nooriparto and Rasekh (2017) proposed that meeting customer demands necessitates efficient communication between the organization and its customers. Customers seek to obtain value for their monetary investments. Therefore, if a product exceeds its expected lifespan, the customer can infer that their expenditure was commensurate with the product's quality. Research has demonstrated that comprehending the desires and requirements of customers provides an organization with an enhanced likelihood of identifying optimal sourcing strategies and manufacturing procedures to attain success. This, in turn, enhances the organization's competitive advantage. Organizations that adopt the TQM methodology endeavor to comprehend the demands and anticipations of their clientele in order to enhance their production procedures and deliverables that align with customer requirements (Iqbal & Asrar-ul-Haq, 2018).

Strategic Planning

Strategic planning enables an organization to comprehend its surroundings and devise strategies to confront unforeseeable alterations that could potentially impact the enterprise in both the immediate and distant future. Strategic planning refers to a series of activities or protocols that an

organization is anticipated to undertake, while considering the external opportunities and threats that are concurrently confronting organizations. It holds a significant position within the administrative process and influences the direction of said process. The successful implementation of strategic planning requires personnel with advanced qualifications and extensive experience in the field of strategic planning, as noted by Kabeyi (2019). The research field of strategic planning holds a considerable appeal across various organizations. The utilization of this management strategy has been widely adopted across various industries, including manufacturing, services, governmental, and non-governmental sectors, and has been acknowledged as a fundamental pillar of management (Samad & Ahmed, 2021). The ability of businesses to promptly and efficiently adapt to changes in a constantly evolving business environment is a crucial determinant of success, necessitating the formulation of a well-defined strategy.

The significance of systematic strategic planning has increased substantially, primarily due to its ability to aid organizations in effectively functioning in a complex and dynamic environment, while also navigating through unpredictable circumstances (Ojha, Patel, & Sridharan, 2020). Systematic strategic planning, which is also referred to as formal strategic planning, comprises a sequence of interconnected stages that involve the formulation of strategies. During this process, both internal and external factors are meticulously examined and diagnosed. The process encompasses the developmental stage of the strategy, which comprises the mission, vision, strategic objectives, plans, and strategic alternatives. It further involves the implementation phase, which entails the actualization of the strategy, followed by the mentoring and evaluation phases. These phases have been highlighted in previous studies (Elbanna, Al Katheeri, & Colak, 2020).

According to Fuertes, Alfaro, Vargas, Gutierrez, Ternero, and Sabattin (2020), the implementation of a systematic strategic planning process allows firms to enhance their competitive position in the market by creating value and identifying, developing, and reinforcing their strengths. Furthermore, it provides leaders with appropriate strategies and measures that must be implemented in order to achieve enduring competitive advantages (Iborra, Safón, & Dolz, 2019). Similarly, various organizations are urged to formulate strategic plans that enable them to compete and endure. Therefore, senior management must embrace and devise strategies utilizing contemporary tools to attain superior outcomes. Fuertes et al. (2020) emphasize the

importance of companies regularly reassessing their internal and external environment and adjusting their strategies accordingly. This includes conducting monitoring and evaluation, which are crucial components of the strategic planning process. Therefore, the formal and official implementation of strategic planning has been found to enhance the financial, operational, and nonfinancial performance of firms, as evidenced by studies conducted by George, Walker, & Monster (2019), Gorondutse, Arshad, & Alshuaibi (2020), and Musi, Mukulu, & Oloko (2018).

Employee Teamwork

The greatest way to get things done in any group is to work together. When employees and management work together, everyone is better able to make decisions that get the organization closer to its goals. Keeping the peace on a team is important for everyone's happiness on the job, which in turn can boost productivity (Aruoren & Oisamoje, 2023). There has been a dramatic increase in the complexity of modern business practices (Ghemawat, 2018). This increased complexity has introduced new challenges for team management, which must be overcome if businesses are to maximize their potential. Global industries now face formidable new problems as a result of the shift towards a more collaborative approach to operations management. More and more businesses are depending on efficient teams to keep up with the increasing complexity of doing business as global sectors develop and expand at a rapid pace (Fleaca & Fleaca, 2014). Today's businesses use teams in a wide variety of configurations to obtain an edge in the marketplace and generate revenue. Cross-functional teams are increasingly utilized in today's complicated environment and are frequently used in projects. A team is a group of people who work together towards a single objective, share common performance standards and methods, and hold each other to high standards of performance. It can be difficult and time consuming to transmit information across team members who are responsible for diverse aspects of a project (Pérez-Luo, Bojica, & Golapakrishnan, 2019). This research examined the complexities of information sharing and its effects on innovation. The researchers took a cross-section of businesses and analyzed their knowledge-sharing and innovation practices (Aruoren, Odiri, & Igemohia, 2021). According to the research conducted by Pérez-Luo et al. (2019), inefficient information exchange impacted new product development due to poor cross-functional integration inside the company.

Continuous Improvement

Today's businesses strive for a perpetual state of peak performance. As a result, the function of continuous performance improvement in an organization is crucial. There is widespread agreement that the primary goal of continuous improvement is to boost efficiency and effectiveness inside a company or its processes (Gonzalez & Van-Aken, 2016). Lean Manufacturing, Lean Six Sigma, and Six Sigma are three of the most popular and effective approaches to implementing and spreading the concept (Gutierrez-Gutierrez & Antony, 2019; McLean, Antony, & Dahlgaard, 2017; Message-Costa, Filho, Fredendall, José, & Paredes, 2018). According to the research, a company's ability to innovate increases when its employees are encouraged to use the Continuous Improvement methodology. According to Linnenluecke and Griffiths (2010), a company's ability to remain sustainable depends on its ability to foster a culture that can adapt to new circumstances. Changes in the business environment are credited with driving the widespread interest, fame, and adoption of the concept (Khan, Kaviani, Galli, &Ishtiaq, 2019). This is necessary for businesses to stay competitive and meet the needs of their customers. Without any doubt, continuous improvement is a key and strategic component for successful businesses. The research suggests that the concept of continuous improvement as an approach and philosophy for performance improvement as opposed to only discrete initiatives first emerged in Japan following World War II. Thus, it has become one of the pillars upon which Japanese manufacturing has been built (Singh & Singh, 2015). According to Ershadi, Najafi and Soleimani (2019), customer happiness is the key to an organization's efficiency, but it doesn't happen overnight. As a result, the company must investigate methods to enhance its operations, such as production and responding to customers' demands. Therefore, enterprises must guarantee ongoing enhancement of all operations if they intend to succeed over the long run.

Organizational Performance

Analyzing an organization's performance requires contrasting the achieved results with the targeted outcomes (Hussain, Rigoni & Orij, 2018). The analysis of organizational performance has focused on three critical outcomes: shareholder value performance, financial performance, and market performance (Yuliansyah, Gurd & Mohamed, 2017; Tarurhor, Aruoren, & Owolabi, 2022). According to studies, a company's success may be evaluated along three dimensions: efficiency in management, finances, and operations (Tran, & Nguyen, 2020). Product quality, customer happiness, and financial success are non-operational characteristics that can be used to

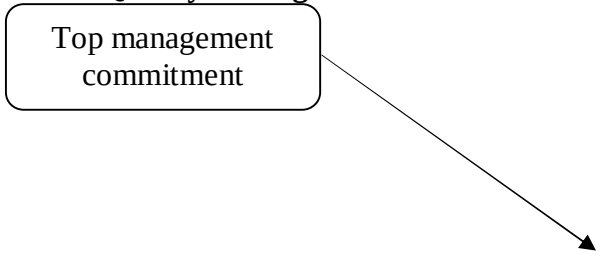
evaluate an organization's performance (Osazevbaru, Aruoren, & Okunima, 2021). Many businesses use market performance metrics like market share and product sales to gauge their own success. Since customers play such a crucial role in any business's success, measuring that success is as simple as gauging customer happiness (Soltani, Zareie, Milani, & Navimipour, 2018).

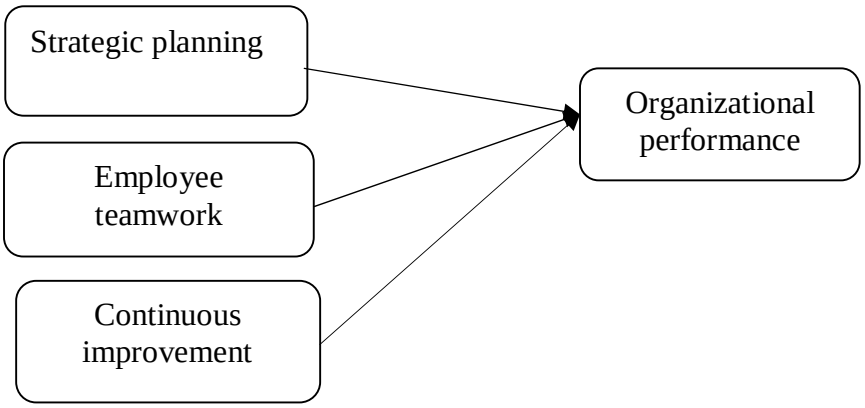
Financial and product quality metrics are both acknowledged as important indicators of an organization's success in a study (Hilman et al. 2019). Total quality management techniques have a significant impact on both indicators of performance. Organizational success in terms of financial performance may be gauged by looking at metrics like return on assets and return on investments; thus, businesses that want to do well financially typically prioritize reducing expenses while increasing these two metrics. To reduce expenses without sacrificing quality, businesses realise they need to implement TQM practices, as stated by (Mahmood, Qadeer, &Aftab, 2015). Gaining a competitive edge in the market is made possible by high-performing organizations. Based on the findings of this study, TQM procedures are designed to give workers more say in the creation of high-quality goods and services. Customer satisfaction relies heavily on the quality of work provided by employees (Yusr, Mokhtar, Othman & Sulaiman, 2017). Enhanced satisfaction from customers ultimately gives businesses an edge in their respective markets. Shareholder value is another metric that may be used to evaluate a company's success. In a capitalist economy, management teams place a premium on maximizing returns for their shareholders. By placing emphasis on the support of upper management, TQM practices can improve an organization's productivity (Budaj, Klencová, Daňková, & Piteková,2018). The dedication of top management is a crucial part of TQM because it is they who set the tone for the organization's quality policy and the techniques it employs to boost productivity (Hilman et al. 2019).

From the reviewed literature, the variables of total quality management such as top management commitment, strategic planning, employee teamwork and continuous improvement to a large extent influencesorganizational performance.

Independent Variable **Dependent Variable**

Total Quality Management





Source; Researcher's Model (2023)

Figure 1 Conceptual model of study variables

Theoretical Review

This study was anchored on the resource based view theory. The resource-based view is a method for developing a company's strategic plan that emphasizesutilizing internal strengths to gain a market advantage. According to this theory, businesses should search inward for a competitive edge rather than scanning the external landscape for opportunities (Barney, 1991). To boost business results, the resources based view of strategy provides a framework for executives to analyses the company's assets and shortcomings and get insight into marketing concerns (Falkenreck, 2010). According to a model proposed by Barney, a company's competitive edge comes from a combination of tangible and intangible resources that are both unique and stationary, as well as difficult to replicate and find a suitable substitute for. By fostering the growth of assets that are unique to the organization, establish socially complex relationships rooted in the company's history and culture, and create tacit knowledge, TQM can boost performance (Barney, 1991). Incorporating TQM into an organization can help it establish a set of routines and a culture that are grounded in the knowledge and experience of its employees (Snongtaweeporn, Siribensanont, Kongsong & Channuwong, 2020). Therefore, TQM creates a plethora of unique competencies within the company that promote a more efficient and effective growth of internal operations. Total quality management practises have an obvious impact on an organization's ability to function, and this research can take advantage of the resource-based view to determine the nature of that impact.

According to the Resource Based View (RBV) paradigm, a company's competitive advantage and long-term success are largely determined by its resources and capabilities. Total Quality Management (TQM) is an alternative management strategy that aims to do just that: boost quality across the board, make customers happier, and streamline operations. TQM is closely related to RBV because it can be thought of as an expansion of RBV. Human capital, technological advancements, and efficient internal procedures are just some of the resources and capabilities that the Resource-Based View recommends might be used to an enterprise's advantage in the marketplace. TQM provides a framework for making the most of these assets to boost output in all areas, from product to service to customer happiness. TQM necessitates in-depth knowledge of a company's assets and how they might be maximized for peak performance. Firms can increase their competitive advantage by employing TQM concepts to analyze how well they use their resources and capabilities and then making the necessary adjustments. Put simply, Total Quality Management (TQM) is a practical approach to optimizing a company's resources and capabilities to boost product and service quality, customer satisfaction, and overall performance, while the Resource-Based View (RBV) theory provides a theoretical framework for understanding how a company's resources and capabilities can create competitive advantage.

Empirical Review

Kurnia, Ahmad,Tuankotta, and Masurin, (2022) investigated the impact of the implementation of total quality management on the managerial performance of a company, with PT. X serving as the case study. The objective of this study is to assess the impact of Total Quality Management (TQM) on the managerial performance of PT. X. The aforementioned enterprise is the foremost corporation in the eastern region of Indonesia, situated in the urban centre of Makassar, and specializes in the manufacturing of wheat flour. The investigation employs three out of the ten principles encompassed in the TQM framework, namely customer orientation, quality preoccupation, and education and training. The sample size comprised 120 participants. The study employed a structural equation modelling (SEM) technique as its analytical method. The study's findings indicate that the adoption of TQM, which encompasses factors such as customer-centricity, quality-driven mindset, and employee education and training, has a statistically insignificant yet positive impact on managerial performance within PT.X. Furthermore, there exists a causal relationship between each TQM variable and the variable of managerial performance.

Wassan, Memon, Mari, and Kalwar (2022) investigated the effects of implementing TQMpractices on the sustainability and performance of organizations in Pakistan. The study's data was obtained through a questionnaire survey conducted within the manufacturing sector. Factor analysis and confirmatory factor analysis (CFA) were employed as analytical tools in the study. The study's results indicate that the implementation of total quality management and sustainability practices are crucial for achieving optimal performance outcomes in the manufacturing sector. The findings indicate that TQM and sustainability exert a favorable influence on the performance of organizations.

Elvina, Anggraeni, Sasongko, and Erlandian (2022) examined the impact of TQM on Quality Cost Efficiency (QCE) and managerial performance, as well as its potential implications for overall company performance. The study incorporated a sample of 100 firms located in Indonesia, as per the researchers' methodology. The employed methodology entails a structural perspective towards the Equation Model (SEM) and is facilitated by the Smart PLS software. The findings indicate a noteworthy affirmative correlation among total quality management, quality cost efficiency, managerial performance, and total management quality with company performance, which is moderated by managerial performance. The explanatory power of the company's performance variable's R-squared value is 88.9%, which can be attributed to the combined effects of total quality management, quality cost efficiency, and managerial performance.

Wall (2021) conducted an empirical analysis to compare the TQMpractices and quality performance of the manufacturing and service sectors in Thailand. Primary data was utilized in the study, which was obtained from a sample of 525 participants representing both the manufacturing and service industries. The data underwent statistical analysis through the utilization of MANOVA, t-tests, and structural equation modelling (SEM) techniques, facilitated by the software programmes SPSS and AMOS. The investigation employed a MANOVA analysis and determined a statistically significant distinction between the manufacturing and service sectors with regards to TQM and quality performance. A comprehensive examination of the t-test results indicated that there existed a disparity between TQM and quality performance in the manufacturing sector and the service sector across six variables, namely leadership, strategic management, customer focus, information analysis, people management, and process management. However, no statistically significant difference was observed between the two

sectors with respect to the variable of product quality. The findings suggest that there is no statistically significant distinction in the correlation between TQMpractices and quality performance among manufacturing and service organizations in Thailand.

Elhawi, Sakarneh, and Janjata (2021) investigated the effects of TQM implementation on the performance of employees who work from home (WFH) at the Jordan Commercial Bank. The study sample comprised of managers and employees who have implemented work-from-home policies. A survey was conducted among a sample of 250 bank employees to investigate their perceptions of performance, job satisfaction, and productivity in relation to TQM variables such as customer satisfaction, continuous improvement, and employee involvement. A comprehensive survey utilizing a questionnaire was conducted. Regression and correlation analyses were conducted to consider the findings. The findings indicate that TQM, along with its various components, has a significant influence on the work-from-home (WFH) performance of employees. The findings indicate that both continuous improvement and customer satisfaction exerted a greater influence on job satisfaction than on productivity, as evidenced by a higher level of correlation. The research revealed that the variable of employee involvement had a greater influence on productivity.

Senarath, Gunarathne, and Fernando (2020) investigated the influence of total quality management on operational performance within the context of Sri Lanka. This research investigates the effects of TQM strategies on operational performance in a cohort of 279 large-scale manufacturing firms located in Sri Lanka. Structural equation modelling was employed to test two hypotheses. The findings of the study indicate that the implementation of TQM practices has a favorable influence on operational performance. Additionally, each of the six TQM indicators analyzed in isolation was found to have a positive effect on operational performance.

Chin, Sofian, and Leng (2018) investigated the influence of total quality management on the performance of Malaysian Public Listed Companies. The study utilized empirical data collected from a sample of 132 human resource managers employed in publicly listed companies in Malaysia. The data was subjected to multiple regression analysis for analysis purposes. The study's findings indicate that TQM has a favorable influence on corporate performance in five key areas: top management leadership, human resource management, customer focus, strategic planning, and information and process management. The primary inference drawn from the discovery is that TQM has a favorable influence on the overall performance of not only

manufacturing firms in Malaysia, but also public listed companies across various sectors in the country.

METHODOLOGY

Research Design

The present study employed the survey research design approach, which entails a systematic gathering of data from participants with the aim of comprehending and/or forecasting certain behavioral patterns within the target population. A cross-sectional study design was employed in the survey research, wherein a sample of elements was drawn from the population of interest and measured at a single point in time.

Population of the Study

Employees from Julius Berger Nigeria Limited in the Nigerian Construction Industry made up the population for the study. The Human Resources Department of the Company provided a total of 9142 employees, which made up the study's population.

Sample Size

The determination of an appropriate sample size that accurately represents the population of interest, as opposed to the entire population, was achieved through the utilization of Krejcie and Morgan's (1970) sample size determination table. The sample size for this study consisted of 368 employees selected from the chosen organizations.

Sampling Technique

For this research, we used a stratified random sampling strategy. This method of sampling was chosen because it would provide a fair representation of the company's workforce. This is because the populace is segmented into many occupational groups.

Method of Data Collection

The data collection instrument employed in this study was a singular set of structured questionnaires. The survey instrument was bifurcated into two distinct sections, the first of which elicited information regarding the demographic characteristics of the participants. The second

section comprised of closed-ended questions that were structured in a Likert scale format. The second section of the survey comprised 20 Likert-scale questions that were specifically designed to address the research objectives. The closed-ended questions in the study utilized a Likert rating scale consisting of five points.

5=Strongly Agree (SA)**;** 4=Agree (A);3=Undecided (U)**;** 2 =Disagree (D);1=Strongly Disagree (SD)

Model Specification

The general form of the equation to predict

$$OP = \beta o + \beta 1TMC + \beta 2SP + \beta 3ET + \beta 4CI + \varepsilon i$$

Where: TMC =Top Management Commitment; SP= Strategic Planning; ET = Employee Teamwork; CI = Continuous Improvement; OP = Organizational Performance; βo= Constant value; $\beta 1_{...}\beta 4$ = Regression Coefficients; εi = The error term in *i*-th observation.

DATA PRESENTATION AND DISCUSSION OF FINDINGS

Characteristics of the Sample

The analysis from the field survey is presented below in tabular form:

Table 1 Analysis from the field survey

Pattern focused	Number administered	Number returned	Number used
Employees	368	359	350

Source: Distributed Questionnaire (2023)

Out of the 368 copies of questionnaire administered, 359 were returned, 9 was not properly filled and 350 were useable. Therefore, the analysis in this section was based on the response rate of 95%.

Table 2: Analysis of Respondents Profile

S/N	Variables	Frequency	Percentage (%)
1	Gender:		
	Male	188	54
	Female	162	46
	Total	350	100
2	Age Range:		
	Below 30 years	59	17

	31-40 years 41years and above Total	112 179 350	32 51 100
3	Marital Status: Single Married Total	 145 205 350	 41 59 100
4	Educational Qualification OND/NCE HND/B.Sc Master Total	 58 231 61 350	 17 66 17 100
5	Years of Job Experience Below 5years 5-10years 11 years and above Total	 76 121 153 350	 22 35 43 100

Source: Field Survey, 2023.

Table 2 showed the background characteristics of the several respondents. Findings showed that 54% of the sample respondents were males while 46% were females. The age bracket of the respondents indicated that 17% of the respondents were below 30 years of age; 32% of the respondents' falls within the age bracket of 31-40 years of age, while 51% of the respondents were 41 years of age and above.The marital composition of the respondents showed that; 41% of the sample respondents were single, while 59% other respondents were married. The educational background of the respondents showed that 17% of the respondents were OND/NCE holders, results showed that 66% of the respondents were HND/B.Sc holders, while 17% of the other respondents were master degree holders.On the years of job experience by staffs, it was shown that 22% of the respondents have below 5years working experience. 35% of the respondents have 5-10 years working experience. And lastly 43% of the respondents have above 11years working experience.

Analysis of Other Research Data

The analysis of the other research data as well as the testing of the earlier postulated hypotheses in previous chapter was done here for the aim of arriving at a conclusion and generalization.

Table 3 Inter-Correlations and Descriptive Statistics for Study Variables

S/N	Variables	1	2	3	4	M	SD
1.	Top management commitment	1				18.84	1.340
2.	Strategic planning	.602**	1			18.97	1.293

3.	Employee teamwork	.059	.468	1		18.86	1.271
4.	Continuous improvement	.203**	.161**	.241**	1	18.68	1.389
5.	Organizational performance	.330**	.297**	.340**	.696**	18.63	1.422

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

*. Correlation is significant at the 0.05 level (1-tailed).

Table 4 The guideline for Pearson correlation coefficients

S/N	Coefficient value	Strength of association
1	< r < 0.3	Small correlation
2	0.3< r < 0.5	Medium/moderate correlation
3	r > 0.5	Large/strong correlation

Source: Based on Cohen (1988)

Table 3 showed theinter-correlations and descriptive statistics of the study variables.

Top management commitmentshowed positive correlation coefficient with organizational performance (0.330**).Strategic planningshowed positive correlation coefficient with organizational performance (0.297**).Employee teamwork showed a positive correlation coefficient with organizationalperformance (0.340**).Continuous improvementshowed a strong positive correlation coefficient with organizationalperformance (0.696**).The result indicated that top management commitment, strategic planning, employee teamwork and continuous improvement are very good measures oftotal quality management.

Table 5: Regression Analysis of total quality management and organizational performance

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	T	Sig.	Tolerance	VIF
1	(Constant)	-1.761	1.145		-1.538	.125		
	Top management commitment	.133	.048	.125	2.771	.006	.626	1.597
	Strategic planning	.128	.049	.117	2.605	.010	.636	1.572
	Employee teamwork	.204	.041	.182	4.954	.000	.942	1.062
	Continuous improvement	.622	.038	.608	16.187	.000	.904	1.106

a. Dependent Variable: Organizational performance

Table 5 displayed the multiple regression analysis result for total quality management and organizational performance. It was shown that top management commitment has positive effect on organizational performance (ß = 0.125, p <0.05). Strategic planning has positive effect on organizational performance (ß = 0.117, p<0.05). It was reported that employee teamwork has positive effect on organizational performance (ß = 0.182, p<0.05). It was also indicated that continuous improvement has positive effect on organizationalperformance (ß = 0.608, p<0.05). The variables have no multicolinearity because the VIF of top management commitment (1.597), Strategic planning (1.572), employee teamwork (1.062), and continuous improvement(1.106) towards organizational performanceare below 10. Besides, the tolerance level is more than 0.1 where top management commitment has 0.626, Strategic planning has 0.636, Employee teamwork has 0.942, and Continuous improvement has 0.904.

The general form of the equation to predict

$$OP = \beta o + \beta 1 TMC + \beta 2 SP + \beta 3 ET + \beta 4 CI + \varepsilon$$

OP = -1.761+ 0.133TMC + 0.128SP + 0.204ET + 0.622CI

Table 6Analysis of Variance

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	395.610	4	98.903	110.032	.000[b]
	Residual	310.104	345	.899		
	Total	705.714	349			

a. Dependent Variable: Organizational performance

b. Predictors: (Constant), Continuous improvement , Strategic planning , Employee teamwork , Top management commitment

The *F*-ratio in Table 6 indicated that the dimensions of total quality management significantly predict organizational performance, F = 110.032, p< 0.05. The implication of this is that the regression model is a good fit of the data.

Table 7 Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate

1	.749[a]	.561	.555	.948

a. Predictors: (Constant), Continuous improvement , Strategic planning , Employee teamwork , Top management commitment

Table 7 showed the extent to which the dimensions of total quality management accounted for change in organizational performance as indicated by the Adjusted R Square value, which showed that 56% (0.555) of the change in organizational performance was brought about by the dimensions of total quality management.

Hypotheses Testing

The multiple regression analysis was adopted as an analytical technique for testing the hypotheses. The p-values reported in the regression coefficient tables were used for testing the study hypotheses.

The Decision Rule

If the critical value calculated is greater than the probability level of significance, then the null hypotheses will be accepted while the alternate hypotheses will be rejected and vice versa. Findings are statistically significant when the null hypotheses are rejected, and vice versa (Paniagua, 2019).

Hypothesis One

H_{01}: Top management commitment has no effect on performance of Julius Berger Nigeria Plc.

Since the p-value critical is at 0.05 (5%) i.e. the level of significance which is the tolerable error in estimation is greater than the calculated level of significance (0.006< 0.05) in table 5, the null hypothesis was rejected while the alternate was accepted. This implies that top management commitment has a positive effect on performance of Julius Berger Nigeria Plc.

Hypothesis Two

H_{02}: Strategic planning has no effect on performance of Julius Berger Nigeria Plc.

The computed level of significance, as shown in Table 5, is lesser than the p-value of 5%, i.e. (0.010< 0.05). Based on this result, the null hypothesis was rejected and the alternate was accepted implying that strategic planning has significant positive effect on performance of Julius Berger Nigeria Plc.

Hypothesis Three

H_{03}: Employee teamwork has no effect on performance of Julius Berger Nigeria Plc.

The null hypothesis was rejected and the alternate hypothesis was accepted, which states that employee teamwork has significant positive effect onperformance of Julius Berger Nigeria Plc., the alternate hypothesis was accepted because the level of significance calculated in table 5 is lesser than the established p-value (0.000< 0.05).

Hypothesis Four

H_{04}: Continuous improvement has no effect on performance of Julius Berger Nigeria Plc.

The level of significance that was calculated in table 5 was lesser than the established p-value (0.000< 0.05), therefore the null hypothesis was rejected while the alternate was accepted which implies that continuous improvement has significant positive effect on performance of Julius Berger Nigeria Plc.

Discussion of Results

Top management commitment and performance of Julius Berger Nigeria Plc.

Table 5 showed that top management commitment has positive effect on performance of Julius Berger Nigeria Plc.(ß = 0.125, p <0.05). Test of hypothesis one in table 5 showed that top management commitment has a positive effect on performance of Julius Berger Nigeria Plc.(0.006 < 0.05).The commitment of top management is a critical factor in determining the success of an organization. The commitment of top management towards the attainment of organizational goals and objectives has the potential to enhance employee motivation and performance. On the contrary, inadequate dedication from upper-level executives may result in decreased productivity and diminished staff drive. Consequently, it is imperative for organizations to guarantee that their upper management is entirely dedicated to accomplishing the organizational goals and objectives, and that they effectively convey this dedication to their employees. The attainment of this objective can be facilitated through diverse methods, including the establishment of unambiguous objectives and anticipations, the provision of resources and assistance, and the demonstration of exemplarybehavior. Alfalla-Luque, Marin-Garcia & Medina-Lopez (2015) conducted a study on a sample of 262 large manufacturing companies and discovered that the performance of a company can be enhanced through the commitment of both

its employees and leaders. Organizations that possess a dedicated senior management team are more likely to exhibit a greater potential for success, as they are better equipped to withstand external pressures that may impel them to enhance their performance (Bouranta, Psomas, & Pantouvakis, 2017; Biswakarma, 2017).

Strategic planning and performance of Julius Berger Nigeria Plc.

Test of hypothesis two in table 5 showed that strategic planning has significant positive effect on performance of Julius Berger Nigeria Plc.(0.010 < 0.05).According to Fuertes et al. (2020), the implementation of a systematic strategic planning process allows firms to enhance their competitive position in the market by creating value and identifying, developing, and reinforcing their strengths. Strategic planning is widely regarded as a crucial organizational process that entails the establishment of unambiguous goals, objectives, and corresponding action plans aimed at their attainment. The implementation of a clearly defined strategy enables organizations to effectively synchronize their resources and activities with the aim of accomplishing their desired goals. This, in turn, can result in enhanced performance and competitiveness. In addition, proficient strategic planning entails scrutinizing the internal and external environments of the organization, recognizing possible opportunities and threats, and formulating tactics to leverage the opportunities and alleviate the threats. This can facilitate organizational adaptation to market fluctuations and sustain competitiveness in the long run. The efficacy of Julius Berger Nigeria Plc's performance is significantly influenced by strategic planning, thereby emphasizing the need for organizations to allocate adequate resources and time towards the development and implementation of efficacious strategic plans.

Employee teamwork and performance of Julius Berger Nigeria Plc.

Test of hypothesis three in table 5 showed that employee teamwork has significant positive effect on performance of Julius Berger Nigeria Plc.(0.000 < 0.05).Collaboration among team members is a valuable approach to preserving team cohesion, which in turn contributes to the attainment of job satisfaction that can have an impact on both individual and organizational performance (Ahmad, Abdullah, & Sakarji, 2023). The collaboration of employees is a crucial aspect for organizations as it facilitates the efficient cooperation of individuals towards a shared objective. The synergistic effect of employees engaging in cooperative and collaborative work can lead to an enhanced outcome that surpasses what could be achieved by each individual's skills, knowledge, and experience alone. In addition, proficient collaboration among team members has

the potential to result in heightened levels of job contentment, drive, and involvement within the workforce. When employees perceive themselves as members of a team and recognize the significance of their contributions, they exhibit a higher probability of displaying commitment towards their job and the prosperity of the organization. Consequently, it is imperative for corporations such as Julius Berger Nigeria Plc to foster a culture of teamwork and cooperation among their workforce, while also affording them the chance to collaborate on various undertakings and ventures. Enhancing overall performance can be instrumental in contributing to the success of the organization.

Continuous improvement and performance of Julius Berger Nigeria Plc.

Test of hypothesis fourin table 5 showed that continuous improvement has significant positive effect on performance of Julius Berger Nigeria Plc.(0.000 < 0.05).By continually seeking to improve processes and systems, organizations can increase efficiency, reduce waste, and improve overall performance. Furthermore, a culture of continuous improvement can help to foster innovation and creativity within the organization, as employees are encouraged to think critically and suggest new ideas for improving processes and systems. Hence, it is imperative for corporations such as Julius Berger Nigeria Plc to adopt a culture of perpetual enhancement and allocate resources towards the provision of requisite training to facilitate this process. This can potentially enhance operational efficiency and facilitate the sustained prosperity of the enterprise. The literature indicates that the implementation of the Continuous Improvement methodology not only enhances organizational performance, but also fosters innovation within the organization. According to Durrani, Raziq, Mahmood and Khan (2024), it is by implementing sustainability measures that a company can establish a culture that is capable of adapting to the challenges and changes in its environment, thereby ensuring its long-term sustainability.

Conclusion

The study concluded that total quality management has significant positive effect onperformance of Julius Berger Nigeria Plc. The dimensions of total quality management such as top management commitment, strategic planning, employee teamwork, and continuous improvementhave significant positive effect on organizational performance.The senior

leadership of the organization ensures that the formulation of policies and objectives is aligned with the internal and external factors affecting the company. The significance of strategic planning is derived from the advantages it provides to organizations, including the effective alignment of resources and efforts, and improved investment outcomes. Collaboration among team members is widely regarded as the most effective approach to attaining success within an organization. Undoubtedly, Continuous Improvement holds significant importance and serves as a crucial and strategic function for organizations. In contemporary times, enterprises are striving to consistently enhance their level of operational efficiency. The ongoing enhancement of organizational performance is of paramount importance.

Recommendations

Drawing from the findings, the following recommendations are proposed for Julius Berger Nigeria Plc:

1. The enhancement of top management's dedication to the organization's objectives and goals should be prioritized by the company.
2. Julius Berger Nigeria Plc should implement a proficient strategic planning process that incorporates the expertise of qualified personnel and seasoned professionals in the domain of strategic planning.
3. The organization should foster a culture of perpetual enhancement through the provision of training, resources, and incentives to its workforce, thereby encouraging innovation and the pursuit of superior methods of operation.
4. Julius Berger Nigeria Plc should foster a culture of teamwork and collaboration amongst its workforce in order to promote creativity, effective problem-solving, and innovation.

COMPETING INTERESTS DISCLAIMER:

Authors have declared that they have no known competing financial interests OR non-financial interests OR personal relationships that could have appeared to influence the work reported in this paper.

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3.

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