

## TOTAL QUALITY MANAGEMENT AND ORGANISATIONAL PERFORMANCE OF FOOD AND BEVERAGES COMPANIES IN LAGOS STATE, NIGERIA

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### ABSTRACT

*The Food and Beverages industry in Nigeria, which contributes significantly to the nation's economy, faces operational inefficiencies and intense competition. This study examines the influence of Total Quality Management (TQM) practices specifically, process management, continuous innovation, and product design on the performance of Food and Beverages companies in Lagos State. Using a sample of 454 employees from Cadbury Nigeria Plc and Nestlé Nigeria Plc, data were collected through structured questionnaires and analysed using linear regression. The results revealed that process management significantly impacts profitability, explaining 85.1% of its variation ( $R^2 = 0.851$ ,  $p < 0.05$ ). Continuous innovation accounted for 80.5% of the variation in market share ( $R^2 = 0.805$ ,  $p < 0.05$ ), showing its critical role in competitive positioning. Additionally, product design influenced 83.1% of the variation in productivity ( $R^2 = 0.831$ ,  $p < 0.05$ ), highlighting the importance of product development in driving operational efficiency. These findings suggest that TQM practices are vital for enhancing profitability, market share, and productivity in Nigeria's highly competitive Food and Beverages industry. Companies that invest in optimizing these practices can achieve greater operational sustainability and competitiveness. Products that align with the financial constraints and risk profiles of low-income populations, underscoring affordability, simplicity, and trust as core components. The findings contribute to the development of more inclusive financial services and offer policy recommendations to increase micro-insurance adoption in developing regions.*

## Introduction

The manufacturing sector in Nigeria contributes significantly to the nation's economy, accounting for 8.86% of the GDP, a figure that remained stable between 2017 and 2018 (Sonko et al., 2020). Within this sector, the Food and Beverages industry plays a crucial role by producing essential consumer goods. Recent data reveals that the Food and Beverages industry contributes around 22.5% of the manufacturing sector's value, 4.6% of the country's GDP, and generates approximately 1.5 million jobs (WTO, 2021). Despite the large number of companies within this sector, it remains highly competitive, with many firms offering similar products to attract a common customer base. In such a competitive landscape, the implementation of effective total quality management (TQM) practices is critical for sustaining operations and achieving competitive advantage (Al-Jarrah, Hailat&Jarrah, 2023).

Furthermore, Akpan and Ikon (2016) note that the frequent changes in Nigeria's Food and Beverages sector present both opportunities and challenges. However, key operational inefficiencies such as a poor business environment and high production costs have led to reduced output and lower profit margins compared to other developing countries. The success of any business largely depends on its customers, yet many Nigerian Food and Beverages companies have not adequately prioritized customer relationship management, resulting in unsatisfactory market share performance (Gladson&Didia, 2015). Furthermore, there is limited investment in research and development in this sector, which has hindered innovation and growth (Dada, 2018).

In addition, the adoption of total quality management within organizations in this sector has been hampered by non-compliance with TQM best practices. Some firms treat TQM as a stand-alone program expected to deliver results on its own, while others take an indifferent approach, thereby undermining the potential improvements in performance that TQM could bring (Uko, 2018). Although many organizations recognize the benefits of TQM in enhancing quality culture and delivering substantial outcomes, there are concerns regarding its effectiveness in producing tangible economic gains and improving operational sustainability.

While numerous studies have examined total quality management in Nigeria (Ezenyilimba et al., 2019; Giwa et al., 2020), there is a scarcity of research focused on the impact of TQM on the performance of Food and Beverages companies, particularly in areas such as waste management, profitability, market share, and productivity (Ezugwu&Agu, 2016; Halilu et al., 2017; Kua, 2016; Nasser & Abdallah, 2020; Uko, 2018). These are critical measures of operational sustainability within the Food and Beverages sector that have been largely overlooked in previous studies. Based on these issues, this study investigates the effect of total quality management practices on organisational performance of Food and Beverages companies in Lagos State, Nigeria.

## Research Aim and Objectives

The main objective of this study is to examine the interaction between total quality management sub-variables on organisational performance Food and Beverages companies in Lagos State, Nigeria.

The specific objectives are to:

- i. Determine the effect of process management on the profitability of Food and Beverages companies in Lagos State, Nigeria.
- ii. Investigate the effect of continuous innovation on the market share of selected Food and Beverages companies in Lagos State, Nigeria.
- iii. Assess the effect of product design on the productivity of selected Food and Beverages companies in Lagos State, Nigeria.

#### Research Questions

The following questions will guide the study:

- i. What is the effect of process management on the profitability of Food and Beverages companies in Lagos State, Nigeria?
- ii. What is the effect of continuous innovation on the market share of selected Food and Beverages companies in Lagos State, Nigeria?
- iii. What is the effect of product design on the productivity of selected Food and Beverages companies in Lagos State, Nigeria?

#### Research Hypotheses

The following hypotheses are tested at 0.05 significance level:

- i. H01: Process management have no significant effect on the profitability of Food and Beverages companies in Lagos State, Nigeria.
- ii. H02: Continuous innovation have no significant effect on the market share of Food and Beverages companies in Lagos State, Nigeria.
- iii. H03: Product design have no significant effect on the productivity of Food and Beverages companies in Lagos State, Nigeria.

## 2. Literature Review

### Total Quality Management

Total Quality Management (TQM) is a comprehensive approach to improving the quality of an organization's products and services, encompassing all stages of production from design and development to quality control, assurance, and continuous improvement (Owusu&Duah, 2018). TQM involves the participation of all employees and seeks to enhance overall customer satisfaction by consistently refining products, services, processes, and the corporate environment (Ho et al., 2023). It is both a management philosophy and a set of guiding principles that focus on continuous improvement, aiming to enhance effectiveness in various aspects of the organization, including production, design, planning, and customer satisfaction. By integrating TQM, firms can bolster competitiveness and operational efficiency while cultivating a more satisfied customer base (Yeng et al., 2018). Furthermore, TQM emphasizes the elimination of defects and the incorporation of continuous changes, ensuring that products and services meet the highest standards of quality (Makinde et al., 2023).

### Process management

Process management refers to the coordination of interrelated activities that transform inputs into outputs, ensuring that each process within an organization contributes to delivering high-

quality products and services (Al-Saffara&Obeidatb, 2020). Achieving superior quality often requires organizations to redesign or adjust processes to align with specific quality requirements, with a focus on preventing errors rather than solely concentrating on outputs (Juda, 2014). Effective process management emphasizes the importance of managing and improving processes as a means to secure high-quality outputs, recognizing that sound processes are the foundation of successful products and services. Business processes are inherently dynamic and require constant management, as they encompass all organizational activities, roles, resources, and rules necessary to deliver value to customers (Stravinskiene&Serafinas, 2020). Properly managing these processes ensures that customer needs are met efficiently and profitably (Wagner, 2008).

### **Continuous innovation**

Innovation is the practical application of knowledge to create new or improved products, processes, and services that offer immediate value in production and commercialization (Hisrich&Ramadani, 2017). Continuous innovation involves the constant improvement of processes, products, and services to meet evolving customer needs and sustain organizational success. It is a multi-dimensional concept that encompasses incremental and radical innovations across product, process, market, and organizational domains (Rajapathirana et al., 2017). Continuous innovation drives profitability and competitive advantage by fostering sustainability through ongoing development and adaptation (Al-Saffara&Obeidatb, 2020). Despite the benefits, innovation often faces resistance due to entrenched routines and organizational inertia, but it remains a vital element for organizational growth and success (Botsiou et al., 2014).

### **Product design**

Product design lies at the core of innovation, playing a crucial role in driving the development and commercialization of new products and services (Patil&Sirsikar, 2018). Successful product design is not merely about aesthetics; it is a process that combines creativity with market research, customer input, and cross-functional collaboration. The continuous development of new products is essential for sustaining long-term success, particularly in the manufacturing sector, where commercialization and growth depend heavily on innovation (Antunes et al., 2021). Product design and development is an iterative process involving feedback from various departments, including executives, marketing, and production teams, with the ultimate goal of meeting customer demands efficiently. Modern trends in product design emphasize shorter development cycles, increased customer involvement, and a multidisciplinary approach to innovation (Shire &Oringo, 2020). Companies must adopt diverse strategies based on their specific circumstances to effectively transform market needs into saleable products.

### **Organisational Performance**

Organizational performance refers to the ability of an organization to achieve its goals and objectives effectively and efficiently, often measured in terms of profitability, market share, and overall business growth. Profitability remains a key indicator of organizational performance, as it directly reflects a firm's capacity to generate returns from its operations (Kenton &Barnier, 2020). Executives and shareholders focus heavily on profitability because it ensures not only the survival of a company but also rewards capital providers, making it crucial for long-term sustainability (Ariguzo et al., 2019). Profitability measures past performance, serving as a metric for a company's success in generating profits, while also guiding strategic decisions aimed at enhancing future growth (Santos &Brito, 2012). Similarly, market share is another vital metric of organizational performance, as it indicates a

company's competitive positioning within its industry (Byukusenge et al., 2018). A higher market share often signifies stronger consumer preference, which can lead to increased sales and reduced competition, reinforcing the firm's dominance in its market (Okolo, 2017). This indicator of performance also serves as a driver of profitability, as companies with larger market shares tend to enjoy better economies of scale and a stronger market presence (Sarkissian&Schill, 2010). Both profitability and market share are intertwined measures that contribute to the overall assessment of organizational performance, with each playing a critical role in ensuring the long-term success of a business.

### **Profitability**

Profitability refers to the ability of a business to generate financial gains from its operations, where the revenue exceeds the associated costs, expenses, and taxes (Kenton & Barnier, 2020). It is a critical measure of a firm's financial health and is paramount for the survival and long-term success of any company. Executives and shareholders emphasize profitability as it serves as a key reward to the providers of capital and ensures the continuity of the organization (Ariguzo et al., 2019). Profitability reflects a company's ability to generate returns from its operations and is essential for guiding strategic decisions aimed at increasing growth and stability (Santos & Brito, 2012). In a dynamic and rapidly changing business environment, firms must adopt strategies tailored to sustain and improve profitability, as it is a crucial element for their competitive advantage and survival (Jaggi&Considine, 2018). While profit is an absolute term, profitability is a relative concept that gauges the efficiency of an investment in generating returns (Kenton & Barnier, 2020). It has gained significant attention in the fields of finance and accounting as one of the primary objectives of financial management is to maximize wealth for the owners, making profitability a critical performance indicator (Hifza, 2011).

### **Market share**

Market share represents the portion of total revenue or sales a company holds within a particular industry during a specified period (Byukusenge et al., 2018). It is a crucial measure of organizational performance, reflecting a company's success in the marketplace. According to Lee and Mason (2010), market share captures the dominance of a firm's product or brand in comparison to competitors. A firm's ability to grow its market share often signals its competitive strength, with growth dependent on factors such as internal organizational efficiency, marketing strategies, human resources, and procurement systems (Ojung'a, 2007). Market share is typically calculated by dividing a company's sales over a period by the total industry sales within the same timeframe (Dorothy, Alila&Omosa, 2007). A higher market share suggests greater consumer preference, easier sales growth, and stronger entry barriers for competitors (Okolo, 2017). Gaining or expanding market share often involves strategic offensive actions to improve a company's market standing and enhance profitability (Sarkissian&Schill, 2010).

### **Productivity**

Productivity in an organizational context measures the efficiency of employees in producing output relative to the resources invested, and it can be evaluated based on the deliverables achieved within a given timeframe (Binuyo&Ogunberu, 2020). Employee productivity directly influences the operational success of a company and can be assessed by employers during the hiring process, although various on-the-job factors also contribute to enhancing productivity (Matiu, 2017). According to Brady (2008), human resources play a pivotal role



in organizational productivity, with several human resource activities including pay structures, appraisal systems, job design, and training designed to boost both individual and organizational output. Enhancing productivity through these means leads to more efficient operations and greater organizational success (Matiu, 2017).

### **Empirical Review**

Numerous researchers have examined the direct relationship between total quality management (TQM) practices and organizational performance. Singh, Kumar, and Singh (2018) conducted a study on the Indian manufacturing and service industries, focusing on five key TQM practices: organizational leadership, customer satisfaction and relationships, emphasis on human resources, strategic planning and development, and supplier quality management. Their findings revealed a significant positive correlation between these TQM practices and organizational performance, confirming that TQM is critical for enhancing the performance of manufacturing firms. Similarly, Zaidi and Ahmad (2020) discovered that both TQM practices and operational performance are highly integrated, further validating the positive impact of TQM on performance.

In another study, Uko (2018) investigated the relationship between TQM practices and performance in Food and Beverages firms in Port Harcourt. The study found that TQM positively influences operational performance, customer loyalty, as well as market and financial performance. By maintaining regular communication with customers and understanding their needs, firms can deliver high-quality, reliable products and services on time. Additionally, Maswadeha and Al Zumot (2021) examined the impact of top management support, customer focus, employee participation, and empowerment on financial performance, specifically in Jordanian transport companies listed on the Amman Stock Exchange. Their research revealed a statistically significant effect of these TQM practices, moderated by organizational culture, on financial performance as measured by return on assets.

### **Theoretical Framework**

This study draws on the Resource-Based View (RBV) theory and Deming's theory to frame the relationship between total quality management and operational sustainability. The Resource-Based View posits that for a firm to achieve and maintain a sustained competitive advantage, it must possess strategic resources that are heterogeneous, immobile, inimitable, and non-substitutable (Barney, 1991). According to Reed and Lemak (2000), many firms consider total quality management as a key competitive resource, supporting the notion that TQM can help firms adapt to dynamic market conditions and secure a competitive edge (Eisenhardt & Martin, 2000). The proper utilization of these core competencies often scarce and non-renewable can enhance firm performance and ensure that capabilities continue to generate value (Lopez, 2005).

More so, the Deming's theory complements the RBV by focusing on the role of leadership and process management in achieving operational sustainability. According to Deming's model, effective leadership fosters a cooperative and learning-oriented organizational culture that supports process efficiency. Continuous innovation, employee training, and successful product design are essential for maintaining operational sustainability (Wanza et al., 2017). Deming emphasized the importance of human relations in leadership, encouraging leaders to treat employees fairly and provide an environment that allows them to fully utilize their abilities. By fostering collaboration and removing barriers that hinder teamwork, organizations can improve performance and sustain long-term competitive advantage.

### 3. Methodology

A survey research design was utilized for this study, targeting a population of 2,757 employees from Cadbury Nigeria Plc and Nestlé Nigeria Plc in Lagos State. The Taro Yamane method was employed to determine a sample size of 454, which was deemed usable for the analysis. The study adopted a stratified random sampling technique to ensure proportional representation across various departments. A structured and validated questionnaire was used for data collection, and the reliability of the constructs was confirmed with Cronbach's alpha coefficients ranging from 0.702 to 0.875. With a response rate of 94.49%, data were analyzed using both descriptive and inferential statistics, including multiple regression analysis. The hypotheses were tested using the multiple regression approach to evaluate the relationships between the independent and dependent variables.

The key variables were measured on a six-point Likert scale, ranging from Very High (VH) to Very Low (VL), to assess both the independent variables and the dependent variable. The multiple regression model was developed to analyze the relationship between total quality management (TQM) as the independent variable and operational sustainability as the dependent variable. TQM was further broken down into sub-variables: process management, continuous innovation, product design, and employee training. The functional model used in this study reflects the relationship between these sub-variables of TQM and operational sustainability, allowing for an in-depth understanding of how these factors influence the overall performance of the firms. The model for the variables is denoted in the equations below:

$$Y = f(X)$$

Y = Dependent Variable (organizational performance)

X = Independent Variable (total quality management) Where:

$$X = (x_1, x_2, x_3)$$

x<sub>1</sub> = Process Management (PM)

x<sub>2</sub> = Continuous Innovations (CI)

x<sub>3</sub> = Product Design (PD)

$$Y = f(y_1, y_2, y_3)$$

y<sub>1</sub> = Profitability (PY)

y<sub>2</sub> = Market Share (MS)

y<sub>3</sub> = Productivity (PD)

#### Hypothesis One

$$PY = f(x_1)$$

$$PY = \beta_0 + \beta_1 PM + e_i$$

..... (eq.i)

#### Hypothesis Two

$$MS = f(x_2)$$

$$MS = \beta_0 + \beta_2 CI + e_i$$

..... (eq.ii)

#### Hypothesis Three

$$PD = f(x_3)$$

$$PD = \beta_0 + \beta_3 PD + e_i$$

..... (eq.iii)

Where:

Beta ( $\beta$ ) = the degree of change in the outcome variable for every 1-unit of change in the predictor variable.

$\varepsilon_i$  = error term

Beta ( $\beta$ ) = the degree of change in the outcome variable for every 1-unit of change in the predictor variable.

$\varepsilon_i$  = error term

#### 4. Data Analysis and Results

##### 1. Data Analysis and Results

A total of 454 questionnaires were distributed to employees of selected Food and Beverage companies in Lagos State. Out of these, 429 were properly completed and returned, resulting in an overall response rate of 94.49%. According to Bryman and Bell (2011), a response rate of 50% or higher is generally sufficient for analyzing study results. Therefore, the response rate of 94.49% for this study was considered excellent, allowing the researcher to proceed with the data analysis.

#### Test of Hypotheses

##### Hypothesis One

H<sub>01</sub>: Process management have no significant effect on the profitability of Food and Beverages companies in Lagos State, Nigeria.

#### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.922 <sup>a</sup>	.851	.849	.58736

a. Predictors: (Constant), Process management

#### Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.334	.140		-2.382	.019
	Process management	1.040	.045	.922	23.036	.000

a. Dependent Variable: profitability

#### ANOVA (b)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	183.073	1	183.073	530.654	.000 <sup>b</sup>
	Residual	32.085	428	.345		
	Total	215.158	427			

a. Dependent Variable: profitability



**b. Predictors: (Constant), Process management**

The analysis results showed that the R-squared value is 0.851, indicating that 85.1% of the variation in the profitability of the selected Food and Beverages companies can be explained by process management. This suggests that process management plays a crucial role in determining the profitability of these firms, while the remaining 14.9% can be attributed to other factors not included in the model. The ANOVA results revealed an F-statistic of 530.654 and a significance level of 0.000, indicating that the regression model is statistically significant, and the relationship between process management and profitability is not due to chance.

The coefficient table further supported these findings with a standardized beta coefficient of 0.922 and a p-value of 0.000, showing a strong positive relationship between process management and profitability. As process management improves, the profitability of the companies increases. Given the significance level, the null hypothesis (H01) is rejected, and it is concluded that process management significantly affects the profitability of Food and Beverages companies in Lagos State, Nigeria.

**Hypothesis Two:**

H<sub>02</sub>: Continuous innovation have no significant effect on the market share of Food and Beverages companies in Lagos State, Nigeria.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.897 <sup>a</sup>	.805	.803	.60337

a. Predictors: (Constant), Continuous innovation

**Coefficients (a)**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.521	.125		4.164	.000
	Continuous innovation	.693	.035	.897	19.588	.000

a. Dependent Variable: market share

**ANOVA (b)**

Model	Sum of Squares	Df	Mean Square	F	Sig.
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1	Regression	139.679	1	139.679	383.674	.000 <sup>b</sup>
	Residual	33.857	428	.364		
	Total	173.537	427			

**a. Dependent Variable: market share**

**b. Predictors: (Constant), Continuous innovation**

The statistical results showed an R-squared value of 0.805, meaning that continuous innovation explains 80.5% of the variation in market share for the selected companies, while the remaining 19.5% can be attributed to factors outside the model. The ANOVA test yielded an F-statistic of 383.674 and a p-value of 0.000, confirming the model's statistical significance. This suggests that the relationship between continuous innovation and market share is robust and unlikely to have occurred by chance.

The coefficients table also demonstrated a significant positive relationship between continuous innovation and market share, with a standardized beta coefficient of 0.897 and a p-value of 0.000. These results indicate that as continuous innovation improves, market share increases significantly. Given the p-value is less than 0.05, the null hypothesis (H02) is rejected, confirming that continuous innovation has a significant impact on the market share of Food and Beverages companies in Lagos State, Nigeria.

### Hypothesis Three:

H<sub>03</sub>: Product design have no significant effect on the productivity of Food and Beverages companies in Lagos State, Nigeria.

### Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.911 <sup>a</sup>	.831	.829	.40245

**a Predictors: (Constant), Product design**

### Coefficients (a)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.288	.135		-2.125	.036
	Product design	1.207	.059	.911	20.424	.000

**Dependent Variable: productivity**

### ANOVA (b)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	67.566	1	67.566	417.159	.000 <sup>b</sup>

Residual	13.767	428	.162		
Total	81.333	427			

**a. Dependent Variable: market share**

**b. Predictors: (Constant), Continuous innovation**

The statistical results showed an R-squared value of 0.805, meaning that continuous innovation explains 80.5% of the variation in market share for the selected companies, while the remaining 19.5% can be attributed to factors outside the model. The ANOVA test yielded an F-statistic of 383.674 and a p-value of 0.000, confirming the model's statistical significance. This suggests that the relationship between continuous innovation and market share is robust and unlikely to have occurred by chance.

The coefficients table also demonstrated a significant positive relationship between continuous innovation and market share, with a standardized beta coefficient of 0.897 and a p-value of 0.000. These results indicate that as continuous innovation improves, market share increases significantly. Given the p-value is less than 0.05, the null hypothesis (H02) is rejected, confirming that continuous innovation has a significant impact on the market share of Food and Beverages companies in Lagos State, Nigeria.

**Hypothesis Three:**

H03: Product design have no significant effect on the productivity of Food and Beverages companies in Lagos State, Nigeria.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.911 <sup>a</sup>	.831	.829	.40245

a Predictors: (Constant), Product design

**Coefficients (a)**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.288	.135		-2.125	.036
	Product design	1.207	.059	.911	20.424	.000

Dependent Variable: productivity

**ANOVA (b)**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	67.566	1	67.566	417.159	.000 <sup>b</sup>
	Residual	13.767	428	.162		
	Total	81.333	427			

a. Predictors: (Constant), Product design

b. Dependent Variable: productivity

The results revealed that the R-squared value is 0.831, indicating that 83.1% of the variation in productivity can be explained by product design, with the remaining 16.9% due to factors outside the model. The ANOVA analysis produced an F-statistic of 417.159 and a significance level of 0.000, confirming the statistical significance of the regression model. This suggests that the relationship between product design and productivity is not due to random chance.

Further analysis of the coefficients indicated a standardized beta coefficient of 0.911 and a p-value of 0.000, showing a strong positive relationship between product design and productivity. As product design improves, productivity also increases. Based on these results, the null hypothesis (H03) is rejected, and it is concluded that product design significantly influences the productivity of Food and Beverages companies in Lagos State, Nigeria.

### Discussion of Findings

The findings of this study revealed significant relationships between total quality management (TQM) practices namely, process management, continuous innovation, and product design and the organisational performance of Food and Beverages companies in Lagos State, Nigeria. The results show that process management has a strong positive effect on profitability, accounting for 85.1% of the variation in profitability, which underscores the importance of efficient processes in maximizing profits (Kenton & Barnier, 2020). This finding aligns with previous research by Singh, Kumar, and Singh (2018), which also identified a positive relationship between TQM practices and organizational performance, particularly in enhancing profitability. In terms of continuous innovation, the results indicated that it explained 80.5% of the variation in market share. This finding supports the view that innovation is crucial for maintaining and expanding market share, as firms that continuously innovate are better positioned to respond to market changes and consumer demands (Byukusenge et al., 2018). This aligns with studies by Zaidi and Ahmad (2020), which highlighted the significant role of innovation in boosting competitive advantage and market performance. Finally, the impact of product design on productivity was found to be significant, with 83.1% of productivity variation explained by product design. This supports the assertion that well-designed products not only meet customer needs but also enhance operational efficiency (Antunes et al., 2021). The findings are consistent with research by Uko (2018), which noted the positive effect of TQM practices, including product design, on operational performance in the Food and Beverages sector.

### 5. Conclusion and Recommendations

This study examined the impact of total quality management (TQM) practices specifically, process management, continuous innovation, and product design on the organisational performance of Food and Beverages companies in Lagos State, Nigeria. The findings revealed that these TQM practices significantly influence key performance indicators,

including profitability, market share, and productivity. Process management was found to have a substantial effect on profitability, continuous innovation on market share, and product design on productivity. These results highlighted the critical role of TQM in enhancing operational sustainability and competitive advantage within the industry. Consequently, adopting and strengthening TQM practices is essential for companies seeking to improve their operational performance and remain competitive in the evolving market landscape.

### Recommendations

1. Based on the strong positive relationship between process management and profitability, companies should focus on optimizing their operational processes. This includes investing in advanced process management systems and training employees to improve efficiency, reduce waste, and enhance overall profitability.
2. The study found that continuous innovation significantly affects market share. Therefore, it is recommended that Food and Beverages companies invest in research and development (R&D) to foster a culture of innovation. Regularly updating product offerings and adopting new technologies will help firms maintain a competitive edge and expand their market presence.
3. Given the significant impact of product design on productivity, companies should focus on improving their product development processes. Incorporating customer feedback, utilizing modern design tools, and enhancing cross-functional collaboration during the product development phase can lead to more efficient operations and higher productivity levels.

Future research could explore the impact of other TQM practices, such as supplier quality management and employee engagement, on organizational performance. Additionally, studies could assess the long-term effects of TQM practices on firm sustainability and investigate their applicability in other sectors beyond the Food and Beverages industry.

### Reference

- Akpan, P. L., & Ikon, C. M. (2016). Economic environment and performance of Food and Beverages sub-sector of a developing economy: Nigeria. *International Journal of Recent Research in Commerce Economics and Management*, 3(3), 85-90.
- Al-Jarrah, M., Hailat, K., & Jarah, B. (2023). Total quality management and its role in improving customer relations in Jordanian Islamic banks. *Uncertain Supply Chain Management*, 11(1), 119-126. <https://doi.org/10.5267/j.uscm.2022.11.003>
- Al-Saffara, G., Nasser, A., & Obeidatb, A. (2020). The effect of total quality management practices on employee performance: The moderating role of knowledge sharing. *Management Science Letters*, 10, 77–90. <https://doi.org/10.5267/j.msl.2019.8.014>
- Antunes, M., Mucharrerria, P., Justino, M., & Teixeira-Quiros, J. (2021). Effects of total quality management (TQM) dimensions on innovation: Evidence from SMEs. *Sustainability*, 13(10), 1-18. <https://doi.org/10.3390/su131810095>
- Ariguzo, V. A., Amos, N. B., Egwakhe, A. J., & Adefulu, A. D. (2019). Lean manufacturing system adoption and profitability: Nigerian Food and Beverages firms' position. *International Journal of Advanced Research*, 7(9), 912-920. <https://doi.org/10.21474/IJAR01/9737>
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99-120. <https://doi.org/10.1177/014920639101700108>

- Binuyo, A., & Ogunberu, A. (2020). Project schedule and productivity of selected telecommunication firms in Nigeria. *Global Scientific Journal*, 8(3), 1710-1721.
- Botsiou, M. G., Koutsou, S., & Dagdilelis, V. (2014). Innovation and success: Perceptions, attitudes and practices of young farmers. *Scientific Bulletin–Economic Sciences*, 13(2), 12-21.
- Brady, M. (2008). Human resource management and its influence on productivity. *International Journal of Management*, 16(2), 155-170.
- Byukusenge, T., Shukla, J., & Irechukwu, N. (2018). Influence of marketing strategy elements on market share: Case study of brewing companies in Rwanda. *International Journal of Research in Management, Economics and Commerce*, 8(5), 115-124.
- Dada, A. (2018). Bridging research-industry divide in Food and Beverages Enterprises: Empirical evidence from Southwestern Nigeria. *Journal of Engineering and Engineering Technology*, 12(1-2).
- Dorothy, A., Alila, P., & Omosa, K. (2007). Examining service experiences and post-consumption evaluations. *Journal of Services Marketing*, 1(2), 12-330.
- Eisenhardt, K. M., & Martin, J. A. (2000). Dynamic capabilities: What are they? *Strategic Management Journal*, 21(10/11), 1105-1121. [https://doi.org/10.1002/1097-0266\(200010/11\)21:10/11<1105::AID-SMJ133>3.0.CO;2-E](https://doi.org/10.1002/1097-0266(200010/11)21:10/11<1105::AID-SMJ133>3.0.CO;2-E)
- Ezenyilimba, E., Ezejiofor, R., & Afodigbueokwu, H. (2019). Effect of total quality management on organizational performance of deposit money banks in Nigeria. *International Journal of Business & Law Research*, 7(3), 15-28.
- Giwa, P., Akinlabi, B. H., & Fasola, I. O. (2020). Effect of total quality management and just-in-time on operational performance of flour mills companies in Lagos state. *Global Scientific Journal*, 8(5), 1438-1450.
- Gladson, N. (2015). Customer relationship management and marketing performance: The study of Food and Beverages Firms in Nigeria. *European Journal of Business and Management*, 7(15), 85-95.
- Halilu, B.R., Mohd, N. S., & Muhammad, H. H. (2017). Moderating effect of access to finance on the relationship between total quality management, market orientation and small and medium enterprises performance: A proposed framework. *International Review of Management and Marketing*, 7(1), 119-127.
- Hisrich, R. D., & Ramadani, V. (2017). Creativity, innovation and entrepreneurial manager. In *Effective Entrepreneurial Management*. Springer Texts in Business and Economics. Springer, Cham.
- Ho, Y. S., Cavacece, Y., MorettaTartaglione, A., & Douglas, A. (2023). Publication performance and trends in total quality management research: A bibliometric analysis. *Total Quality Management & Business Excellence*, 34(1-2), 97-130. <https://doi.org/10.1080/14783363.2022.2031962>
- Jaggi, B., & Considine, J. (2018). Differences in financial characteristics of owner-controlled and non-owner controlled acquired firms. *The Mid-Atlantic Journal of Business*, 26(2), 15.



Juda, M. A. (2014). Total quality management concepts and applications. Dar Wael Publishing.

Kenton, W., & Barnier, B. (2020). Profit definition. Investopedia. <https://www.investopedia.com/terms/p/profit.asp>

Kua, C. (2016). The effect of total quality management (TQM) and work-life balance towards job satisfaction. *Total Quality Management Journals*, 4(6), 50-63.

Lee, R., & Mason, A. (2010). Fertility, human capital, and economic growth over the demographic transition. *Eur J Population*, 26, 159–182. <https://doi.org/10.1007/s10680-009-9186-x>

Lopez, S. V. (2005). Competitive advantage and strategy formulation: The key role of dynamic capabilities. *Management Decision*, 8(4), 153-171.

Makinde, O. G., Akinlabi, B. H., Adefulu, A. D., & Vyas-Nikunj, N. (2023). Quality management practices and competitive advantage of selected food and beverage manufacturing firms in Lagos state, Nigeria. *European Journal of Human Resource Management Studies*, 6(2), 146-169. <https://doi.org/10.46827/ejhrms.v6i2.1487>

Maswadeha, S., & Al Zumot, R. (2021). The effect of total quality management on financial performance by moderating organizational culture. *Accounting*, 7(1), 441-450.

Matiu, J. (2017). Employee productivity on organizational performance in the Kenyan banking sector: A case of Kenya commercial bank. *Journal of Strategic Management*, 24(2), 66-84.

Okolo, B. (2017). Market share as a driver of profitability in the Nigerian beverage sector. *Journal of Strategic Marketing*, 15(1), 24-37.

Owusu, P., & Duah, H. (2018). Evaluating total quality management as a competitive advantage tool in mobile telecommunication services in Ghana. *European Journal of Research and Reflection in Management Sciences*, 6(1), 9-22.

Patil, H., & Sirsikar, S. (2018). Product design and development: Phases and approach. *International Journal of Engineering and Technical Research*, 1(9), 57.

Rajapathirana, R., & Hui, Y. (2017). Relationship between innovation capability, innovation type, and firm performance. *Journal of Business Research*, 69(12), 5675-5681. <https://doi.org/10.1016/j.jbusres.2017.06.002>

Reed, R., & Lemak, D. J. (2000). Total quality management and sustainable competitive advantage: A resource-based view. *Journal of Operations Management*, 18(1), 37-56.

Santos, J. B., & Brito, L. A. L. (2012). Toward a subjective measurement model for firm performance. *Brazilian Administration Review*, 9, 95-117.

Sarkissian, S., & Schill, M. (2010). Cross-listing waves. Retrieved from <http://mpra.ub.uni-muenchen.de/27545>

Shire, Y., & Oringo, J. (2020). Total quality management practices and performance of public hospitals in Embu County, Kenya. *International Journal of Scientific Engineering and Science*, 4(10), 58-71.

- Singh, A., & Masuku, M. (2014). Sampling techniques and determination of sample size in applied statistics research: An overview. *International Journal of Economics, Commerce and Management*, 2(11), 1-22.
- Sonko, M. L., & Akinlabi, H. B. (2020). Inventory management and profitability of Food and Beverages manufacturing companies in Lagos State, Nigeria. *IOSR Journal of Business and Management*, 22(5), 10-18.
- Stravinskiene, I., & Serafinas, D. (2020). The link between business process management and quality management. *Journal of Risk and Financial Management*, 13(10), 1-11.
- Uko, R. (2018). Quality management practices and performance of Food and Beverages firms in Port Harcourt. *International Journal of Advanced Academic Research, Social & Management Sciences*, 4(1), 77-93.
- Wagner, S. M. (2008). Innovation management in the German transportation industry. *Journal of Business Logistics*, 29(2), 215-231.
- Wanza, L., Ntale, J., & Korir, M. (2017). Effects of quality management practices on performance of Kenyan universities. *International Journal of Business and Management Review*, 5(8), 53-70.
- WTO. (2021). World Trade Organization report on Nigeria's manufacturing sector. World Trade Organization Annual Report.