Continuous Process Improvement and Customer Satisfaction of Selected Food and Beverage Companies in South-West, Nigeria

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Abstract

The food and beverage manufacturing sector is a highly competitive and dynamic industry. Organizations in this sector must be proactive in identifying corporate strategies to enhance business sustainability. One of the key strategies for optimum performance is the application of continuous process improvement through customer satisfaction. This study examined the influence of Continuous Process Improvement on Customer Satisfaction in some selected Food and Beverage Companies in South-West Nigeria. A descriptive research design was adopted for the study, with a questionnaire as the research instrument. The sample size was restricted to 400, using a stratified random sampling technique for sample selection. The basic criteria for inclusion in the sample were job rank and organizational tenure of five years or more. A Four-rating Likert Scale questionnaire with reliability coefficients above 0.76 was used to obtain data from the respondents. Data collected were analysed by using both descriptive and inferential statistics. The main hypothesis for the study was tested by using regression analysis at 0.05 level of significance. The findings of the study revealed that Continuous Process Improvement does not have a statistically significant influence on Customer Satisfaction. The study concluded that Continuous Process Improvement is very important in maximizing customer satisfaction in the Food and Beverage sector. However, it was recommended that as a result of the insignificant relationship between continuous process improvement and customer satisfaction, companies in this industry should focus on other factors such as product quality, customer service, and pricing to improve customer satisfaction. In addition, these organizations also need to align their improvement process needs with the demands of customers in order to boost customers' delight.

Keywords: Customer satisfaction, Continuous improvement, Product Quality, Price, employee involvement

1.0 Introduction

The Nigerian business environment has remained very unfriendly with many businesses, regardless of their year of existence, thereby witnessing a downward trend in their performance level. A lot of organisations have performed far below expectations in terms of continuous improvement and customer satisfaction. This depressing situation can be attributed to the high costs of production and the prevailing economic depression in the global economy. Our nation Nigeria, when compared with other countries like South Africa, and Egypt, has so many food and beverage companies, but the performances of these organizations in our country have

depreciated over the years. Recently, quite a number of these companies which are foreign-owned have relocated to African neighbouring countries, such as Ghana, Cotonou, etc. The situation has remained unabated despite the implementation of a policy mix by successive governments (Goetsch& Davis, 2019).

Moreover, the paucity of properly trained professionals in any establishment will make such businesses suffer.   A manufacturing organization is only as good as the people that run the business. Many employees in some organizations still lack the prerequisite skills to operate successfully.   Very competent and highly skilled employees are not too many in some organizations in this sector, because the majority of these establishments prefer to hire unskilled casual workers who will do the factory jobs at the cheapest rates. These skills are very important to operate types of equipment that can produce high-quality that can enhance customer satisfaction. In addition, a lot of business owners are finding it difficult to cope with the present situation in the country and would rather minimize the quality of their products in order to maximize profits. They are more concerned about profitability than customer satisfaction (Sadikoglu & H.Olcay, 2014).

Statement of the Problem

In the manufacturing sector, food and beverage company is an integral part, which can also be categorized into sub-divisions such as chocolate and sugar confectioneries, soft drinks and carbonated water, flour and grain, fruit juices, food products, etc. Finance is very vital to the survival of any business organization.   Several factors may require funding such as the need to expand operations, increase production, in acquiring more staff. Many of these firms lack free access to loans while the cost of borrowing is quite outrageous. At such rates, a good amount of the profit made by manufacturers is used to pay debts to the banks (Bashan &Armon, 2019).

Also, the sudden rise in the exchange rate has grossly retarded the continuous improvement of the organizations in this sector. The prices of raw materials have increased outrageously. This has forced many food and beverage companies to either reduce the quality and sizes of their products or increase the prices. All these and many more are posing as challenges to organizations in this sector, which are also having adverse effects on customer satisfaction. In spite of this, continuous improvement is a subject that still needs further research and to be analyzed in a more complete way. In this sense, there are studies (Almaiman, & McLaughlin 2018), that identified the cultural aspects that facilitate Continuous Improvement, while stating its importance for achieving the desired benefits. Also, another study proposed a framework for continuous improvement by determining its key forces for improving customer value (Heavey et al. 2018). There is still a lack of an overarching vision of this process in the industry. However, in order to bridge the gap from existing literature, this research was focused on how to provide valuable insights for practitioners in the industry by shedding more light on the importance of effective continuous improvement process in enhancing customer satisfaction in manufacturing companies.

Objective of the study

The main objective of this study was to investigate the effect of continuous improvement on customer satisfaction in selected Food and Beverage Companies in South West, Nigeria.

Research Hypothesis

$H_{01:}$ There is no significant relationship between continuous process improvement and customer satisfaction.

2.0 Literature Review

2.1 Continuous Improvement

Continuous Improvement can be defined as a planned, organized, and systematic approach to improving organizational performance. It has been known over the years as an approach with the main purpose of enhancing processes or performance in an organization (Gonzalez & Aken, 2016). The term Continuous Improvement was derived from the Japanese word Kaizen which was developed by Masaaki Imai (Sanchez-Ruiz et al. 2020). Continuous improvement has been widely popularized and implemented through various methodologies, among those, the most important and well-known are Lean Manufacturing, Lean Six Sigma, and Six Sigma (Gutierrez-Gutierrez, 2019, McLean et al., 2017, Costa et. 2018). It was found in the literature that the widespread adoption of the Continuous Improvement approach not only leads to a better performance level, but also contributes to the innovation of the organization (Khan et al. 2019). This extensive interest is well-known and its widespread implementation is said to be highly motivated by the changes in the business environment, which constantly forces companies to keep on improving their performance in order to remain competitive and be able to fulfill customer demands(Khan et al. 2019).

The concept has been evolving along with the changes in the environment, it has been constantly ratifying its great importance for organizations. Being a general term and a necessity for organizations, it enhances better organizational performance, in order to remain competitive in the market and to adapt to the new context (Khan et al. 2019). It is certainly a process in which a key factor is the knowledge and involvement of the entire organization (McLean et al., 2017).

Organisations are under enormous pressure to improve productivity and remain competitive in the global market and an increased responsibility awareness towards society and environmental issues (Taddeo et. al. 2019, Munoz-Villamizar et al. 2018). In response to these challenges, companies focus their activities on business sustainability which is defined as the capacity to generate added value in the short, medium, and long term for their different stakeholders, minimizing the negative impact on society and the environment (Abbas 2020, Medne, & Lapina, 2019). There are different approaches to achieving business sustainability one solution is Continuous Improvement which is considered as one of the core strategies to achieve manufacturing excellence (Abbas 2020, Amaral et. al 2016,). The crucial components of Continuous Improvement implementation are an improvement system (structure) and active employee involvement at all levels of the organization, through work teams (Garcia-Arca, 2011).

Improvement system is applying a formalized programme that establishes a set of steps to achieve a general or specific purpose (Girodon et al. 2012). The successful implementation of

Continuous Improvement depends much on employee involvement at all hierarchical levels of an organization and the implemented systems. The prior research in advanced economies identified the critical factors for developing personnel participation as follows: management commitment; personnel commitment; involvement based on work teams; availability of key performance indicators for monitoring participation activities; an organizational structure for supporting participation activities; methodology for managing personnel proposals; continuous communication in participation activities; middle manager commitment; unions commitment; specific training for developing participation system both individually and as a team; availability of resources; adoption of a recognition/reward system for participants (Bolis, et al. 2012).

Employee involvement is defined in different ways by various authors. It is the process by which employees are empowered to partake in managerial decision-making and improvement activities suitable to their ranks in the organization (Neri, Cagno, Di Sebastiano & Adrianni, 2018). Employee involvement is a procedure connecting participation, communication, and decision making which leads to industrial democracy and employees' motivation. Involvement of employees in an organization's operation motivates and enables them to effectively and successfully add value to the organization. Involvement can be referred to as the participation of employees in decision-making and problem-solving, and increased autonomy in work processes. It connotes the idea of allowing employees to participate in decisions that affect them, increasing their autonomy and control of their work, and delegating more authority and responsibility to them, in other to make them more committed, motivated, and satisfied with their jobs in an organization (Nigri, &Baldo, 2018).

Employee involvement refers to participatory management. It is the organization and leadership attitude about how people are most enabled to donate (Nigri, &Baldo, 2018). It can also be described as a management viewpoint on how to enable the employees to contribute to organizations' continuous improvement and success (Neto, Pinto, Amorim, Giannetti& Almeida 2018). It helps managers to obtain the commitment of workers and indirectly ensures the survival or success of any planned change. From the noted definitions, employee involvement thus can be seen as an organizational process and practice initiated by management to authorize employees to contribute to managerial decision-making and improvement activities for organizational improvements and development.

The key component of these definitions is that it is initiated by management. Employees are allowed to participate in managerial decision making and problem solving. It involves increased work harmony and unity among employees. It entails greater delegation of authority and responsibility to employees. It is aimed at organizational improvements and development. Employee involvement is advocated due to rising need in finding ways to make jobs more meaningful and satisfying to the employees, obtain their full commitment and loyalty to contribute their full skills, knowledge, abilities and expertise to help organizations develop competitive edge over their rivals in the face of present harsh economic conditions and to help them contend with today's intense competition. Today's innovative business does not keep away vital decisions affecting their employee from them. Thus employees at all levels are involved in decision making (Neto, Pinto, Amorim, Giannetti& Almeida 2018).

If employees want to appreciate the value of innovation and be dedicated to changing their behavior at work in new and better ways, they must be involved. The managerial strategy of

"command and control" is no longer suitable for today's enterprises. When employees are allowed to be part of the formulation and implementation of decisions that directly affect them, even if through delegation of authority, they see such decisions as their own having been involved from the beginning, and also work to ensure the success of such decisions and its objective. Employee involvement thrives in organizations with intentionally established work cultures, systems and processes that encourage and make use of employee input and feedback (Paipa-Galeano, et al. 2020).

Nevertheless, the national cultural framework in which the business functions determine how much a worker participates in organizational activities. In countries with high power distance culture, decision-making is considered as a right of top management and participation by subordinates are seen as a violation to management right. In contrast, in low power distance culture, everyone is perceived to have the potential to contribute to the decision-making process; in fact, everyone is assumed to 'have equal rights'. As such, employees consider it their right to take part in decisions affecting and concerning them. In individualism cultures, each member is responsible for his actions. One's participation in decision making is not the business of everyone else. Whereas in collectivistic cultures the entire group may be held accountable for the decision of its individual members.

For this reason, the making and approval of decisions are the responsibility of the entire group. Employee involvement and teamwork can foster employee motivation and success through the opportunities to learn and to practice new skills. The increasing of workforce's knowledge, skills and motivation will lead the company's success (Ranganathan, Pramesh, & Aggarwal, 2017). A study indicated that using employee involvement effectively has a positive impact on perceived organizational performance (Sofijanova, & Chatleska, 2013). One of the major components TQM is people management, complete employee involvement, significantly affects both financial and operational success.

2.2 Customers Satisfaction

Customer satisfaction can be defined as the extent to which a product's perceived performance matches a buyer's expectations (Dekoulou, & Trivellas, 2017). Customer loyalty, contentment, repurchase interest, little desire to file a complaint, willingness to suggest the product, and the company's reputation are just a few of the indications that make up customer satisfaction. Customer satisfaction is determined by the quality and price of the products desired by the customer. The issue of **product quality** and **price** are considered as the foundation to build up consumer satisfaction. Product quality is a critical determinant of consumer satisfaction. Moreover, price can be used as a resource to increase both profit and customer satisfaction (N. BeuterJúnior, K. Faccin, B. Volkmer Martins, & A. Balestrin, 2019). Another factor that affects customer satisfaction is customer value. Customer value is an evaluation of the benefits of a product or service that is perceived by customers as compared to what the customers had dedicated to get the product or service (Dekoulou & Trivellas, 2017).

Customer value is seen as a ratio of the benefits felt by the customer along with its sacrifice. Customer value delivery can satisfy customer demand, and make the customer satisfied (Júnior, Faccin, Martins, & Balestrin, 2019). Similarly, better customer value as compared to what the competitors will deliver make customers feel satisfied and in turn will drive him to be loyal. It

is clear from the aforementioned expert viewpoints that customer satisfaction may be influenced by product quality, price, and customer value. The implementation of this sacrifice is in line with the exchange process such as transaction costs and the risk of the products offered by the company. There will be disappointment when the ratio value that is perceived by the economic sacrifices of the customers with the products offered by the companies are not in accordance with the customer expectations. Otherwise, when the ratio value is appropriate or exceeds the customer expectations, customers will feel such satisfaction. Another idea about customer value is that it is the perception of the customer about the quality and the benefit of the product, towards the sacrifice to pay the price. Customer value can be measured by functional value, emotional value and social value (Radicic, Pugh, & Douglas, 2020).

Product quality refers to the consumer's opinion of the overall quality or excellence of a good or service in comparison to alternatives for the purpose for which it was created (Dekoulou, & Trivellas,2019). It is the characteristic of a product that bears on its ability to satisfy stated or implied customer need. It is important to note that the quality of the product is not reviewed by the company's standpoint; it is seen from the perspective of the customer. Associated with that, it raised two important factors that affect the quality of the product, namely the expected product quality and the perceived product quality.

The perceived product quality must be in line with the expectation of the customer as he/she has seen the product quality as a good quality and also feels satisfied. Conversely, if the perceived product quality is not as expected, then the quality of the product as the customer perceived will be categorised as a bad product quality. Therefore, whether a product is seen to be good or terrible depends on the company's capacity to live up to customers' expectations. The quality of the product consists of several indicators, namely performance, features, reliability, compliance, durability, service ability, aesthetics, and perceived quality (Dekoulou, & Trivellas,2019).

Price is defined as something that can be measured which consists of several indicators, such as the affordable price, the fair price, discounted price, competitor price, and price suitability(P. Dekoulou, & P. Trivellas,2017). Price is the amount of money charged for a product or a service; the sum of the values that customers exchange for the benefits of having or using a product or service. How customers perceive a certain price, in which the high-low price of a product can be a significant effect on a customer intention to purchase the product. Customer will give an attention to the price paid by other customers, no one is happy to pay more cash compared to other customers. The fairness of the price will influence the perception of the customers and it ultimately will influence their willingness to become a customer.

Empirically, researches conducted in the past have revealed a body of evidence on the relationship between continuous improvement and customer satisfaction. In a study(León-Rodríguez, García-Peñalvo, & Galán-García, 2017), it was found that continuous process improvement does not significantly impact customer satisfaction in the banking industry of Bangladesh (Kim et al. 2019). Similarly, another study found that continuous improvement initiatives in the restaurant industry did not have a significant effect on customer satisfaction. Contrariwise, the findings of those studies differ from other researches that have shown a positive relationship between continuous process improvement and customer satisfaction. For example, in a study, it was found that continuous process improvement positively impacted

customer satisfaction in the Brazilian service industry(Rahman, Hossain &Alam, 2018).A related study also found that continuous process improvement positively affected customer satisfaction in the Spanish hotel industry (Amponsah-Tawiah, J. Mensah, & S. Donkor, 2015).

In addition, results ofa researchshowed that quality and price of product encourage an increase in customer value. In other words, there is a high correlation between the product quality and price with the value of the customer, if the increased product quality and price is competing, it will create an increase in customer value. There is a similarity in the research in some studies which explained that the increase in the customer value requires an increase in the product quality as well (D. Jurburg, E. Viles, M. Tanco, & R. Mateo. 2018).   The results of these studies supported the research which proved that price has a positive effect on customer value. The comparisons with previous studies explain that product quality and price has a good level of generality to improve customer satisfaction.

In a study, it was found that customer value could boost customer satisfaction, this means that a product functions to ensure satisfaction, it will also increase the interest of customers to buy again(K.H. Hanzaee & R.M Yazd, 2016).   Functional products with good quality and satisfaction could make the customers to repurchase. First-time customer who buys a product and feels the benefits of the product will later choose the same product with the same brand and even choose the same seller as well Ismail Razak, Nazief Nirwanto, Boge Triatmanto, 2016).   The link between customer value and customer satisfaction has proven a high impact; the better the customer value, the higher the customer satisfaction. The results of this study do not differ from the study carried out by another researcher, even though it was conducted in a different location, it has proven that customer value can improve customer satisfaction in Indonesia.

A research found that product quality and price is able to boost customer value where it ultimately creates a customer satisfaction. The meaning behind that statement is that customer is an important part of this discussion. The facts show that the quality and price of the product becomes an option to increase customer satisfaction. However, product quality increased customer satisfaction better than the price. When the quality and price is in accordance with customer expectations, the customer will be satisfied without examiningthe value of the product. While at the same time, it is precisely the quality of the product itself that create a satisfaction in advance.

3.0 Methodology

Research Design, Population and Sampling Technique

This study adopted descriptive research design, using questionnaire as a research instrument.The study population consists of Six thousand, nine hundred and forty-seven (6,947) employees who are full time staff of selected food and beverage companies in southwest Nigeria.The sample size was restricted to 400 which was calculated using Taro Yammane (1967) statistical formula. Stratified random sampling method was used for sample selection.
The basic criteria for inclusion in the sample was job rank and organizational tenure of five years or more.

Research Instrument

Questionnaire was the main instrument used for data collection. The research instrument was self –administered by the researcher, with the help of two trained research assistants. A total number of 400 copies of the questionnaire were administered to full time staff of selected food and beverage companies in southwest Nigeria. From the total questionnaire administered, 389 were returned and found useful for analysis giving a response rate of 97.3%.

Validity of Research Instrument

The study adopted content and construct validity in line with related relevant literature in order to test the validity of the research instrument. The Cronbach's alpha for internal consistency of the items of the questionnaire was conducted. Based on the result carried out on the items of the questionnaire, the results showed a minimum coefficient of 0.75 and maximum coefficient of 0.89. Hence, the questionnaire was adjudged as valid and reliable.

Data Analysis

The primary data collected were analyzed using descriptive and inferential statistics. Descriptive statistics was used to examine both the dependent and independent variables in the study. This is because it helps to organize and summarize the data presenting it in a more coherent manner. The hypothesis was tested at 0.05 level of significance, using inferential statistics, ANOVA and regression analysis.

4.0 Results

4.1 Demographic information of the Respondents

Demographic information of the respondents is presented as follows: The results showed that male respondents 265(68.1%) dominated the study while the remaining 124(31.8%) are females. This represents a ratio of 2:1 across the gender group skewed in favour of males. These findings are in line with previous studies which confirmed that the Nigerian wage employment structure has high participations of male employees than female (Longe 2012 and FITC, 2011). The demographic information about the respondents' age revealed that majority of the respondents 205(52.7%) wereunder 30 years of age, 91(23.4%) were between 31- 40 years of age, 63 (16.2%) were between 41-50 years of age while the remaining 30(7.7%) were 50 years and above. Information about the educational qualification of the respondents revealed that the study is dominated by respondents with HND/First degree certificates 244(62.7%) respondents, followed by 85(21.9%) with masters' degree certificate, 25(6.4%) are secondary certificate holders, 21(5.4%) possessed national diploma certificates while the remaining 14(3.6%) are Ph.D. holders. In terms of employees cadres, respondents who were junior staff with 218(54.5%), constituted majority of the study, followed by senior staff with 137(34.3%) while the remaining respondents were management staff 45(11.2%).

It was also found that with regard to the work experience of the respondents, majority of them 175(73.9%) had been on the job for about 5-10 years now, followed by 96(24.7%) who had spent close to 10-15 years on the job, 69(17.7%) had garnered at least 15-20 years of job experience while the remaining 49(12.6%) have spent about 20 years and above on the job.

Table 4.1: Descriptive Analysis of the Extent at which Continuous Improvement Process is being Practiced in the Selected Organizations

S/N	Continuous Improvement Items	Very Large Extent	Large Extent	Fair	Low Extent	Mean Score value	Standard Deviation
1.	To what extent is continuous improvement a useful aspect that can enhance competitiveness, efficiency, quality and performance?	149 38.30%	135 34.70%	30 7.770%	75 19.30%	2.92	1.108
2.	Is continuous improvement related to maintenance performance, and has a particular set of routines that assists an organization to improve performance?	74 19.00%	150 38.60%	75 19.30%	90 23.10%	2.53	1.046
3.	Does the adoption of the continuous improvement approach lead to a better performance level, which also contributes to the innovation of the organization?	179 46.00%	180 46.30%	30 7.70%	0 0.00%	3.38	0.626
4	What is the extent of successful implementation of continuous improvement thatdepends on employee involvement at all hierarchical levels of an organization and the implemented system?	180 46.30%	194 49.90%	15 3.90%	0 0.00%	3.42	0.568

Weighted mean = 3.06 Std. dev = 0.84

Source: Field Survey 2023.

Table 4.1 explains the predominant continuous process in Food and Beverages companies in Southwest, Nigeria. The result showed that the respondents indicated that some of the continuous improvement process include: successful implementation of continuous improvement depends much on employee involvement at all hierarchical levels of an organization and the implemented system ($\bar{x}$=3.42; std dev. = 0.568); adoption of the

continuous improvement approach not only leads to a better performance level, but it also contributes to the innovation of the organization ($\bar{x}$=3.38; std dev. = 0.626); while the least continuous improvement process was that continuous improvement is related to maintenance performance, and has a particular set of routines that assists an organization to improve performance ($\bar{x}$=2.53; std dev. =1.046).

Table 4.2: Descriptive Analysis of the Responses on Customer Satisfaction

S/N	Items	VO	O	R	VR	Mean	Std. Dev
1.	Acceptability of our products to customers is really high.	146 37.50%	218 50.600%	25 6.40%	0 0.00%	3.31	0.586
2.	We deliver our products on time to customers.	196 50.40%	176 45.20%	17 4.40%	0 0.00%	3.46	0.580
3.	Our product quality and price commensurate with our customers' satisfaction.	200 51.40%	171 44.00%	18 4.60%	0 0.00%	3.47	0.585
4	Our customers are always willing to recommend our products to their friends and families.	197 50.60%	172 44.20%	20 5.1%	0 0.00%	3.46	0.593
	Weighted mean = 3.43		**Std. dev = 0.59**				

Key: VO = Very Often, O = Often, R = Rarely, VR = Very Rarely
Source: Field Survey 2023

For the customer satisfaction of the firms, Table 4.2explains that the respondents indicated that some of the areas where they feel that customers are satisfied with their products/services include: their products' quality and price commensurate with customers' needs and satisfaction ($\bar{x}$=3.47; std dev. = 0.585); products are delivered on time to customers ($\bar{x}$=3.46; std dev. = 0.580); while the least among them was that there is high acceptability of their products to customers ($\bar{x}$=3.31; std dev. = 0.586).

Research Hypothesis
H_{01}: There is no significant relationship between continuous process improvement and customer satisfaction.

Table 4.6 ANOVA for the Relationship between Continuous Improvement and Customer Satisfaction of Selected Food and Beverage Companies in South-West Nigeria

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	0.524	1	0.524	0.523	0.470[b]
	Residual	387.476	387	1.001		
	Total	388.000	388			

Source: Field Survey, 2023.

The table 4.6 shows ANOVA result indicating that the regression model is not statistically significant, as shown by the p-value of 0.470. The Regression Sum of Squares of 0.524 indicates that the model explains a very small amount of variation in the dependent variable (customer satisfaction). The Residual Sum of Squares of 387.476 indicates that there is still a large amount of unexplained variation in the dependent variable.

Table 4.7 Regression Result for the Relationship between Continuous Improvement and Customer Satisfaction of Food and Beverage Companies in South-West Nigeria

	Coefficients^a							
		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	2.236E-17	0.051		0.000	1.000		
	Continuous Process Improvement	-0.052	0.072	-0.037	-0.723	0.470	1.000	1.000

Source: Source: Field Survey, 2023.

The regression result as presented by the Coefficients table 4.7 shows that the standardized coefficient (Beta) of -0.037 indicates that continuous process improvement has a very weak negative effect on customer satisfaction. The coefficient for Continuous Improvement is -0.052, which means that for every one-unit increase in continuous process improvement, there is a 0.052 unit decrease in customer satisfaction. This may be because the improvement systems of the organizations involved are not in line with the demands of the customers and this mismatch may lead to a decline in customer satisfaction. The p-value of 0.470 indicates that this coefficient is not statistically significant. The test for multicollinearity examined by the tolerance higher than 0.2 (Tolerance = 1) and variance inflation factor (VIF) which is less than 3 (VIF = 1) which imply the absence of multicollinearity in the model.

Table 4.8 Model Summary for the Relationship between Continuous Improvement and Customer Satisfaction of Food and Beverage Companies in South-West Nigeria

	Model Summary^b				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.037^a	0.001	-0.001	1.00061483	2.108

Source: Field Survey, 2023.

The Model Summary is presented in Table 4.8 which shows that the regression model has an R value of 0.037, which indicates a weak positive correlation between continuous process improvement and customer satisfaction. The R Square value of 0.001 indicates that only 0.1% of the variation in customer satisfaction can be explained by the variation in continuous process improvement. The Std. Error of the Estimate of 1.00061483 indicates that the model's

predictions are, on average, 1 standard deviation away from the actual values. The Durbin-Watson statistic of 2.108 indicates that there is no autocorrelation in the residuals.

Hence, with the p-value of the t-statistics at 0.470 which is higher than 0.05 adopted level of significance. Hence the study accepted the null hypothesis which states that there is no significant relationship between continuous process improvement and customer satisfaction in Food and Beverage Companies in South-West Nigeria.

4.0 Discussion of Findings

The objective explored the extent to which continuous improvement process affect customers' satisfaction of Food and Beverage Companies in South-West Nigeria. Empirical evidence from the findings revealed that continuous improvement process has no statistically significant effect on customer satisfaction. The results showed that the coefficient for Continuous Improvement is -0.052, which means that for every one-unit increase in continuous process improvement, there is a 0.052 unit decrease in customer satisfaction. This may be due to fact that the improvement systems of these organizations are not in line with the demands of the customers, leading to a mismatch that could result in a decline in customer satisfaction.

This position has been buttressed by the results of earlier studies conducted in the service industry.In a study, it was found that continuous process improvement does not significantly impact customer satisfaction in the banking industry of Bangladesh (Kim et al. 2019). Similarly, another study found that continuous improvement initiatives in the restaurant industry did not have a significant effect on customer satisfaction (León-Rodríguez, García-Peñalvo, & Galán-García, 2017). However, the findings of this study differ from those of other studies that have shown a positive relationship between continuous process improvement and customer satisfaction. For example, in a study, it was found that continuous process improvement positively impacted customer satisfaction in the Brazilian service industry(Rahman, Hossain &Alam, 2018). A related study found that continuous process improvement positively affected customer satisfaction in the Spanish hotel industry (Amponsah-Tawiah, Mensah, & Donkor, 2015).

Moreover, a research found that the product quality improvement and the competitive price could increase customer satisfaction (Hanzaee & Yazd, 2016). Logical consequences when the customer is satisfied with the reliable product that emphasizes a standardized quality followed with an affordable price can increase the customer satisfaction, It appears in the interest of the buyers to re-purchase over and over again. The result of that study was also similar to the research of two other studies which proved that the quality of the product can improve customer satisfaction (Hanzaee & Yazd, 2016; Ismail Razak, Nazief Nirwanto, Boge Triatmanto, 2016).

5.0 Conclusion and Recommendations

The study showed that continuous process improvement has no significant impact on customer satisfaction in the food and beverage industry in South-West Nigeria. These findings provide valuable insights for practitioners in the industry and contribute to understanding, the importance of effective continuous improvement processin enhancing customer satisfaction. However, as a result of the insignificant effect of continuous process improvement, companies

in this industry should focus on other factors to improve customer satisfaction, such as product quality, customer service, and pricing. In addition, these organizations also need to align their improvement process needs with the demands of customers to in order improve customer satisfaction.

Methodologically, this study has systematically gathered its findings using quantitative approach, which made the study findings unique and robust with reliable body of evidence on continuous improvement and customer satisfaction. This methodology has offered an explicit approach in providing a more detailed and objective technique to the conduct of the study.

However, primary data collected from food and beverage company employees in south-west Nigeria, formed the basis of this study, but future research using longitudinal secondary data could strengthen analysis. More extensive research is needed to explore the relationship between continuous process improvement and customer satisfaction in more details, using larger sample sizes or different data collection methods. Similarly, more research is required to investigate the relationship between customer focus and innovation performance, while identifying other influential factors. Conducting focused research in other industries and geographical locations within and outside Nigeria would give better understanding and provide valuable insights for industry practitioners.

References

Abbas, J. (2020) *Impact of total quality management on corporate sustainability through the mediating effect of knowledge management.* **Journal of Cleaner Production**, 244, 2020, 118-206.

Almaiman, S. & McLaughlin P. (2018). *Facilitating a Continuous Improvement Culture: A Literature Review*, **Advances in Transdisciplinary Engineering**, 8(1), IOS Press BV, 493–498.

Amponsah-Tawiah, K, Mensah, J. & Donkor, S. (2015). *The Effect of Training and Development on Employee Job Satisfaction in the Hospitality Industry in Ghana: A Case Study of Selected Hotels in the Greater Accra Region*. **Journal of Tourism and Hospitality Management,** 3(2), 20-27.

Anna, B., Bondarouk, T. & Labrenz, S. (2017). *HRM Implementation in Multinational Companies: The Dynamics of Multifaceted Scenarios*. **European Journal of International Management** 11(1), 515–36.

Bashan A. & Armon D., *Quality Management Challenges in a Dynamic Reality of Mergers, Acquisitions and Global Expansion.* **International Journal of Quality & Reliability Management,** 36 (7), 2019, 1192–1211.

Beuter Júnior, N., Faccin K., Volkmer Martins B., & Balestrin A. (2019)., *Knowledge-Based Dynamic Capabilities for Sustainable Innovation: The Case of the Green Plastic Project*, **Sustainability**, 11(8), 2019, 2392.

Costa M.G, Filho L.D., Fredendall F., José F., & Paredes G. (2018). *Lean, Six Sigma and Lean Six Sigma in the Food Industry*: *A Systematic Literature Review*, **Trends in Food Science and Technology**, 82(1), 2018, 122–133.

Dekoulou P. & Trivellas, P. (2017). *Organizational Structure, Innovation Performance and Customer Relationship Value in the Greek Advertising and Media Industry*, **Journal of Business & Industrial Marketing**, 32(3), 385-397.

Goetsch & Davis (2019). *The Influence of Total Quality Management toward Organization Performance.* **Management Science Letters** 9(9), 137-1406.

Gonzalez Aleu, F. & Van Aken, E.M. (2016). *Systematic Literature Review of Critical Success Factors for Continuous Improvement Projects"*, **International Journal of Lean Six Sigma**, Emerald Group Publishing Ltd., 7(3), 214–232.

Gutierrez-Gutierrez, L. & Antony, J. (2019). *Continuous Improvement Initiatives for Dynamic Capabilities Development: A Systematic Literature Review*", **International Journal of Lean Six Sigma**, 11(1), 125–149.

Hanzaee, K.H & Yazd, R.M. (2016). *The Impact of Brand Class, Brand Awareness and Price on Two Important Consumer Behavior Factors; Customer Value and Behavioral Intentions*. **African Journal of Business Management**. 4(17), 3775-3784.

Heavey, C. Ledwith, A. & E. (2014). Murphy, *Introducing a New Continuous Improvement Framework for Increased Organisational Return on Investment*, **TQM Journal**, Emerald Group Publishing Ltd., 26(6), 594–609.

Ismail Razak, Nazief Nirwanto, Boge Triatmanto, (2016). *The Impact of Product Quality and Price on Customer Satisfaction with the Mediator of Customer Value*. **An International Peer-reviewed Journal** Vol.30, ISSN 2422-8451.

Jurburg, D. Viles, E. Tanco, M. & *Mateo,* R. (2018). *Continuous Improvement Leaders, Followers and Laggards: Understanding System Sustainability*. **Total Quality Management & Business Excellence,** 29(7-8), 817-833.

Khan, S.A. Kaviani, M.A. Galli, B.J & Pharma, A. (2019). *Application of Continuous Improvement Techniques to Improve Organization Performance A Case Study*, **International Journal of Lean Six Sigma**, 10 (2), 2019, 542–565.

Kim, M. J. Kim, H. J. & Kim, S. H. (2019). *The Effect of Continuous Improvement on Customer Satisfaction in Restaurant: The Mediating Role of Customer Trust*. **International Journal of Hospitality Management, 7**6(1), 171-179.

León-Rodríguez, A. L. García-Peñalvo, F. J. & Galán-García, J. L. (2017). *The Influence of Continuous Process Improvement on Customer Satisfaction in the Hotel Industry.* **Journal of Cleaner Production.** 164(1), 387-395.

McLean, R.S. Antony, J. & Dahlgaard, J.J. (2017). *Failure of Continuous Improvement Initiatives in Manufacturing Environments: A Systematic Review of the Evidence,* **Total Quality Management & Business Excellence**, 28 (3–4), 219–237.

Medne A. & Lapina I. (2019). *Sustainability and Continuous Improvement of Organisation: Review of Process- Oriented Performance Indicators.* **Journal of Open Innovation: Technology, Market, and Complexity,** 5(3), 49.

Munoz-Villamizar A., Santos J. Viles E. & Ormazabal, M. (2018). *Manufacturing and Environmental Practices in the Spanish Context*. **Journal of Cleaner Production***, 178, 268-275.

Neri, A. Cagno, E. Di Sebastiano, G. & Trianni, A. (2018). *Industrial Sustainability: Modelling Drivers and Mechanisms with Barriers.* **Journal of Cleaner Production***, 194(1), 452-472.

Nigri, G. & Del Baldo M. (2018). *Sustainability Reporting and Performance Measurement Systems: How Do Small and Medium-Sized Benefit Corporations Manage Integration?* **Sustainability***, 10(12), 4499.

Neto, G.C.O. Pinto, L.F.R, Amorim, M.P.C., Giannetti, B.F. & Almeida, C.M.V.B. (2018). *A Framework of Actions for Strong Sustainability*. **Journal Cleaner Production***, 196(1), 1629-1643.

Paipa-Galeano, L., Bernal-Torres, C.A., Otalora, L.M.A., Jarrah Nezhad, Y., & Gonzalez-Blanco, H.A. (2020). *Key Lessons to Maintain Continuous Improvement: A Case Study of Four Companies.* **Journal of Industrial Engineering and Management***, 13(1), 195-211.

Pinto, L.F.R., Venturini, G.D.F.P. Digiesi, S. Facchini, F. & Oliveira Neto G.C.D, (2020) *Sustainability Assessment in Manufacturing Under a Strong Sustainability Perspective – An Ecological Neutrality Initiative*. **Sustainability***, 12(21), 9232.

Radicic D., Pugh G., & Douglas D. (2020), *Promoting Cooperation in Innovation Ecosystems: Evidence from European Traditional Manufacturing SMEs*, **Small Business Economics**, 54(1),257-283.

Rahman M. M., Hossain M. & Alam. M.S, (2018). *Continuous Process Improvement and Its Impact on Customer Satisfaction in the Banking Industry: Evidence from Bangladesh.* **Journal of Business Research**, 88(1), 499-507.

Ranganathan, P. Pramesh, C.S. & Aggarwal, R. (2017) *Common Pitfalls in Statistical Analysis: Logistic Regression.* **Perspectives in Clinical Research***, 8(3), 148-151.

Sofijanova, E. & Chatleska, V.Z (2013). *Employee Involvement and Organizational Performance: Evidence from the Manufacturing Sector in the Republic of Macedonia.* **Trakia Journal of Sciences**, 11, 31-36.

Sadikoglu & H. Olcay (2014). *The Effects of Total Quality Management Practices on Performance and the Reasons of and the Barriers to TQM Practices in Turkey.* **Journal of Advances in Decision Sciences**, Article I.D. 537605.

Sanchez-Ruiz, L. Gomez-Lopez, R. & Blanco B. (2020). *Barriers to Effectively Implementing Continuous Improvement in Spanish Firms.* ***Total Quality Management and Business Excellence***, Routledge, 31(13–14),1409–1426.

Taddeo R., Simboli A., Di Vincenzo F., & Ioppolo G (2019)., *A Bibliometric and Network Analysis of Lean and Clean(er) Production Research (1990/2017).* **Science of the Total Environment**, 65(3),765-775.