

CUSTOMER FOCUS AND OPERATIONAL EFFICIENCY OF MANUFACTURING FIRMS IN RIVERS STATE, NIGERIA

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ABSTRACT

The study examined the relationship between customer focus and operational efficiency of manufacturing firms in Rivers State, Nigeria. The measures of operational efficiency used are product quality and on-time delivery. The study adopted a cross-sectional survey research design. The target population was the 34 manufacturing firms registered with the Manufacturing Association of Nigeria, as obtained from the 2022 updated Directory of Rivers state zone of the association. However, the study elements were 102 which comprised managers from the production, marketing and operations departments of the respective 34 manufacturing firms. The study adopted a census sampling since the population of the study was relatively small. Data for the study was collected through structured questionnaires, while the five-point Likert scale was used to measure the responses from the respondents. The face validity of the survey instrument was achieved through supervisor's scrutiny and approval. Data was analysed using mean and standard deviations with charts to display the study variables, while inferential statistics such as the Spearman's Rank Order Correlation Coefficient Statistics technique was used to test the hypotheses with the aid of Statistical Package for Social Science version 29.0 for the purpose of examining the nature and proposed association. The results of the study showed that there is a positive and significant relationship between customer focus and operational efficiency. The study concludes that customer focus has a strong influence on the product quality of manufacturing firms in Rivers State. The study also concludes that customer focus has a strong influence on on-time delivery of manufacturing firms in Rivers State. The study therefore recommends that manufacturing firms in Rivers State, Nigeria should create more distribution channels in other to get their products delivered to the customers on-time.

Keywords: Customer focus, On-time delivery, Operational efficiency, Product quality

INTRODUCTION

There is a need to be efficient in operations at work in today's business environment, where competition is tough, change is quick, and resources are hard to come by. Efficiency is the quality of doing something well without wasting materials, time and money. Johnson & Lee (2012) defined operational efficiency as the ability to deliver products and services cost effectively without sacrificing quality. Operational inefficiency can lead to low outputs, low product quality and increases production lead time. Operational inefficiency costs the firm time, money, it diminishes work quality and increases risks (Bagshaw, 2020). Therefore, it is important for manufacturing firms to improve the efficiency of their production processes in order to lessen the threat of manufacturing inefficiency. A firm can be considered efficient if

that firm can employ the same number of inputs to produce higher level of outputs compared to other firms (Akbar, 2010).

Due to the importance of operational efficiency, many studies have been carried out on it. Johnson et al (2012) investigated a firm's operational efficiency with both queueing models and productivity and efficiency analysis methods that identify maximum productivity and measure efficiency as a ratio of observed productivity to maximum productivity. Bagshaw (2020) examined work line balancing and production efficiency of manufacturing firms in Rivers State, Nigeria. Bagshaw (2018) examined the relationship between lean manufacturing and efficiency of 53 manufacturing firms listed with the Manufacturers Association of Nigeria in Rivers State, Nigeria. Okolocha and Anugwu (2022) examined the effect of lean manufacturing approach on efficiency of pharmaceutical companies in Anambra State. Sarkis (2000) studied operational efficiency in the flight industry. The empirical study evaluated the operational efficiencies of 44 major U.S. airports using data envelopment analysis and some of its recent developments.

Lam, Yeung and Cheng (2016) carried out research on the impact of Firms' Social Media initiatives on operational efficiency and innovativeness. Taking the resource-based view of firms' information capability, they considered firms' social media initiatives as strategic resources for operational improvement. They posited that firms' social media initiatives enhance dynamic knowledge-sharing routines through an information-rich social network, leading to both operational efficiency and innovativeness. Also, Nwokeji (2017), analysed data quality management and its effect on the operational efficiency of selected manufacturing companies with fully computerised Accounting information system in Anambra state, Nigeria. Furthermore, Khan (2022) carried out a study to determine the factors that affect the operational efficiency of Saudi commercial banks. The study used data of listed banks from the period 2010 to 2017. It showed that capital adequacy, profitability and bank size have an influence on operational efficiency.

Eletu, Nwuche and Akhigbe (2021) examined empirically the nexus between learning capability and operational efficiency of manufacturing firms in Nigeria. A survey design was adopted and a population of 13 manufacturing firms in south west, Nigeria were covered. A sample size of ninety-eight (98) respondents were covered. The systematic sampling tech was used. Copies of questionnaire were used in gathering data for the study and the retrieved data was analysed using the spearman rank order correlation coefficient. Based on the analysis, the findings revealed that learning capability in terms of experimentation and participative decision making had a positive and significant relationship with product quality and timeliness.

Also, Fullante and Alvarez (2022) carried out a study with the purpose of identifying the success of the ISO 9001 program and its contribution to the success of operational efficiency in Adamson University. Furthermore, Machinini (2010) examined the impact of six sigma on operational efficiency in North America. Despite all of these studies on operational efficiency, researchers have found that majority of organizations have failed to achieve operational efficiency, which has resulted in issues like inefficiency in business administration, costs money, wastes time, diminishes work quality, increases risk and prevents management from focusing on strategic decisions that drive the business forward (Bagshaw, 2018). This study therefore sought to fill the gap by examining the relationship between quality control practices and operational efficiency of manufacturing firms in Rivers State.

LITERATURE REVIEW

Theoretical Foundation

The three orientations or viewpoints (Transformation, Flow, and Value-generation) that make up the TFV theory are partial and complimentary rather than conflicting or rival theories. These perspectives all speak to different facets of the manufacturing phenomena (Koskela, 2000). Due to its three points of view, the TFV theory provides a wider framework. The transformation viewpoint holds that production is about converting inputs into outputs. According to this perspective, production management entails breaking down the overall transformation into simpler transformations and tasks, obtaining the inputs for these tasks at the lowest feasible cost, and carrying out the tasks as effectively as possible (Koskela, 2000). The basic goal of transformation is to increase productivity in an effective way. The hierarchy of breaking down the overall transformation into smaller transformations (i.e., tasks) and minimizing the cost of each job separately are suggested by the principles of production in transformation (Ahmad, 2020). The Flow view claims that manufacturing is a material flow that involves transformation, inspection, movement, and waiting. According to Koskela (2000), flow is "movement that is smooth and uninterrupted." The primary goal of the flow perspective is to reduce waste in flow operations by supporting ideas like lead-time compression, variability reduction, and simplification (Koskela, Howell, Ballard & Tommelein, 2002).

The elimination of waste, or non-value-adding operations, is the core tenet of the flow view (Ahmad, 2020). In order to provide the best value to the client, the concept of production as value-generation was first introduced in the 1930s (Koskela et al., 2002). According to the Value-generation view of production management, it is important to accurately translate client wants into design solutions before creating goods that adhere to the chosen design (Koskela, 2000). The usefulness, functioning, utility, and benefit of a product can all be considered aspects of value. According to this perspective, the ultimate goal of the production process is the consumer's intended use of a product. As a result, value for the consumer is the main value viewpoint in Koskela's TFV production theory. As a result, the notion of value in this tradition may be provided as a production output that the customer requests. The key premise of the value-generation viewpoint is the elimination of value loss, or the reduction of the gap between the achieved value and the maximum attainable value (Ahmad, 2020).

When manufacturing firms become customer focused, they identify the needs and expectations of their customers, and then satisfy those needs by creating value for their money. The focus here is seeing customers as topmost priority, thereby producing quality products. Production management according to the Value-generation view is to accurately translate customer needs into a design solution, and then developing products which conform to the specified design (Koskela, 2000). Value can be about the usefulness, functionality, utility, and benefit of a product. This point of view holds that the intended use of a product by the consumer is the ultimate purpose of the manufacturing process. Therefore, the concept of value within this tradition might be given as an output of production that the client demands. Eliminating value loss, or reducing the difference between the achieved value and the greatest feasible value, is the main tenet of the value-generation perspective (Ahmad, 2020).

The concept of Customer Focus

The concept customer focus means meeting the needs and expectations of current and potential customers by developing a comprehensive understanding of customer needs and then delivering perceived value to customers. The expected outcomes of a customer focus strategy are creating value for customers which leads to loyal customers which in turn leads to business profitability (Sharabi, 2015). The term customer refers to either the firm purchasing the offering in a business-to-business (B2B) setting and/or the end-user of the offering in a business-to-consumer (B2C) setting. Thus, the term is used to describe the actor who uses the offering and, as a result, forms a perception of the offering's quality. Customer focus implies the ability to take customers' viewpoints into account to increase the organization's understanding of its customers, managing the quality of an offering as it is being used by the customer, and facilitating quality improvements for both current and future product and service offerings.

Customer-focused businesses devote their resources to identifying and addressing the demands of their consumers, providing exceptional client service, and incorporating customer feedback into product design and other business choices, among other activities (Cravens & Piercy, 2017). Customer-focused firms make decisions based on how those decisions affect their customers, unlike businesses that place profits above everything else in their decision-making. It is a long-term approach that fosters loyalty and trust among customers. In the current highly competitive business environment, companies/organizations often become more responsive and sensitive to customers' changing demands and needs. Continually reinforcing 'customer focus' is vital to sustaining and attaining competitive business advantages (Madhani, 2020).

A customer-focused business values and relies on positive customer experience and feedback. Every time end-users become satisfied with the services and goods provided, and they are likely to remain loyal. Customer feedback ensures that a business outdoes the completion and improves its bottom line. Customer is the most important part of the production line; product should be aimed at the needs of the customer. Obtaining customer complaint information is to seek opportunities to improve product and service quality (Deming, 1986). Customer satisfaction may very well predict the future success or failure of a firm. Thus, it is very important to find customer satisfaction and perception of quality. The insights gained can clearly help the firm improve quality. In-depth marketing research can suddenly identify arising customer needs. The attainment of quality requires the performance of a wide variety of identification activities of quality tasks such as the study of customers' quality needs, design review, and field complaint analysis (Juran & Gryna, 1993).

Firms should understand what the customer needs and wishes are now and, in the future, so that products and services can be designed to satisfy those needs and wishes (Deming, 1986). In order to pursue customer focus, firms should always provide warranties on their products sold to customers. Thus, customers will reduce their risk in buying products. Firms should pay sufficient attention to customer services. In a word, pursuing customer focus efforts should be a long-term business strategy; it is never ending (Juran and Gryna, 1993). Meeting the customers' requirements means that the company is offering a quality product which is the foundation of successful business operations. Companies consistently offering quality products often have a loyal customer base who keep purchasing from the same supplier while offering the products/ services to their peers helping the company add new customers to its base. Apple could be given as an example as they are known for their quality and innovation which has a loyal customer base who purchase their products as soon as they are out seeing

the company as reliable and consistently delivering innovative products that suit their needs (Arikkök, 2017).

Manufacturing firms depend on their customers and therefore should understand current and future customer needs, meet customer requirements and strive to exceed customer expectations. For an organization to be successful, it has to align their operational practices to what the customer needs. This means putting measures in place where communication between management of the organization and the customer is two-way for flow of ideas and issues, to feedback being relayed both ways. (Nnadi, Akawnonu & Okafor, 2018) Customer focus is the orientation of an organization toward serving its clients'. The consumers have become more aware of the variety of products in the market. Thus, customers are the focus of manufacturing such that every organization has to study what customers' needs are, and satisfy them in order to remain in business by offering products of desired quality.

The Concept of Operational Efficiency

Operational efficiency is a term used to describe the state or level at which a manufacturing firm is producing the greatest number of units while utilizing the least number of resources possible. The idea is to achieve a balance of task assignments in the work stations as not to overload or under-load a given work station (Bagshaw, 2020). The term 'efficiency' refers to the situation where the cost is minimized and resource utilization is maximized. Efficiency refers to performance in manufacturing firms measured through factor productivity analysis (Ahmed & Haider, 2013). Johnson et al (2012) defined operational efficiency as the ability to deliver products and services cost effectively without sacrificing quality. A business enterprise can improve its current and future firm performance by increasing operational efficiency (OE). A corporation must reduce waste and redundancy while maximizing the assets that are most important to its success and making the best use of its people, technology, and business procedures in order to achieve operational efficiency (Akinlabi, 2021). Hence, operational efficiency is the ability of an organization to reduce waste in time, effort and materials as much as possible, while still producing high-quality service or product.

According to Ndanusa & Daniel (2020), operational efficiency refers to the capability of an organization to deliver products or services to its customers in the most cost-effective manner possible while still ensuring the high quality of its products, service and support. Operational efficiency looks at an organization's capabilities and performance. It also looks at an organization's ability to minimize waste of inputs and maximize resource utilization so as to deliver quality, cheaper products and services to their customers. Operational metrics tracking shows how well the company performs the processes delivering products or services to its customers in the most cost-effective manner possible while still ensuring the high quality of its products, service and support. Operational efficiency KPIs provide a way to determine if a company is controlling costs and not wasting time, materials and labor, which is at the heart of operational efficiency (Schwarz, 2022). Efficiency is a vital feature of a well-organized manufacturing sector and it can be seen as the relationship between the volume of output generated and the number of inputs utilized in the course of production. In a nutshell, it is measured as the ratio of output in relation to the number of inputs employed in a production process (Muhammad, Eva & Hizir, 2018). In this study, operational efficiency was measured in terms of product quality and on time delivery.

Measures of Operational Efficiency

Product Quality

Product quality can be defined as the quality perceived upon the basis of the consumer's decision on the overall excellence or superiority of the product. Again, product quality is the degree to which satisfaction is met by inherent elements in the product. It is the intrinsic properties in the product that gives satisfaction to the consumer (Bagshaw, 2020). Khoironi, Syah and Dongoran (2018) in defining product quality cited (Trentin et al., 2012) is the ability of a product to perform its function; it includes the products of overall durability, reliability, precision, ease of operational repair and other valued attributes. Product quality is the ability of a product to perform its function. It includes overall robustness, reliability, precision, easy to use and repair and the value of other attributes in a product.

Product quality is a product or service characteristic that provides the ability to meet customer needs. Product quality is defined as a product or service in its ability to satisfy the stated or implied customer requirements (Naini, Santoso, Andriani, Claudia & Nurfadillah (2022). Product quality has two dimensions: the level of consistency to develop a product; the company must see and choose a quality level that will support product positioning. This quality level means the product's quality in carrying out its function so that the resulting product can be of high quality and must be maintained by the company. One of the important elements in the business world is providing value to customers which does not only include objects that are tangible but also objects that are intangible, that is including packaging, service characteristics, brand name as well as performance quality. Customer's satisfaction and value is thus linked to a product's quality which has a significant impact towards service performance or the product (Kotler & Armstrong, 2012).

If the product quality matches the expectations of the consumer, then the perceived quality of the product is seen to be acceptable (Nigel, 2009). The customers view of quality of the product or service is as a result of the customers comparing their expectations of the product or service with their perception of how it performs. If the product quality is more than expected by the consumer, then the consumer is satisfied and the product quality perceived to be high, again if the product quality is less than expected, then quality is low and the customer is likely to be dissatisfied (Dundar & Ozturk, 2020). Thus, the customer's view of quality of the product or service is as a result of the customers comparing their expectations of the product or service with their perception of how it performs. Customers are presently more concerned with the amount of quality they obtain from a product, thus maintaining strong, long-term relationships with them is crucial to the survival of manufacturing businesses in today's business environment. It is said that quality is the perception of an overall superiority of a product or service with respect to its intended purpose, relative to alternatives and is a multidimensional notion (Bagshaw & Tarurhor, 2018).

On-Time Delivery

The On time delivery in its performance index is all order lines which are produced on time and ready to be shipped from the warehouse before or on the due date specified on the order (Donderwinkel, 2015). On-time delivery is measured on the basis of the amount of time taken from concept to delivery of the final product to the market. If a manufacturing unit is able to deliver goods on time it gains competitive advantage in the marketplace (Wanjikugichuki, 2018). The time factor has been considered as representing a competitive advantage over the last few years, and is a fundamental measurement of manufacturing performance. The reduction in the time taken from the moment the material is received to the moment the

product is delivered to the customer serves as an indicator of the speed of the processes. In the same way, the percentage of delivery dates complied with is a typical measurement of punctuality (Merino, 2021).

On-time delivery is the extent of how well the delivery date and the delivered quantity corresponds to what has been confirmed based on the lead-time. Overall, the lead-time performance contains many different dimensions like the lead-time length and the on-time delivery, but also the adaptability and flexibility of the lead-time. For some customers there are deliveries every day, but for some other customers, mainly for longer destination or lower volume customers, there are few the most optimal shipping dates defined per week. As an example, for one customer there are Monday, Wednesday and Thursday as shipping dates via air freight and Tuesday via sea freight. Few customers have also some special limitations from their side, like for example only complete deliveries are allowed or some special inspection or payment must be conducted before the shipment can be done. In these cases, customers should order accordingly with the lead-time that the request can be realistically completed. In some cases, the case company is not able to send the total quantity at once due to lack of components or huge quantity ordered. If partial delivery is shipped, the last partial delivery that completes the order line is considered in the ROTD percentage calculation.

On-time delivery (OTD) is one of the top industrial metrics that needs to be met by the firm's original promised date (OPD) to the customer. To improve OTD, on-time receipt (OTR) of material from suppliers and subcontractors is required. To achieve any realistic and sustained improvement in OTD performance, all the functional units and associated systems must be considered (Ramachandran & Neelakrishnan, 2017). On-time criteria mean that the delivery should not be late, but neither too early, because there are some mismatches in the process if either of those happens. Delivered "in-full" is the synonym of customer getting exactly the amount they have ordered (Sorvali, 2020). Performance of OTD process has a significant importance for most of the companies. It determines companies' capability to produce a certain amount of goods in a certain time. The faster OTD process is the faster company is capable to respond to customer needs (Heinonen, 2015). The most fundamental requirement for a manufacturing or distribution business is to deliver to customers what they want; in the quantity they want; when and where they want it.

Delivery in full, on time (DIFOT) is the ultimate measure of the performance of the supply chain. The purpose of the supply chain is to deliver to customers the firm's products they need in the quantity they need, when they need them (McLean, 2016). According to Sundström & Tollmar (2018), on time delivery as a delivery precision, is one of the most common Order-to-Delivery performance measurement. It determines if a perfect delivery has been achieved or not. The measurement is a driver for customer satisfaction and supply chain excellence. Delivery performance can be measured according to different dates, such as Delivery-to-request date and Delivery-to commit date. The delivery performance deeply relies on the quality of the information exchanged across the distribution channels and the way the information is presented. To be able to achieve high delivery performance, location, delivery channel and vehicle scheduling are important factors to improve delivery performance, the reduction of lead time.

Customer Focus and Operational Efficiency

Scheraga (2004) carried out a study to examine the relationship between the strategic focus of airline customer service activities and operational efficiency. The empirical investigation employed data for thirty-eight airlines for fiscal year 2000-the last full year before the events

of September 11, 2001. This sample was global in nature and included large international carriers, with nine from North America, ten from Europe, six from Latin America, twelve from Asia, and one from the Middle East. Operational efficiency was measured on strategically focused expenditures on operations, passenger services, and ticketing, promotion, and sales by means of a Tobit analysis. The results of the analysis suggested that focused expenditures on ticketing, sales, and promotion had a positive impact on operational efficiency.

Also, Kangethe (2015) carried out a study to examine the level of impact of customer quality focus practices and operational performance in the improvement of services among Kenyan government owned entities. The measures used are cost, delivery, quality, and speed of the introduction of a new good or service to the market. This study was a descriptive survey design. The population of interest in this study was thirty-four (34) commercial government owned entities in Kenya. Primary data was collected directly from the respondents in all commercial government owned entities in Kenya. Data collected, was tabulated and analyzed for purpose of clarity, using SPSS software. Data was presented using tables, and pie charts to make them reader friendly. In addition, a multiple linear regression was used to test the relationship among variables (independent) on customer satisfaction using SPSS. The result of the analysis suggested that there is a positive relationship between customer quality focus and operational efficiency. The study also concluded that that customer quality focus had influenced the operations of commercial government owned entities in Kenya to the extent of; increase in employee's attitude towards quality, enabling the organization to focus on core competences of business and improving services.

Furthermore, Ullah, Ajmal & Aslam (2016) carried out a study to examine the relationship between customer focus and organizational performance with mediating effect of competitive advantage and moderating effect of human resource. 500 copies of questionnaire were circulated in telecommunication companies and 250 received back of which 207 were valid. Different statistical techniques and tools were applied such as factor analysis, Pearson correlation, and multiple regression. Results of these statistical techniques have revealed that there is positive and significant association between independent variable (customer focus) and dependent variable (organizational performance). One of the organizational performance measures used is operational efficiency with regards to product quality and on-time delivery. This is the most fundamental facet of the quality culture to increase the performance of telecommunication companies as well as to achieve competitive edge. The needs of customers and their satisfaction have always to be kept in mind by all employees and top management.

Ho1: There is no significant relationship between customer focus and product quality in the manufacturing firms in Rivers State, Nigeria.

Ho2: There is no significant relationship between customer focus and on-time delivery in the manufacturing firms in Rivers State, Nigeria.

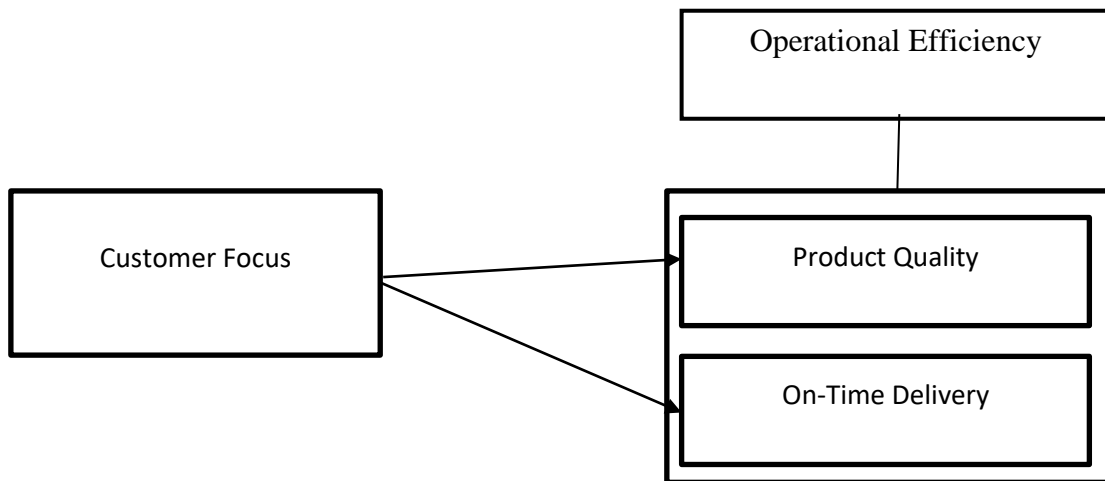


Figure 1: Operational framework for the hypothesized relationship between customer focus and operational efficiency

Source: (Bagshaw, 2020; Merino, 2003)

METHODOLOGY

Research design can be considered as the structure of research. It is the ‘glue’ that holds all of the elements in a research project together, in short it is a plan of the proposed research work (Akhtar, 2016). Ahiauzu, (2006) argues that the research design is influenced by the purpose of the study, type of investigation, unit of analysis and time frame of the study in collecting data). For the purpose of this study which was to examine the relationship between supplier quality management and operational efficiency of manufacturing firms in Rivers State, Nigeria, the study adopted a cross-sectional research design. Therefore, the target population of this study was thirty-four (34) manufacturing companies registered with the Manufacturing Association of Nigeria (MAN), as obtained from the 2022 updated. Participants of the study were selected in line with the unit of analysis which is the organization level study. By virtue of the aforesaid, three (3) representatives from each of the thirty-four (34) manufacturing companies were chosen to make up the study elements. This included managers from the production, marketing and operations departments of the respective thirty-four (34) manufacturing firms. These participants were chosen because it is in that cluster we have those who have the knowledge, intellect and official capacity to respond to the research instrument because some of the responses are not issues commonly dealt with every cadre of staff nor departments in the organization, rather those who are privy to corporate matters are deemed as most qualified to do so. However, the study elements will be (102) which consist of managers from the Production, marketing and operations departments of the respective 34 manufacturing firms.

Census sampling method was adopted because the target population of the study was relatively small. The main data collection instrument for the study was structured questionnaire. A total of one hundred and two (102) copies of questionnaires were distributed, eighty-three (83) copies were retrieved, nineteen (19) copies were not retrieved, four (4) copies were discarded and seventy-nine (79) copies were eventually used for the study. Data was analyzed using mean and standard deviations with charts to display the study variables, while inferential statistics such as the Spearman’s Rank Order Correlation Coefficient Statistics technique was used to test the hypotheses with the aid of Statistical Package for Social Science version 29.0 for the purpose of examining the nature and proposed association.

RESULTS

Table 1: Correlation Between Customer Focus and Operational Efficiency

		Customer Focus	Product Quality	On-time Delivery	
Spearman's rho	Customer Focus	Correlation Coefficient	1.000	.869**	.591**
		Sig. (2-tailed)	.	<.001	<.001
		N	79	79	79
	Product Quality	Correlation Coefficient	.869**	1.000	.614**
		Sig. (2-tailed)	<.001	.	<.001
		N	79	79	79
	On-time Delivery	Correlation Coefficient	.591**	.614**	1.000
		Sig. (2-tailed)	<.001	<.001	.
		N	79	79	79

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

Source: SPSS Output, 2023

Interpretation of Results: Table 1 presented the Spearman’s rank order correlation matrix for the relationship between customer focus and the measures of operational efficiency (product quality and on-time delivery) in the Manufacturing firms in Rivers State, Nigeria. From the data given in the table 1, the correlation results for **Ho1** and **Ho2** were given as:

Ho1 There is no significant relationship between customer focus and product quality in the manufacturing firms in Rivers State, Nigeria.

From the analysis, the result showed the correlation coefficient of $\rho = 0.869$ which shows the direction and strength of this relationship. The coefficient represents a very strong positive correlation between customer focus and product quality in the manufacturing firms in Rivers State, Nigeria. The test of significance shows that this relationship is significant at $p = .001 < 0.01$ which makes possible to the generalization of our findings to the study population. Therefore, based on observed findings, the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between customer focus and product quality in the manufacturing firms in Rivers State, Nigeria.

Ho2: There is no significant relationship between customer focus and on-time delivery in the manufacturing firms in Rivers State, Nigeria.

From the analysis, the result showed the correlation coefficient of $\rho = 0.591$ which shows the direction and strength of this relationship. The coefficient represents a moderate positive correlation between customer focus and on-time delivery in the manufacturing firms in Rivers State, Nigeria. The test of significance shows that this relationship is significant at $p = .001 < 0.01$ which makes possible to the generalization of our findings to the study population. Therefore, based on observed findings, the null hypothesis earlier stated is hereby rejected and the alternate upheld. Thus, there is a significant relationship between customer focus and on-time delivery in the manufacturing firms in Rivers State, Nigeria.

Customer Focus and Operational Efficiency

The first and second hypotheses sought to examine the relationship between Customer Focus and Operational Efficiency. Hence it was hypothesized that there is no significant relationship between customer focus and operational efficiency. These hypotheses (**Ho1** and **Ho2**) were tested using the PLS-SEM algorithm. The study findings reveal that customer focus has a very strong positive relationship with product quality and on-time in the manufacturing firms in Rivers State, Nigeria.

The finding agrees with previous finding by Scheraga (2004) who examined the relationship between the strategic focus of airline customer service activities and operational efficiency. The empirical investigation employed data for thirty-eight airlines for fiscal year 2000, the last full year before the events of September 11, 2001. This sample was global in nature and included large international carriers, with nine from North America, ten from Europe, six from Latin America, twelve from Asia, and one from the Middle East. Operational efficiency was measured by means of data envelopment analysis, using the input-oriented model specified by Ali and Seiford. Efficiency measures were related to strategically focused expenditures on operations, passenger services, and ticketing, promotion, and sales by means of a tobit analysis. The results of the tobit analysis suggested that focused expenditures on ticketing, sales, and promotion had a positive impact on operational efficiency.

The finding also agrees with Kangethe (2015) in the study that sought to examine the level of impact of customer quality focus practices and operational performance in the improvement of services among Kenyan government owned entities (GOEs). The measures used here are cost, delivery, quality, and speed of the introduction of a new good or service to the market. This study was a descriptive survey design. The population of interest in this study was all commercial government owned entities in Kenya. Currently there are thirty-four (34) commercial government owned entities in Kenya. Two kinds of data were used in this study, namely primary and secondary data. Primary data was collected directly from the respondents in all commercial government owned entities in Kenya.

Secondary data was obtained from existing literature in previous research paper findings, journal articles, text books, newspapers, reports and conference proceedings and the commercial government owned entities publications and website. Data collected, was tabulated and analyzed for purpose of clarity, using SPSS software. Data was presented using tables, and pie charts to make them reader friendly. In addition, a multiple linear regression was used to test the relationship among variables (independent) on the on-customer satisfaction using SPSS. The result of the analysis suggested that there is a positive relationship between customer quality focus and operational efficiency. The study also

concluded that that customer quality focus had influenced the operations of commercial government owned entities in Kenya to the extent of; increase in employee's attitude towards quality, enabling the organization to focus on core competences of business and improving services.

Furthermore, the finding agrees with Ullah et al (2016) in the study that sought to examine the relationship between customer focus and organizational performance with mediating effect of competitive advantage and moderating effect of human resource. 500 questionnaires were circulated in telecommunication companies and 250 received back of which 207 were valid. To examine the validity and reliability of data collected, different statistical techniques and tools have been applied like; Cronbach's alpha, factor analysis, Pearson correlation, and multiple regression. Results of these statistical techniques have revealed that there is positive and significant association between independent variable (customer focus) and dependent variable (organizational performance). One of the organizational performance measures used is operational efficiency with regards to product quality and on-time delivery. This is the most fundamental facet of the quality culture to increase the performance of telecommunication companies as well as to achieve competitive edge. The needs of customers and their satisfaction have always to be kept in mind by all employees and top management. It is compulsory to identify these needs and their level of satisfaction.

CONCLUSION AND RECOMMENDATIONS

The basis of the findings of this study concludes that customer focus has a significant relationship product quality and on-time delivery in the manufacturing firms in Rivers State, Nigeria. From the findings, we make the following recommendations:

- i) Manufacturing firms in Rivers State, Nigeria should pay more attention to satisfying the expectations of their customers by offering high product quality.
- ii) Manufacturing firms should create more distribution channels in order to make their products get delivered to their customers on-time.

REFERENCES

- Ahiauazu, A. I. (2006). CIMRAT working paper, Port Harcourt, CIMRAT.
- Ahmad, T. (2020). Explaining success in green building projects using transformation-flow-value-generation theory. 2nd conference on sustainability in civil engineering (CSCE'20).
- Ahmed, S. M. & Haider, Z. M. (2013). Effective utilization of resources in manufacturing firms. *Asian Journal of Emperical Research*, 3(7), 821-835.
- Akinlabi, B. H. (2021). Effect of Inventory management practices on operational performance of flour milling companies in Nigeria. *International Academy Journal of Management, Marketing and Entrepreneurial Studies* 8(2), 137-174, ISSN: 2382-7446.
- Akbar, R. A. (2010). Analysis of efficiency in Baitul Mal WaTamwil using DEA [Thesis]. Semarang: University of Dipenogoro.
- Akhtar, I. (2016). *Research in social science: interdisciplinary perspectives* (pp.17). Publisher: Social research foundation, Kanpur, India.
- Arikkök, M. (2017). *Total Quality Management*. 10.13140/RG.2.2.15304.72969. (Accessed as at 20/7/2023).

https://www.researchgate.net/publication/312054032_TOTAL_QUALITY_MANAGEMENT

- Bagshaw, K. B. (2020). Work line balancing and production efficiency of manufacturing firms in Rivers State, Nigeria. *American Journal of Industrial and Business Management*, 10, 45-60.
- Bagshaw, K. (2018). Lean application and efficiency of manufacturing firms: An empirical study of manufacturing firms in Rivers State, Nigeria. *International Journal of Management Excellence*, 11, 1553.
- Bagshaw, K. B. & Tarurhor, E. M. (2018). Quality correlates: An empirical assessment. *Singaporean Journal of Business Economics and Management Studies*. 6, 48-58.
- Demings, W. E. (1986). *Out of the Crisis: Quality, productivity and competitive position*. Cambridge University Press.
- Donderwinkel, S. (2015). *Improving the on time delivery performance by implementation of a sales inventory & operations planning process*. (Accessed as at 22/06/2023). https://essay.utwente.nl/68781/1/Donderwinkel_MA_BMS.pdf
- Dundar, A. O. & Ozturk, R. (2020). The effect of on-time delivery on customer satisfaction and loyalty in channel integration.
- Eletu, T. I, Nwuche, C. A. & Akhigbe, O. J. (2012). Learning capability and operational efficiency of manufacturing firms in Nigeria. *Journal of Emerging Trends in Economics and Management Sciences*. 12(4)
- Heinonen, K. (2015). Reducing the delivery time of order to delivery process. <https://core.ac.uk/download/pdf/38123226.pdf>
- Johnson, A. & Lee, C. (2012). *Operational efficiency*. (Accessed as at 21/05/2023). https://www.researchgate.net/publication/280840397_Operational_Efficiency
- Juran, J. M., & Gryna, F. M. (1993). *Quality analysis and planning*. Published by McGraw-Hill College.
- Khoironi, T. A., Syah, H., & Dongoran P. (2018). Product quality, brand image and pricing to improve satisfaction impact on customer loyalty. *International Review of Management and Marketing*, 8(3), 51-58
- Koskela, L. (2000). An exploration towards a production theory and its application to construction, PhD Dissertation, VTT Technical Research Centre of Finland, Helsinki University of Technology, 2000.
- Koskela, L., Howell, G., Ballard, G. & Tommelein, I. (2002) The foundations of lean construction, in design and construction: *Building in value*, 291, 211-226.
- Kotler, P. & Armstrong, G. (2012). *Principle of marketing*. 14th Edition. New Jersey. Prentice Hall Publishers.
- Lam, H. K. S., Yeung, A. C. L., & Cheng, T. C. E. (2016). The impact of firms' social media initiatives on operational efficiency and innovativeness. *Journal of Operations Management*, 47-48(1), 28-43.
- Machinini, A. (2010). The impact of six sigma on operational efficiency. (Accessed as at 3/06/2023). <http://hdl.handle.net/10394/4462>
- Madhani, P. M. (2020). Building a customer focused strategy: Conceptual frameworks and research propositions. *SSRN Electronic Journal*, 6(2), 456-470.
- McLean, T. (2016). *On time,in full: Achieving perfect delivery with lean thinking in purchasing, supply chain and production planning*. CRC press, Taylor and Francis Group
- Merino, J. (2003). Quality management practices and operational performance: Empirical evidence for Spanish industry. *International Journal of Production Research*, 41, 2763-2786.

- Muhammad, N., Eva, A., & Hizir, S. (2018). The efficiency of manufacturing sector: Empirical evidence from Aceh Province Indonesia. *Indonesian Journal of Business & Entrepreneurship*, 4(1), 1-22.
- Ndanusa, H. S. & Daniel, C. O (2020). Effect of supplier development on operational performance of manufacturing firms in Nigeria. *International Journal of Managerial Studies and Research (IJMSR)*, 8(6), 13-25.
- Nnadi, C. F., Akawnonu, N. G., & Okafor, O. P. (2018). An empirical analysis of quality control techniques and product quality in manufacturing firms in South East Nigeria. *International Journal of Academic Research in Economics and Management Sciences*, 7(3), 166–184.
- Nwokeji, N. E. (2017). Analysis of data quality and its effect on operational efficiency of selected manufacturing companies in Anambra. *COOU International Journal of Marketing Sciences*, 1(1), 101-118.
- Naini, N. F., Santoso, S., Andriani, T.S., Claudia, U. & Nurfadillah I. (2022). The Effect of Product Quality, Service Quality, Customer Satisfaction on Customer Loyalty. *Journal of Consumer Sciences*, 7(1), 34-50.
- Nigel, R. (2009). Determining customer satisfaction through perceived service quality. A study of Ethiopian mobile users. *International Journal of Mobile Marketing*. 4(1), 31-38.
- Okolocha, C. B. & Anugwu, C. C. (2022). Lean manufacturing approach and operational efficiency of Nigerian pharmaceutical companies in Anambra State. *Saudi Journal of Business and Management Studies*, 7(3), 94-99.
- Ramachandran, G. M. & Neelakrishnan, S. (2017). An approach to improving customer on-time delivery against the original promise date. *South African Journal of Industrial Engineering*, 28(4), 109-119.
- Sarkis J. (2000). An analysis of the operational efficiency of major airports in the United States. *Journal of Operations Management*, 18(3), 335-351.
- Scheraga, Carl. (2004). The relationship between operational efficiency and customer service. *Transportation Journal*, 43, 48-58.
- Schwarz, L. (2022) (Accessed as at 2/5/2023). <https://www.netsuite.com/portal/resource/articles/financial-management/business-efficiency-vs-effectiveness.shtml>
- Sharabi, M. (2015). *Encyclopedia of quality and the service economy*. Su Mi Dahlgard Park (Eds): Sage publishers.
- Sorvali, N. (2020). Improving the requested on-time delivery by analysing the data: The case company of X. (Accessed as at 2/4/2023). <https://www.theseus.fi/bitstream/handle/10024/348527/Improving%20the%20Requested%20On-Time%20Delivery%20by%20Analyzing%20the%20Data.pdf?sequence=2&isAllowed=y>
- Sundström, P. & Tollmar, K. (2018). Measuring performance of an order-to-delivery process - A study at Scania CV AB. (Accessed as at 7/5/2023). <http://kth.diva-portal.org/smash/get/diva2:1235617/FULLTEXT01.pdf>
- Ullah, A., Ajamal, M. A. & Aslam, W. (2016). Study of relationship between customer focus and organizational performance in the telecommunication organizations of Pakistan. *Information and Knowledge Management*, 6(2), 95-109.
- Wanjikugichuki, S. (2018). Influence of value management approaches on on-time delivery of products in Kenya: A survey of manufacturing firms in Naune. *IOSR Journal of Business and Management*, 20(3), 38-63.