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MATERIAL MANAGEMENT AND PRODUCTIVITY OF NIGERIA BOTTLING COMPANY ONITSHA ANAMBRA STATE

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***Abstract*:** *The study appraised the material management and productivity of Nigerian Bottling Company. The researcher developed four objectives such as; To determine the extent to which planning, material procurement, logistic and stock and waste control on productivity in Bottling Companies in Onitsha. This study is anchored on inventory management theory which posits that the chain of movement of material and information depends to a large extent on the availability of materials and the quality of information at the disposal of the chain operator. The study adopted survey method of research. Data were generated through primary and secondary sources. The method for data collection was questionnaire which was administered randomly among the staff of Nigerian Bottling Company. The population of the study was 288 staff. while two hundred and seventy (270) questionnaires were retrieved. The hypotheses were tested using regression analysis method at 0.05% level of significance. The findings of the study revealed, Planning has a significant effect on productivity in Bottling Companies in Onitsha given its F-value of 14.027. Material procurement has a significant effect on productivity in Bottling Companies in Onitsha given its F-value of 33.048. Logistic has a significant effect on productivity in Bottling Companies in Onitsha given its F-value of 9.418. Stock and waste control has a significant effect on productivity in Bottling Companies in Onitsha. The study recommends that Efforts should be made to develop staff through workshops and seminars on the possible ways of material management so their organizations can be improved. This will go a long way in updating their knowledge and understanding for new products and services. That firms develop a policy framework to facilitate faster implementation material management systems in Nigeria brewery so as to excel and guarantee its future, hence improving organizational productivity.*

Keywords: *planning, material procurement, Logistic, inventory management, stock and waste control.*

Introduction

The pressure on businesses to find better ways to provide value to their clients is increasing in the present, extremely competitive business environment. The need to develop a more effective storage strategy has arisen as a result of the rising necessity for

business to sell goods in a global market based on price and quality. Material management is now regarded as being unquestionably important to the running of large manufacturing companies. Prior to processing finished goods stored for customer distribution, material management is performed (Coyle, Bardi, & Langely 2014). Because it performs crucial tasks that aid in the development of materials, management of items, dismissal of vehicle loads, creation of stock keeping unit combinations, and gathering of materials for shipments, material management appears to be an essential hub in a supply chain network (Langevin & Riopel 2015).

All operations involved in the movement of materials from the supplier to the customer are included in materials management. Physical distribution, planning and controlling operations, and physical supply are some of these activities. In 2000, Banjoko. Business logistics and supply chain management are other phrases that are also used in this context. In company logistics, it's common for the focus to be on transportation and distribution systems, with little thought given to what happens in the factory. Materials management is a method to increase profitability by cutting costs and making the greatest use of existing resources while also maximizing performance in meeting customer service needs. According to Jacobs, Chase, and Aquilano (2009), the primary goal of materials management is to make sure that the appropriate item is purchased and made available to the production activities at the appropriate time, location, and cost. They stressed that without adequate planning for materials resources, the overall performance of an organization may be crippled.

By maximizing the purchase, storage, distribution, and use of materials to suit customer needs while also enhancing the bottom line through cost savings and more effective resource usage, materials management is a management method that increases efficiency and effectiveness. The corporate environment got more competitive as a result of the advent of deregulation and globalization in the 20th century, and material management gained popularity. The company's purchasing division was spending money on materials, and the store already had an excess of inventory, so the idea was seen as a waste of resources (Monday, 2012; Putra et al., 2021).

The market has also seen a considerable transformation as a result of the liberalization of globalization, forcing producers to come up with plans to cut costs of manufacturing in order to compete. Given its potential to lower production costs, it is now widely acknowledged that materials management can be seen as a profit center. From the stage of raw materials through to the stage of the finished product, planning, buying, processing, and distributing production materials can all be thought of as components of the same material flow process (Okorocha, 2017). Material planning, sourcing, buying, moving, storing, and controlling must all be coordinated as part of the crucial corporate activity of materials management (GopalKrishnan, 2016). This is so that the client can get service at the lowest possible cost. Materials management is a key business function that is responsible for the coordination of planning, sourcing, purchasing, moving, storing, and controlling materials in an optimum manner to provide service to the customer at a minimum cost(GopalKrishnan, 2016).

1.2 Statement of the Problems

The current state of the brewing industry in Nigeria is indicative of a number of issues, including delays in project execution or delivery, poor work, disputes, cost and time overruns due to material shortages and production waste, theft and material displacement

on sites, as well as inadequate accounting and security systems of the concerned sites/firms (Adafin, 2011). Dahiru (2010) asserts that a lack of materials not only results in delays but also in decreased productivity and cost overruns.. There is little doubt that one of the root causes of this issue is ineffective material management. Delays may occur if the manager does not provide the necessary materials. Another factor that tends to gradually reduce a company's profitability is strict non-compliance with material requirement planning of quantities, schedule of materials, specifications, and breweries program in material stock control practice (Inyang Udoh, 2002). This frequently results in an extension of time, and consequently, no proper material stock control practice.

Dey (2015) observed that inappropriate management is wasting materials at a rate that is becoming intolerable for the organization owing to its impact on their profit margin and proper material usage to produce quality work using a variety of strategies. In today's competitive and dynamic market, material management strategies are essential to an organization's success (Dimitrios 2008). Amoro (2011) claims that the majority of manufacturing companies struggle with stock outs, excess supply, overstocking, stock obsolescence, poor forecasting, stock theft, and a lack of adequate material management tools, techniques, and procedures that lead to low productivity. A study by Edwin and Florence (2015) on the influence of material management on cement manufacturing company profitability revealed that effective, streamlined material management systems had a favorable effect on the profitability of the business. The results of a study conducted by Wilfred (2014) on the impact of an efficient system of material management techniques on the performance of the seven-up bottling company in Nigeria showed that businesses benefit from material control management through simpler material storage and retrieval, increased sales effectiveness, and lower operational costs. By evaluating the impact of the material management concept as a technique for attaining productivity in Bottling Companies in Onitsha, this study was done to close the knowledge gap.

1.3 Objectives of the Study

The broad objective of this study is the material management and productivity of Nigerian Bottling Company Onitsha Anambra state. This study specifically identified the following objectives:

i. To determine the extent to which planning affects productivity in Bottling Companies in Onitsha.

ii. To evaluate the extent to which material procurement affects productivity in Bottling Companies in Onitsha

iii. To assess the effect of logistic on productivity in Bottling Companies in Onitsha.

iv. To examine the effect of stock and waste control on productivity in Bottling Companies in Onitsha

1.4 Research Hypotheses

The following research hypotheses are formulated

Ho_1: Planning has no significant effect on productivity in Bottling Companies in Onitsha.

Ho_2: Material procurement has no significant effect on productivity in Bottling Companies in Onitsha

Ho_3: Logistic has no significant effect on productivity in Bottling Companies in Onitsha.

Ho_4: Stock and waste control has no significant effect on productivity in Bottling Companies in Onitsha

REVIEW OF RELATED LITERATURE

2.1 Conceptual Review

2.1.1 Material Management

Construction material management, according to Ajayi et al. (2017), is the process of decreasing the quantity and environmental impact of material waste produced throughout a project. Material management is defined by Muleya & Kamalondo (2017) as an integrated process of designing, building new structures or remodeling existing structures, and using materials more effectively. This process is significant for improving the performance of the construction industry and addressing issues with material waste management. When discussing materials, it is possible to refer to raw materials, components, sub-assemblies, etc. Now, let's look at the various definitions of materials management. The supplier initiates the materials management process. The materials management process begins from the point of entry into the company as raw materials and components. The receipt and section functions begin on receipts of delivery notice from the supplier (Heinritz, 2011).

The copies of the purchase orders are received and examined to ensure that the quality and other standards comply with those of the company. The inspection task is then completed. The storekeeper, technical staff, or a department request can all conduct the examination (Morrison 2014). The practice of providing accurate material at the precise location at the proper time in the appropriate quantity in order to save project costs is known as material management. Planning, identification, procurement, storage, receipt, and distribution of material are all part of material management. According to Jacobs, Chase, and Aquilano (2009), the fundamental objective of materials management is to ensure that the appropriate item is bought and made According to Dobler and Burt (2016), materials management offers a comprehensive system approach for the efficient coordination of material activities and the overall material cost. They view it as something that involves allocating all major operations—activities that affect the cost of materials—to a single operating department. Instead of sub-optimizing the performance of sub-individual operational units, which are a part of the material system, the objective is to improve the performance of material systems.

2.1.2 Organizational Productivity

A measurement or computation of productivity compares inputs and outputs. Inputs are the amount of time, money, effort, physical resources, technology resources, and human resources used by the business, whereas outputs are the outcomes. The worker is deemed productive if the inputs and outputs are equal. An organization may do more in a given amount of time when it is productive. Efficiency also saves their business money on labor and time. When workers are not productive, projects take longer to finish, which increases costs for workers because of wasted time (Ikeanyibe, 2009). Productivity is a ratio to measure how well an organization converts input resources (labor, materials, machines, money) into goods and services (Tokarčíková, 2013).

Productivity is "the increased functional and organizational performance, including quality," according to Dorgan (1994). According to Rolloos (1997), productivity is defined as what people can produce with the least amount of effort. Employee productivity is defined by Nda & Fard (2013) as the economic measure of output per unit of input. A alternative perspective is held by Rohan and Madhumita (2012), who define employee

productivity as the log of net sales over the total number of employees. Pritchard (2015) provides three definitions of productivity: output/input, or a measure of efficiency; a combination of effectiveness and efficiency; and anything that improves an organization's performance. The benefits of improved staff productivity in manufacturing companies, which include higher earnings, profits, and incomes, cannot be overstated. increased availability of both capital and consumer goods at more affordable prices; ultimately shorter workdays and better living and working environments; enhancing the workers' overall economic base (Parker, Waller, & Hu, 2013).

The term "productivity" describes the actual production per labor unit. It is a significant force behind global money flows. Due to higher employment rates than in the euro region, the United States appears to have the highest productivity levels (Skoczylas & Tissot, 2005). Meneze (2006) defined productivity as an employee's capacity to generate work, goods, and services that meet or exceed the requirements set by their employers. By comparing the entire output to the total input required to produce it, productivity is determined (Bojke, 2012). According to Amah (2006), productivity is the measurement of how effectively and efficiently resources (inputs) are combined and used to produce goods and services (outputs) of the caliber required by society over the long term. This suggests that productivity is a result of both effective utilization of resources and performance. High productivity shows that resources are used effectively and efficiently, and waste is kept to a minimum within the company. Productivity strikes a balance between the efforts put out in pursuit of various economic, social, technological, and environmental goals (Amah, 2006). High productivity increases investors' returns and fosters the growth of the business. Productivity measurement identifies potential improvement opportunities and evaluates the success of improvement initiatives. It aids in the evaluation of efficacy and efficiency.

2.2 Theoretical Framework

The Inventory Management Theory is the foundation of this study: Nowicka-Skowron (2007) developed the notion of inventory management. It places emphasis on the part logistics chain material management plays in material management and forecasting. According to the idea, the chain of material and information movement is greatly influenced by the materials' accessibility and the caliber of the information at the chain operator's disposal. Operations research and operations management's subspecialty of material theory, or more formally the mathematical theory of inventory and production, is focused with designing production/inventory systems to save costs.: It examines the choices businesses and the military must make about production, storage, supply chains, spare part distribution, and other issues, and it offers the mathematical underpinnings for logistics. A company that must choose how much to order each time period to meet demand for its products is faced with the inventory control challenge. The issue can be modeled mathematically utilizing network optimization, dynamic programming, and optimum control.

Inventory theory's goal is to identify guidelines that material management might follow to reduce the expenses of sustaining material management and satisfying consumer demand. In order to assist businesses in making significant financial savings, inventory material management is explored. When should a product be ordered? is answered by inventory material management models.How much should be ordered each order? The solutions to these issues are referred to as material management. By creating

mathematical models that describe the inventory system and then using those models to generate the best material management strategy, businesses can save money.

2.3 Empirical Review

Kayiranga, Nyamweya and Shukla (2020) examined the contribution of material management practices on performance of construction of project. Specifically, the present research assessed the effects of material estimation costs on project performance, the effect of procurement on performance of construction project and examined the effect of inventory control on performance of construction projects. Both descriptive and correlational research designs were adopted where qualitative and quantitative approaches were applied. Data collection instruments that used were questionnaire, interview guide and documentary analysis. The target population was 200 contractors and 180 subcontractors. The sample size was 195 respondents. Furthermore, information was analyzed using Statistical Package for Social Sciences version 21.0. Results evidenced a positive and significant correlation between material estimation cost and performance of construction project at Baraka Properties was 0.518. A positive and significant correlation of 0.884 was also obtained between procurement process and project performance. The results also indicated that the coefficient correlation between procurement process inventory control and project performance was 0.874.

Egwuatu, (2020) investigated the effect of material management and organizational productivity in breweries industry South-East in Nigeria. The study aims to examine the effect of material control and organizational productivity of brewer industry and to examine the relationship between material planning strategy and organizational productivity of brewer industry South-East in Nigeria. Relevant conceptual theoretical and empirical literature was reviewed. The study was anchored on Inventory Management Theory. Descriptive survey research design was adopted. The study was carried out in South-East, Nigeria. The population Sample size calculation was employed to determine the sample size of 328. The instrument used for the study was questionnaire. Face and content validity was adopted while, test re-test and Cronbach Alpha method were carried out to achieve reliability of the instrument. Simple percentage analysis was employed to answer the research questions and Multiple Regression analysis was used in testing the hypotheses. Statistical package for social sciences (SPSS) version 21 was employed to run the test. Results showed that material control has a significant positive influence on organizational productivity in Nigeria brewer industries South-East. Material planning strategy has a positive significant effect on organizational productivity in Nigeria brewer South-East. The study concludes that material management positive significant effect on organizational productivity in Nigeria brewer South-East.

Kisioya and Moronge (2019) examine the influence of Material handling practices on performance of manufacturing firms in Nairobi Kenya. The study adopted descriptive survey design and the target population was 355 large -scale-manufacturing firms in Nairobi county Kenya. Stratified random sampling was adopted to select a sample size of 188 large-scale manufacturing firms in Nairobi County, Kenya. Primary data was collected using structured questionnaires inform of Likert scale. Filled questionnaires were reviewed for completeness and then coded and entered in SPSS. Data analysis was involved both descriptive and inferential statistics. The analyzed data was presented inform of tables together with associated explanations." A good response rate of 71.3% was realized. It was established that most of the material handling practices indicators

have positive impact on performance of the firm. The study further adopted a regression analysis to determine the relationship between the variables at 5% confidence level of significance. The study findings showed that the four variables had a significant influence on performance of the firms.

Joel, and Noor (2019) determined the influence of material management on performance of Large Manufacturing Firms in Nairobi City County, Kenya. The study adopted the descriptive research design; research design is defined as a plan, structure and strategy of investigation conceived to obtain answers to research questions and control variance. The collected research data was checked for any errors and omissions, coded, defined and then entered into Statistical Package for Social Science (SPSS Version 23). Descriptive statistics was used to portray the sets of categories formed from the data. The mean, standard deviation and variance on the dependent and independent constructs was used to show how clustered or dispersed the constructs are. The study used multiple linear regression analysis to test the statistical significance of the various independent variables In testing the significance of the model, the coefficient of determination (R2) was used to measure the extent to which the variation in implementation on supply chain performance is explained by the variations of various factors on the outsourced distribution services. The study established that Basic functionality of materials management includes various factors such as supply, material pricing, and usage. Large manufacturing firms should take more in-depth look at the functions of materials management and how it is advantageous to large manufacturing firms supply chain to enable production facility and locate areas where aid is needed.

Atueyi (2019) examined the effect of external debt and human capital development in Nigeria. Three research objectives were formulated. Ex-post facto research design was adopted and time series data spanning 32 years (1986-2017)were processed using the models earlier formulated. Ordinary Least Square (OLS) regression technique was used to analyze the data. Secondary sources of data were applied and sourced from Central Bank of Nigeria statistical bulletin, the variables were on human capital index, debt servicing, gross fixed capital formation and external debt. Unit root test, co-integration approach, error correction model, causality test and stability were employed to analyze the included variables. The study found that external debt has a negative and significant effect on human capital development in Nigeria, debt financing has a negative insignificant effect on human capital development, and lastly gross fixed capital formation has positive insignificant effect on human capital development. The study recommends among others that Governments can investment enormously on human capital such as research & development, training and technology to facilitate and increase productivity. Government should consider industrial revolution with the foreign loan. Proper resources utilization is need in education and health sector borrowed fund should be channeled to productivity sector and should not be embezzled as has been the routine in the Nigeria system.

Dagim, (2018) examined the role of material management on organizational performance: A Case Study in Commercial Bank of Ethiopia. The research employed descriptive research designed to describe the role of material management on the bank`s performance. The target populations of the study were 80 employees of the bank who are directly involved in the material management aspects. The researcher used census sampling, by involving all of the employees of the bank who are working in material

management as the population of the study. The quantitative data were analyzed through descriptive statistics such as mean, standard deviation, median and percentages. The thesis result reveals the study established that there is practice of planning and using it, but federal proclamation is not well obeyed. This concluded that the bank's endeavor to material procurement is not backed by proper practice based on law. In addition, inventory control system is employed only averagely that it lacks consistency and profundity.

Oyebamiji (2018) examined the effect of materials management on the performance of manufacturing industry with particular reference to the selected cement industry. Purposive sampling technique was employed to select Dangote Cement Plc, Ashaka Cem Plc and Lafarge Africa Plc, while judgmental technique was used to select ten (10) staff members from purchasing/store/ logistic department of the selected cement industry respectively, totalling thirty (30) respondents as a sample size for the study. The data collection instrument for the study was a structured questionnaire and a personal interview. Data analysis was conducted with the aid of multiple regression analysis. Result revealed that materials management dimensions jointly contribute significantly to firm performance. The study further revealed that materials inventory, materials procurement and inter-departmental collaboration have an insignificant effect on firm performance, while only materials storage has a significant impact on firm performance. The study concluded that effective materials management is a veritable tool to organization performance.

Napoleon, Ayoakateng, Asubonteng, Asigri and Alubokin (2018) assessed material management techniques required for construction firms in the Tamale Metropolis of Ghana. The data was analyzed using descriptive and inferential statistics such as factor analysis, and Pearson product moment correlation coefficient. The study adopted descriptive quantitative survey approach. Using empirical data obtained from ninety-six administered questionnaires of material managers in Tamale Metropolis; the data was analyzed using descriptive and inferential statistics such as factor analysis, and Pearson product moment correlation coefficient. The study indicated that firms often employed store keepers and security personnel on site; list of materials in project that includes for example (material name, material number and unit price), and provide clear specifications to suppliers. However, they seldom use ICT; and rarely offer training for their workers. The study further revealed that planning and monitoring of material schedule; establishing good business relations with suppliers; the use of security measures on site; use of information communication technology; and also use of competent workers as well as effective training of workers is significant for effective material management on construction site, and has direct effect on construction project delivery success.

Assiamah, Daniel and Hanson (2018) studied materials management and its effect on cost of supplies case study of cocoa processing company of Ghana. Primary data, interviews (face-to-face, telephone) and questionnaire were used. Secondary data has been sourced through literature from the university library and internet sources, qualitative design method was chosen over others because of the nature of the research work. Financially, materials (inventories) are very important to manufacturing companies and on the balance sheet they usually represent from twenty to sixty percent of total assets. Therefore, if the application of the concept of materials management is accepted with well qualified personnel, it could lead to the minimization of cost. The function of a materials manager is to promote coordination and integration within the supply chain and the major

benefits are assumed to be; reduction in interdepartmental conflicts, reduction of inventory levels, increased knowledge of total corporate operations and reduction of materials handling costs among others.

Jacobs and Arinze (2021) examined the effect of team work on organizational performance in Coscharis Rice Mill Igbariam. The researcher developed three objectives such as: To examine the effect of team members' abilities on organizational performance of Cosharis rice mill Igbariam. To analyze effect of team members' esprit de corps on organizational performance of Cosharis Rice Mill Igbariam. To ascertain effect of team members' trusts on organizational performance of Cosharis Rice Mill Igbariam. However, three research questions and hypotheses are formulated in line with the objectives. The study was anchored on Belbin's Team Roles Theory that was propounded in 2012. The study adopted survey method of research. Data were generated through primary and secondary sources. The method for data collection was questionnaire and interview which were administered randomly among the staff of Coscharis Rice Mill. The sample size of the study is three hundred and seventy-six (376). The hypotheses were tested using ANOVA method at 0.05% level of significance. The findings of the study revealed Team members' abilities have significant effect on organizational performance of Cosharis Rice Mill Igbariam, Team members' esprit de corps has significant effect on organizational performance of Cosharis Rice Mill Igbariam, and Team members' trust has significant effect on organizational performance of Cosharis Rice Mill Igbariam

METHODOLOGY

Research Design

The research used a descriptive cross-sectional survey design to gather information on the pertinent material management. Anambra state is the study's geographical focus. In this study, questionnaires served as the main source of data. This is as a result of the kind of the employed variables. Data from the targeted individuals were gathered using a questionnaire as the source of the data collecting instrument. A total of 288 people made up the study's population, which also included employees from the following bottlers: Nigerian, Intafact, and Premier. It was possible to select each of the many respondents in the sample without bias thanks to stratified random sampling. A survey was used to get the data.. In testing hypotheses, the calculated value of the test statistic were compared with critical and table value of the statistic. The critical or table value serves as a benchmark for rejecting or not rejecting the null hypotheses. Therefore, the decision rule applied in this research is to reject the null hypotheses if the calculated value at 5% significance level with respective degrees of freedom is greater than the table value, otherwise do not reject.

DATA PRESENTATION AND ANALYSIS

4.1 Data Presentation and Analysis Responses to Questionnaire

A total of two hundred and eighty-eight (288) questionnaires were distributed to respondents while only (270) two hundred and seventy were returned. The set of returned questionnaire represents the total distribution.

Table 4.1 Distribution and Return of Questionnaire

Description	Frequency	Percentage
Total distributed	271	100
Total number returned	270	99

The table shows that out of 100% of the distributed questionnaire was (271) two hundred and seventy-one and (270) two hundred and seventy were returned. NB: All computations, interpretations and analysis were therefore based on the number of returned questionnaire i.e 270

Section A: Respondents Information

Question 1: Age Distribution of the Respondents

Table 4.1.2

Responses	Frequency	Percentage
30-41 years	70	27
40-51years	140	41
51-60years	50	24
61years and above	10	8
Total	**270**	**100**

Source: Field survey, 2025

From the above table, 70 respondents representing 27% are between the ages of 30-41years, 140 respondents representing 41% were between the ages of 41-50 years, 50 respondents representing 24% of the respondents were between the ages of 51-60 years while 10 respondents representing 8% were 61 years and above.

Question 2: Marital Status

Table 4.1.3

Marital Status	Frequency	Percentage
Single	93	21
Married	170	74
Others	7	5
Total	**270**	**100**

Source: Field survey, 2025

From the above table, 100 respondent representing 21% were single, 93 respondents representing 74% are married, 170 while others are 7 respondents representing 5% of the population

Question 3: Educational Qualification

Table 4.1.4

Responses	Frequency	Percentage
FSLC	13	11
O' level	94	38
OND/NCE	150	40
B.Sc/HND	13	11
Total	**270**	**100**

Source: Field Survey, 2025

From the above, 13 respondents representing 11% are FSLC, 94 respondents representing 38% are O' level holders, and 150 respondents representing 40% are OND/NCE holders while 13 respondents representing 11% are B.Sc/HND holders.

4.2 Hypotheses Testing

Hypotheses one

H_{01}: Planning has no significant effect on productivity in Bottling Companies in Onitsha.
H_I: Planning has a significant effect on productivity in Bottling Companies in Onitsha.

Table21: Evaluation on the effect of planning on productivity

	Sum of Squares	df	Mean Square	F	Sig.
Among women	7.374	2	2.458	14.027	.000
Within society	16.473	268	.175		
Total	23.847	270			

Source: **SPSS, 2025**

The test table reveal that small significance value (F. sig<.05) indicate group differences. Since the F- value of 14.027 which has a significance of .000 is less than .05 (i.e .001<.05), there exist significant difference among the variables. Therefore, we reject the null hypothesis and accept an alternative hypothesis which states that planning has a significant effect on productivity in Bottling Companies in Onitsha.

Hypotheses Two

H_{01}: Material procurement has no significant effect on productivity in Bottling Companies in Onitsha.
H_1; Material procurement has a significant effect on productivity in Bottling Companies in Onitsha

	Sum of Squares	Df	Mean Square	F	Sig.
Among women	36.189	2	12.063	33.048	.000
Within society	34.311	268	.365		
Total	70.500	270			

Source: **SPSS, 2025**

The test conducted revealed that the large significance value (F.sig<.002) indicate no group differences. Since the F-value of 33.048 with a significance of .000 is less than .05 (i.e .002<.05), from the test conducted above it was discovered that alternative hypotheses is accepted which State that, material procurement has a significant effect on productivity in Bottling Companies in Onitsha.

Hypothesis Three

$H_{01:}$ Logistic has no significant effect on productivity in Bottling Companies in Onitsha.
$H_{I:}$ Logistic has a significant effect on productivity in Bottling Companies in Onitsha.

	Sum of Squares	Df	Mean Square	F	Sig.
Among women	56.102	2	18.701	9.418	.000
Within society	186.643	268	1.986		
Total	242.745	270			

Source: **SPSS, 2025**

The test conducted revealed that the large significance value (F.sig<.002) indicate no group differences. Since the F-value of 9.418 with a significance of .000 is less than .05 (i.e .002<.05), from the test conducted above it was discovered that alternative hypotheses is accepted which State that, logistic has a significant effect on productivity in Bottling Companies in Onitsha.

Hypothesis Four

H_{01}: Stock and waste control has no significant effect on productivity in Bottling Companies in Onitsha**.**

H_1: Stock and waste control has no significant effect on productivity in Bottling Companies in Onitsha.

	Sum of Squares	Df	Mean Square	F	Sig.
Among women	56.102	5	10.701	34.035	.000
Within society	16.643	265	1.986		
Total	70.745	270			

Source: **SPSS, 2025**

The test table reveal that small significance value (F. sig<.05) indicate group differences. Since the F- value of 34.035 which has a significance of .008 is less than .05 (i.e .001<.05), there exist significant difference among the variables. It was discovered that alternative hypotheses is accepted which state that, stock and waste control has a significant effect on productivity in Bottling Companies in Onitsha**.**

Conclusions and Recommendations;

5.1 Conclusion

This study appraised material management concept as a strategy for achieving productivity in Bottling Companies in Onitsha. Therefore, the general conclusion of this study is that materials management practices improves the overall in handling of materials for more efficiency and effectiveness on the construction site. This is because poor handling of construction materials affects the overall performance of construction projects in terms of cost, time, quality and productivity. Materials management practices improve the success rate of project planning and execution thus lowering the project cost. More so, the minimization of materials wastage during the construction phases is important in order to avoid loss of profits.

5.2 Recommendations

i. Efforts should be made to develop staff through workshops and seminars on the possible ways material management of their organizations can be improved. This will go a long way in updating their knowledge and understanding for new products and services, which could be made available not only for domestic needs but also could meet international demands.

ii. The study recommended that firms develop a policy framework to facilitate faster implementation material management systems in Nigeria brewer so as to excel and guarantee its future, hence improving organizational productivity.

iii. Bottling Companies in Onitsha should increase their resource commitment to staff training and Research and Development in material manangement strategy so as to develop the necessary skills, update their knowledge, and enhance organizational productivity.

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