

# Supply Chain and Production Cost of Brewing Plants in South-East, Nigeria

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## ABSTRACT

The study focused on Supply Chain and Production Cost of Brewing plants in South-East, Nigeria. The study sought to ascertain the nature of relationship between Supply Chain and Production Cost of the Brewing plants in the South-East, Nigeria. The study had a population size of 1528, out of which a sample size of 431 was obtained using Cochran's formula at 5% error tolerance and 95% level of confidence. Primary data were collected through structured questionnaire and observation and secondary data were obtained through textbooks, and journal materials. Out of 431 copies of the questionnaire that were distributed, 401 copies were returned while 30 copies were not returned. The hypothesis was tested using Pearson Product Moment Correlation Coefficient. Finding revealed that there was a significant positive relationship between supply chain and production cost of Brewing plants in South East, Nigeria. ( $r = 0.866$ ). The study concluded that supply chain practices is a set of activities carried out in any organization to promote effective management of its supply chains in order to improve production cost. The study recommended that brewing plants in South East Nigeria need to ensure that their supply chain concentrates on the most important member, the customer who should be kept satisfied at all costs, thus helping to boost customer services and also put in place a well-managed supply chain that removes disruptions and obstacles in their business activities.

**KEYWORDS:** Supply Chain; Production Cost; brewing plants; South Nigeria

## 1. INTRODUCTION

Supply Chain Management has been recognized as an important phenomenon that has generated extensive interest among managers and academic researchers. Supply chain management (SCM) has nowadays become a crucial strategy for firms to enhance their profitability and stay competitive (Li *et al.*, 2006). In this 21st century, more and more companies understand and evaluate the importance of the supply chain concept. In a company, the supply chain is strategically relevant for internal and external areas of activity. Also, it is considered as one of the best ways to control distribution processes of the company. Generally, the supply chain is not focusing on financial improvements; nevertheless, it has a big influence on the profit of the company by optimizing processes and reducing final product cost (Morana, 2013).

SCM is the management of a network of interconnected businesses involved in the provision of product and service packages required by the end customers in a supply chain. Supply chain management spans all movement and storage of raw materials, work-in-process inventory, and finished goods from point of origin to point of consumption. (Dhakry, 2013). Product costing is a powerful tool. Determining the costs of products can enable management to discern, which of its products are viable, which cost more, and which contribute most to the bottom line. In fact, understanding the savings of product costs can be a key to improving the viability (Hirschland 2005)

Many organizations have begun to recognize that SCM is the key to building competitive advantage for their products and services in an increasingly

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crowded marketplace, Jones, (1998). The SCM has been careful from different points of vision in different bodies of literature Croom Romano, and Giannakis, (2000), such as purchasing and supply management, logistics and transportation, operations management, marketing, and management information systems. Different theories have offered insights on specific aspects or perspectives of SCM, such as industrial organization and associated transaction cost analysis Ellram, (1990), Rungtusanatham, Salvador, Forza, Choi, (2003).

Therefore, Supply chain activities transform natural resources, raw materials, and components into a finished product that is delivered to the end customer. In sophisticated supply chain systems, used products may re-enter the supply chain at any point where residual value is recyclable, (David & Jacoby, 2009). The comprehensive supply chain management consists of top decision-making of leading firms from a wide variety of industries, such as commodity merchandising, oil and petrochemicals, automotive manufacturing, athletic equipment, household plumbing and accessories, and consumer electronics. Some of companies represent all possible locations across a supply chain: original suppliers, manufacturers of industrial products (business to business), manufacturers of consumer products, distributors, and retailers.

### 1.1. Objective of the Study

Ascertain the nature of relationship between Supply Chain and Production Cost of Brewing plants in South-East, Nigeria.

### 1.2. Research Questions

With the above objective in focus, the study seeks to find answer to the research question:

What is the nature of relationship between Supply Chain and Production Cost of Brewing Plants in South-East, Nigeria?

### 1.3. Research Hypothesis

There is no significant positive relationship between Supply Chain and Production Cost of Brewing plants in the South-East, Nigeria.

## 2. Review of Related Literature

### 2.1. Supply Chain Management

Stock and Boyer (2009) define SC as the network of relationships within a firm and between interdependent organizations and business units consisting of material suppliers, purchasing, production facilities, logistics, marketing, and related systems that facilitate the forward and reverse flow of materials, services, finances and information from the original producer to final customer with the benefits of adding value, maximizing profitability through

efficiencies, and achieving customer satisfaction. SC practices are defined as the set of activities undertaken by an organization to promote effective management of its supply chain (Koh et al., 2007); such as the approaches applied in integration, managing and coordination of supply, demand and relationships in order to satisfy clients in an effective way as tangible activities/technologies that have a relevant role in the collaboration of a focal firm with its suppliers and/or clients and as the approach to involve suppliers in decision making, encouraging information sharing and looking for new ways to integrate upstream activities. As a consequence, it involves developing customer contacts by customer feedback to integrate the downstream activities and delivering orders directly to customers (Chow et al., 2008).

### 2.1.1. Production Cost

Production Cost is the total price paid for resources used to manufacture a product or create a service to sell to consumers including raw materials, labor, and overhead (Argilés and Slob, 2003). It includes costs related to making or acquiring goods and services that directly generate revenue for a firm. It comprises of direct costs and indirect costs. Direct costs are those that are traceable to the creation of a product and include costs for materials and labor whereas indirect costs refer to those costs that cannot be traced to the product such as overheads

### 2.2. Theoretical Review

#### Information Theory

Information theory or The Mathematical theory of Communication, has two primary goals: The first is the development of the fundamental theoretical limits on the achievable performance when communicating a given information source over a given communications channel using coding schemes from within a prescribed class. The second goal is the development of coding schemes that provide performance that is reasonably good in comparison with the optimal performance given by the theory. Companies may seek to communicate their environmental performance to outside stakeholders, but may not always find this easy to do since they may lack full knowledge of the products, processes and materials flowing through their supply chains (Moore and Scheinkopf, 1998). Typically, suppliers may hold more information about their environmental performance and the performance impact is to be experienced by the customers. This situation is defined as information asymmetry. A major advantage of greening supply chains is derived from the capability to market and sell green products. Such capability potentially develops new products

and hence builds competitive advantages for enterprises. Yet, companies may not be able to reap this image benefit due to the information asymmetry arising from consumers inability to discern how green the products or materials from the supply chain are (Flynn, 2011).

Similarly, continuous improvement fundamental philosophy focuses on improving existing operations within organizations allowing them to use resources more efficiently and effectively (i.e. produce value), and provides tailored solutions to solve specific organizational problems (i.e. unique and imperfectly imitable) (Melton, 2005). Sustaining competitive advantage is specifically related to the human and technical capabilities. Organizational capability in terms of staff with existing continuous improvement related experience and the ownership and exposure to a variety of technical lean manufacturing practices tools have a major impact on the final results of the continues improvement project. This accumulated experience has value, is hard to imitate, transfer or substitute and can be exploitable by the organization and thus creates 'sustainable competitive advantage' in accordance with RBV theory. Therefore, information theory and its competitive advantage sustainability are tightly related to lean manufacturing practices (Paneru, 2011)

### 2.3. Empirical Review

Faisal (2017) conducted a study on the impact of supply chain management practices on supply chain performance in the Jordanian Industrial Sector. Also, it aimed at assessing the level of awareness and understanding of supply chain management concepts and practices in the Jordanian context. Design/methodology/ approach- The research methodology involved the adoption of a survey as a research strategy and quantitative approach, utilized a self-administered questionnaire, to arrive at the major findings of the study. The type of research is a single cross-sectional design in which the collection of data from the respondents was carried out only once. Data were analyzed using the statistical package for social sciences (SPSS). Finding- The paper revealed that there is an impact of supply chain management practices on supply chain performance in the Jordanian Industrial Sector. It also revealed that there is a high level of awareness among the respondent about the supply chain management concept

Ayman, Bader and Noor (2012) carried out study on the impact of supply chain management practices on supply chain performance in terms of supply chain efficiency and supply chain effectiveness. Additionally, they investigated the moderating effect of competitive intensity on the relationship between

supply chain management practices and supply chain performance. Data for this research were collected from 104 manufacturing companies in Jordan. Hierarchical regressions were used to test the hypothesized relationships. The results indicate that three supply chain management practices, internal integration, information sharing, and postponement, but not supplier integration and customer integration, significantly and positively affect supply chain efficiency performance. Competitive intensity moderates the relationship between each of internal integration, supplier integration, and customer integration, and supply chain efficiency performance. The results also show that three supply chain management practices, internal integration, customer integration, and postponement, but not supplier integration and information sharing, significantly and positively affect supply chain effectiveness performance. Competitive intensity moderates the relationship between each of customer integration and information sharing, and supply chain effectiveness performance.

Veera, Abdul and Chandran (3009) did a study on supply chain management practices in the electronics industry in Malaysia Consequences for supply chain performance Purpose– The purpose of this paper was to explore the effects of different dimensions of supply chain management practices (SCMP) on supply chain performance (SCP) in the electronics industry in Malaysia .Design/methodology/approach– The study employed the quantitative method where convenience sampling and self-administrated survey questionnaires were sent to 125 electronics firms in Malaysia. The research framework was tested using variance-based structural equation model, the partial least squares (PLS) method. Findings– The empirical results of PLS indicate that six of the seven dimensions of SCMP have a significant positive effect on SCP. Furthermore, agreed vision and goals shows a greater influence than other dimensions of SCMP.

Suhong, Bhanu ,and Ragu-Nathan (2006) did a study in China on the impact of supply chain management practices on competitive advantage and organizational performance. This research conceptualized and developed five dimensions of SCM practices (strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing, and postponement) and tested the relationships between SCM practices, competitive advantage, and organizational performance. Data for the study were collected from 196 organizations and the relationships proposed in the framework were tested using structural equation

modeling. The results indicated that higher levels of SCM practice can lead to enhanced competitive advantage and improved organizational performance. Also, competitive advantage can have a direct, positive impact on organizational performance.

Baghe (2018) conducted a study on the effect of supply chain capabilities on performance of food companies in Ardabil as one of the metropolises of Iran. The main objective of this research is to evaluate the impact of supply chain capabilities on operational and financial performance of food companies. The study population consists of 76 companies operating in the food industry in Ardabil as one of the metropolises of Iran. Given the limited number of population, no sampling method was used and all companies went under scrutiny. A standard questionnaire was used as the data collection tool which was given to the managers of the companies. In order to test research hypotheses, structural equation modeling and PLS software were used. The results of hypotheses testing suggested the significant positive impact of supply chain capabilities on operational and financial performance of food companies. Additionally, the positive impact of operational performance on financial performance of the companies was confirmed. Finally, it was found that operational performance has a mediating role in the relationship between supply chain capabilities and financial performance of the companies.

Jouno (2017) did a study on the impact of supply chain agility on business performance in a high level customization environment in Turkey. He examined the effect of supply chain agility on customer service, differentiation, and business performance. A survey research methodology was employed using a sample of 156 manufacturing firms that provide high levels of customization. In particular, structural equation modeling (SEM) was employed to evaluate the proposed model. The results suggest that supply chain agility influences customer service and differentiation positively. However, it does not affect business performance directly; instead, better business performance can be achieved and mediated through improved customer service and differentiation. In particular, differentiation through customer service is the most effective way to improve business

performance, and supply chain agility can help to achieve high-level customer service. The paper advised managers on details of how to fulfil their business performance ambitions better through suggested key agile supply chain management activities.

Aswini (2019) conducted a study on the effect of supply chain management practices on organizational performance in Nigeria : An empirical approach, The main purpose of this study is to determine the impact of supply chain management practices (i.e., strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing, postponement, and risk and reward sharing on organizational performance, that is, marketing performance and financial performance). The instrument was adopted, and it was administered to 115 target respondents from 6 organizations in Chennai. A valid of 100 samples was taken for further analysis, and multiple regression analysis were employed to determine the purpose of the study. The findings indicated that supply chain management practices (i.e., strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing, postponement, and risk and reward sharing) have significant and positive impact on organizational performance (i.e., marketing and financial performance). The limitations, discussions, implications, and further research were outlined and delineated

### 3. Methodology

The study adopted research survey design. The population of the study consists of senior management and junior management staff of the Brewing plants (1528). A Sample size was determined using Cochran releasing a sample of 431. The instrument was validated using face and content validity by giving the tool to academicians to make necessary corrections so that the device can measure what it ought to measure. The tool used for test of hypothesis was Product Moment Correlation Coefficient. The reliability of the instrument was obtained using Spearman Reliability and Validity of Instrument. Ranking Order Correlation Co-Efficient which amounted to a coefficient of 0.871 indicated a High Internal Consistency of the Instrument.

**4. Data presentation and Analysis****Descriptive Statistics nature of the relationship between supply chain and production cost of the Brewing Plants in the South East, Nigeria.**

s/ no	Questionnaire items	Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Mean	Remarks
16	<b>Supply Chain</b> We pay particular attention to our supply of raw materials so that they will match the demand for our product	250 (62.34%)	135 (33.66%)	8 (2.00%)	6 (1.50%)	2 (1.00%)	<b>4.56</b>	<b>Agreed</b>
17	We involve our supplier in decision making in this organization	200 (49.87%)	180 (44.88%)	12 (2.99%)	5 (1.25%)	4 (1.00%)	<b>4.41</b>	<b>Accept</b>
18	We encourage our share information with us that will help us serve our customer better	160 (39.90%)	230 (57.35%)	3 (0.75%)	5 (1.25%)	3 (0.75%)	<b>4.34</b>	<b>Accept</b>
19	We try to maintain a good relationship with the retailers is our product	230 (57.36%)	160 (39.90%)	4 (1.00%)	5 (1.25%)	2 (0.50%)	<b>4.52</b>	<b>Agreed</b>
	<b>Mean</b>	<b>4.46</b>						
	<b>Cronbach Alpha</b>	<b>0.960</b>						
	<b>Valid (listwise)</b>	<b>401</b>						
20	<b>Production Cost</b> We endeavour to get our raw materials from the cheapest source	240 (59.85%)	140 (34.91%)	12 (2.99%)	5 (1.25%)	4 (1.00%)	<b>4.51</b>	<b>Agreed</b>
21	We take advantage of bulk purchase so that we can buy cheaply	225 (56.11%)	150 (37.41%)	11 (2.74%)	10 (2.50%)	5 (1.24%)	<b>4.45</b>	<b>Agreed</b>
22	The workers directly involved in the manufacture of our final product are the best paid among our workers	195 (48.63%)	185 (46.14%)	7 (1.74%)	12 (2.99%)	2 (0.50%)	<b>4.39</b>	<b>Agreed</b>
23	We make every attempt to motivate workers directly involved in producing our final product so as to get them give the organization their best	208 (51.87%)	175 (43.64%)	6 (1.49%)	8 (2.00%)	4 (1.00%)	<b>4.43</b>	<b>Agreed</b>
24	Money spent on materials and labor not directly connected to our finished products are also kept at the barest minimum	190 (47.38%)	200 (49.87%)	5 (1.25%)	4 (1.00%)	2 (0.50%)	<b>4.73</b>	<b>Agreed</b>
25	Our material labour and other expenses are closely monitored to keep them as low as possible	268 (66.83%)	120 (29.93%)	6 (1.50%)	4 (1.00%)	3 (0.74%)	<b>4.61</b>	<b>Agreed</b>
	<b>Mean</b>	<b>4.47</b>						
	<b>Cronbach Alpha</b>	<b>0.978</b>						
	<b>Valid (listwise)</b>	<b>401</b>						
	<b>Overall Mean</b>	<b>4.46</b>						

Source: Fieldwork, 2020

**Decision Rule:****If mean < (less than) 3.5 the respondents Disagree****If mean > (greater than) 3.5 the respondents Agree**

Table above shows the responses to the likert scale statement and this sample mean ( $\bar{x}$ ) in respect of the supply chain and production cost in the Brewing plants of South East, Nigeria. For the statement on whether they pay particular attention to their supply of raw materials so that they will match the demand for their product, 250 (62.34%) of the respondents strongly agreed that they pay particular attention to their supply of raw materials so that they will match the demand for their product, 135 (33.66%) of the respondents agreed, 8 (2.00%) of the respondents were undecided, 6 (1.50%) while 2 (1.00%) disagreed and strongly disagreed respectively that they pay particular attention to their supply of raw materials so that they will match the demand for their product, giving a sample mean of 4.56. This shows that they pay particular attention to their supply of raw materials so that they will match the demand for their product, since the mean is  $> 3.5$

For the statement on whether they involve their supplier in decision making in their organization, 200 (49.87%) of the respondents strongly agreed that they involve their supplier in decision making in their organization, 180 (44.88%) of the respondents agreed, 12 (2.99%) of the respondents were undecided, 5 (1.25%) and 4 (1.00%) of the respondents disagreed and strongly disagreed respectively that they involve their supplier in decision making in their organization, giving a sample mean of 4.41. This shows that they involve their supplier in decision making in their organization, since the mean is  $> 3.5$

For the statement on whether they encourage to share information with them that will help them serve their customer better, 160 (39.90%) of the respondents strongly agreed that they encourage to share information with them that will help them serve their customer better, 230 (57.35%) of the respondents agreed, 3 (0.75%) of the respondents were undecided while 5 (1.25%) and 3 (0.75%) of the respondents disagreed and strongly disagreed respectively that they encourage to share information with them that will help them serve their customer better, giving a sample mean of 4.34. This show that they encourage to share information with them that will help them serve their customer better, since the mean is  $> 3.5$

For the statement on whether they try to maintain a good relationship with the retailers of their product, 230(57.36%) of the respondents strongly agreed that they try to maintain a good relationship with the retailers of their product, 160 (39.90%) of the respondents agreed, 4(1.00%) of the respondents were undecided while , 5(1.25%) and 2 (0.50%) of the respondents disagreed and strongly disagreed respectively that they try to maintain a good relationship with the retailers of their product, giving a sample mean of 4.52. this show that they try to maintain a good relationship with the retailers of their product, since the mean is  $> 3.5$

For the statement on whether they endeavour to get their raw materials from the cheapest source, 240(59.85%) of the respondents strongly agreed that they endeavour to get their raw materials from the cheapest source, 140 (34.91%) of the respondents agreed, 12 (2.99%) of the respondents were undecided, 5 (1.25%) and 4 (1.00%) of the respondents disagreed and strongly disagreed respectively that they endeavour to get their raw materials from the cheapest source, giving a sample mean of 4.51. This shows that they endeavour to get their raw materials from the cheapest source, since the mean is  $> 3.5$

For the statement on whether they take advantage of bulk purchase so that they can buy cheaply, 225(56.11%) of the respondents strongly agreed, 150 (37.41%) of the respondents agreed, 11 (2.74%) of the respondents were undecided, 10 (2.50%) and 5 (1.24%) of the respondents disagreed and strongly disagreed respectively that they take advantage of bulk purchase so that they can buy cheaply, giving a sample mean of 4.45. This shows that they take advantage of bulk purchase so that they can buy cheaply, since the mean is  $> 3.5$

For the statement on whether the workers directly involved in the manufacture of their final product are the best paid among their workers, 195 (48.63%) of the respondents strongly agreed that the workers directly involved in the manufacture of their final product are the best paid among their workers, 185(46.14%) of the respondents agreed, 7 (1.74%) of the respondents were undecided, 12 (2.99%) and 2 (0.50%) of the respondents disagreed and strongly disagreed respectively that the workers directly involved in the manufacture of their final product are the best paid among their workers, giving a sample mean of 4.39. this show that the workers directly involved in the manufacture of their final product are the best paid among their workers. since the mean is  $> 3.5$

For the statement on whether they make every attempt to motivate workers directly involved in producing their final product so as to get them give the organization their best, 208 (51.87%) of the respondents strongly agreed that they make every attempt to motivate workers directly involved in producing their final product so as to get

them give the organization their best, 175 (43.64%) of the respondents agreed, 6 (1.49%) of the respondents were undecided, 8(2.00%) and 4 (1.00%) of the respondents disagreed and strongly disagreed respectively that they make every attempt to motivate workers directly involved in producing their final product so as to get them give the organization their best, giving a sample mean of 4.43 . This shows that they make every attempt to motivate workers directly involved in producing their final product so as to get them give the organization their best, since the mean is  $> 3.5$

For the statement on whether money spent on materials and labor not directly connected to their finished products are also kept at the barest minimum , 190 (47.38%) of the respondents strongly agreed that money spent on materials and labor not directly connected to their finished products are also kept at the barest minimum, 200(49.87%) of the respondents agreed, 5 (1.25%) of the respondents were undecided, 4 (1.00%) and 2 (0.50) of the respondents disagreed and strongly disagreed respectively that money spent on materials and labor not directly connected to their finished products are also kept at the barest minimum, giving a sample mean of 4.73. This shows that money spent on materials and labor not directly connected to their finished products are also kept at the barest minimum, since the mean is  $> 3.5$

For the statement on whether their material, labour and other expenses are closely monitored to keep them as low as possible, 268 (66.83%) of the respondents strongly agreed that their material, labour and other expenses are closely monitored to keep them as low as possible, 120 (29.93%) of the respondents agreed, 6 (1.50%) of the respondents were undecided, 4 (1.00%) and 3 (0.74%) of the respondents disagreed and strongly disagreed respectively that their material, labour and other expenses are closely monitored to keep them as low as possible, giving a sample mean of 4.61. This shows that their material, labour and other expenses are closely monitored to keep them as low as possible, since the mean is  $> 3,5$

On the average, the respondents agreed that there is a significant positive relationship Brewing supply chain and production cost in the Brewing plants of South East, Nigeria; since overall mean is (4.46)  $> 3.5$ .

### Test of Hypothesis

**Hi:** There is no significant positive relationship between supply chain and production cost of the brewing plants in the South East, Nigeria

**Table 4.2 a Descriptive Statistics**

	Mean	Std. Deviation	N
Supply Chain	1.4464	.68025	401
Production Cost	1.6334	.79233	401

**Table 4.2 b Correlations**

		Supply Chain	Production Cost
Supply Chain	Pearson Correlation	1	.856**
	Sig. (2-tailed)		.000
	N	401	401
Production Cost	Pearson Correlation	.856**	1
	Sig. (2-tailed)	.000	
	N	401	401

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

The descriptive statistics of supply chain and product cost, shown in Table 4.2a. The table shows a mean response of 1.4464 and standard deviation of .68025 for supply chain and a mean response of 1.6334 and standard deviation of .79233 for product cost and number of respondents 401. A close examination of the standard deviation values reveals a significant difference in the scores of the two variables. This implies that the variability of data points between the dependent and independent variables is about the same.

Table 4.2b displays the Pearson correlation coefficient for supply chain and product cost. The correlation coefficient shows a value of 0.856. This value indicates that correlation is significant at 0.05 level (2tailed) and implies that there is a strong positive relationship between supply chain and product cost ( $r = .866$ ). The computed correlation coefficient is greater than the table value of  $r = 0.196$  with 399 degrees of freedom ( $df = n-2$ ) at alpha level for a two-tailed test ( $r = .856, p < .05$ ). As a result, since the computed  $r = .856$ , is greater than the table value of 0.196. We reject the null hypothesis and

concluded that there was a significant positive relationship between supply chain and production cost of the Brewing plants in the south-east, Nigeria ( $r = .856, P < .05$ ).

### Discussion of Finding:

#### What is the nature of the relationship between supply chain and production cost of the Brewing plants in the South East, Nigeria.

The study also shows that there is a significant positive relationship between supply chain and production cost of the Brewing plants in the south-east, Nigeria. This finding agrees with Faisal (2017) that posits there is an impact of supply chain practices on performance in the Jordan industrial sector. It is also in tandem with Veera, Abdul and Chandran (2009) study which revealed that six of the seven dimension of supply chain practice have a significant effect on performance. Suhong, Bhamu and Ragu-Nathan (2006) indicated that higher levels of supply chain practice can lead to enhanced competitive advantage and improved organizational performance. To buttress it further, Baghe (2018) shows that there is a significant positive impact of supply chain capabilities on operational and financial performance of food companies.

### 5. Summary of Finding, Conclusion and Recommendation

#### 5.1. Summary of Finding

1. There was a significant positive relationship between supply chain and production cost of the Brewing plants in the South East, Nigeria. ( $r = 0.866$ ).

#### 5.2. Conclusion

The study concluded that Supply Chain practices is a set of activities carried out in any organization to promote effective management of its supply chains and to improve production cost. From this we can see that components of SC practices include supply and material management issues, operations, information technology and sharing (Information Communication Technologies) and customer service which aid in cost reduction.

#### 5.3. Recommendation

Based on the outcome of this research, the researchers recommend:

1. Brewing plants in South East Nigeria need to ensure that their supply chain concentrates on the most important member, the customer who should be kept satisfied at all costs, thus helping to boost customer services and also put in place a well-managed supply chain that removes disruptions and obstacles in their business activities.

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