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## SUPPLY CHAIN MANAGEMENT AS A TOOL FOR COST MINIMISATION STRATEGY AMONG SELECTED TISSUE PAPER MANUFACTURING FIRMS IN ABA, SOUTH EAST NIGERIA

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**Abstract:** *The understanding and practicing of supply chain management (SCM) has become an essential prerequisite for staying competitive in the global race and for enhancing profitably. The study examine supply chain management as a tool for cost minimization strategy among selected tissue paper manufacturing firms in Aba, South East Nigeria. Descriptive research design was adopted in the study among 138 staff of the selected tissue paper manufacturing firms in Aba, Abia State. Questionnaire was used to obtain data used for the study. The results were presented in descriptive statistic while the study hypotheses were tested using inferential statistic of linear regression. The result of the study shows that distribution cost control significantly and positively affect cost minimization operations of tissue paper manufacturing firms in Aba, South East Nigeria ( $t = 17.634$ ;  $F = 149.504$ ;  $p = .000 < 0.05$ ) and Inventory cost control does not positively affect cost minimization operations ( $r = .899$ ,  $F = 528.6744$ ,  $t = 33.161$ ;  $p = .000 < 0.05$ ). It was concluded that supply chain management among tissue papers is a vital strategy that influences the cost as such, it leads minimization of cost. It was concluded that the management of tissue papers within Abia state especially Abba should see the supply chain management as a cardinal to minimizing operating cost and creating customer satisfaction, as such, a need to plan towards its integration into management strategy and that the management should adopt information communication technology in facilitating its supply chain system as such, allowing adequate flow of communication between distributors and the organization to reduce high cost of distribution.*

**Keywords:** *Supply Chain Management, Cost Minimization Tool, Tissue Paper Manufacturing, Distribution Cost Control, Inventory Cost Control*



## **INTRODUCTION**

Increase competition and market globalization of manufacturing product and the consequent increase in complexity of market, channel, supply networks and distributed facilities in the recent time poised the need for rapid products and services delivery at the lowest cost (Balaji & Kumar, 2013). As a result, business organizations all over the world are striving hard to evolve strategies to survive in a new competition ushered in by globalization. Today, supply chain management is vital strategy of the firm management (Sahu & Victor, 2016). Supply chain mechanism is an effective methodology and presents an integrated approach to resolve the issue in sourcing, customer service, demand flow and distribution. The term supply chain refers to the entire network of firms that work together to design, produce, deliver and service products to end customers. Many organizations have begun to see supply chain management as the key to building sustainable competitive edge for their products and/or services in an increasingly crowded market place (Jones, 1998)

Supply chain integrates the key businesses processes of any organization from end user through original supplier that provide products, services & information that add values for customers and other stakeholders (Stock & Lambert, 2001). The understanding and practicing of supply chain management (SCM) has become an essential prerequisite for staying competitive in the global race and for enhancing profitably (Moberg, Cutler, Gross & Speh, 2002). In recent times, Supply Chain Management (SCM) has received a considerable amount of interest from both researchers and in the industry (Pettersson & Segerstedt, 2013). Numerous studies have equally been conducted to ascertain the relationship between effective supply chain management and operational efficiency and profitability of firms (Poza, Moretti, Bueno, Torres, 2014; Njoku & Kalu, 2015).

Extant literatures reported that Organizations can gain competitive advantage by running supply chain network scenarios, evaluating and proactively implementing changes in response to dynamic business scenarios like new product introduction, changes in demand pattern, addition of new supply sources, and changes in tax laws (Balaji & Kumar, 2013). Shapiro, (2001) report indicate that integration of the supply chain offers many opportunities to improve customer service and eliminate unnecessary costs as it provide a growing array of options in logistics. Balaji & Kumar, (2013) revealed that the supply chain



costing could provide an approach for measuring the cost of activities spanning through the entire channel.

The supply chain management literature reports a number of studies on the benefits that a firm derives from linking performance with suppliers and customers. Despite the importance of supply chain management to performance, tissue paper manufacturing firms in Aba, South East Nigeria have continued to experience customer satisfaction decline, increase cost of operation as well as distributive cost. More so, many of the firms lack the capability to determine the cost of moving products to market and where potential savings may exist. There is dearth of empirical study on the role inventory cost control, distribution cost control and information sharing cost control performance on cost reductions in the operations of tissue paper manufacturing firms makes it imperative to investigate the impacts of supply chain management on cost minimizations of selected tissue manufacturing firms in Aba, South East Nigeria.

### **OBJECTIVES OF THE STUDY**

The main objective of the study is to evaluate the effect of supply chain management on the cost minimization operations of tissue paper manufacturing firms in Aba, South East Nigeria.

The specific objectives are to:

1. Determine the effect of distribution cost control on cost minimization operations of tissue paper manufacturing firms in Aba, South East Nigeria.
2. Ascertain the effect of inventory cost control on cost minimization operations of tissue paper manufacturing firms in Aba, South East Nigeria.

### **RESEARCH QUESTIONS**

1. What is the effect of distribution cost control on cost minimization operations of tissue paper manufacturing firms in Aba, South East Nigeria?
2. What is the effect of inventory cost control on cost minimization operations of tissue paper manufacturing firms in Aba, South East Nigeria?

### **RESEARCH HYPOTHESIS**

**H<sub>01</sub>:** Distribution cost control does not positively affect cost minimization operations of tissue paper manufacturing firms in Aba, South East Nigeria.

**H<sub>02</sub>:** Inventory cost control does not positively affect cost minimization operations of tissue paper manufacturing firms in Aba, South East Nigeria



## **LITERATURE REVIEW**

### **Conceptual framework**

A supply chain may be defined as an integrated process wherein a number of various business entities (suppliers, manufacturers, distributors, and retailers) work together in an effort to: acquire raw materials, convert these raw materials into specified final products, and deliver these final products to retailers (Beamon, 1998). It is an integrated manufacturing process wherein raw materials are converted into final products, then delivered to customers. At its highest level, a supply chain is comprised of two basic, integrated processes: the production planning and inventory control process, and the distribution and logistics process (Beamon, 1998). Supply chain management (SCM) could also be seen as the combination of art and science that goes into improving the way firms find the raw components it needs to make a product or service and deliver it to customers ("Supply Chain, Five Main Components," 2017). Christopher (1997), notes that logistics management can provide some steps to increase productivity and efficiency, which would have as a direct consequence the reduction of the unitary costs, reflected in the general performance of the firm. Shapiro (2001) writes that the traditional objective of SCM is to minimize the total supply chain cost to meet fixed and given demand. This total cost may include the following: raw material and other acquisition costs, inbound transportation cost, facility investment costs, direct and indirect manufacturing cost, direct and indirect distribution cost, inventory holding cost, interfacility transportation cost and outbound transportation cost.

### **Distribution Costs Control**

Distribution is viewed as a cost centre. Statistics reveal that the logistics costs accounts for nearly 4 to 42% of the total corporate cost in manufacturing (Patil, 2007). Patil further noted that the days of the distribution network with regional depots, sub regional depots, stockist and then to the retailer are over. In today's world of cut throat competition, the logistics costs have to be brought to a minimum in order for firms to survive.

According to Voordijk (2010), distribution costs depend primarily on the type and amount of goods carried from location to location, the mode of transport, vehicle size, consignment size and the distance between locations. Transport costs vary significantly with the number and locations of manufacturers, traders, and contractors and the services provided



(frequency of rides). Voordijk (2010) note that for firms to calculate the transportation costs, three route types can be distinguished: direct delivery from factory to the consumer, from the factory to the trader and from a trader to the consumer. For each route, stopping and kilometer costs can be calculated. Voordijk(2010) further maintained that stopping costs are related to finding the address and waiting times. With direct distribution, all the transport costs are attributed to one delivery. With group deliveries, transport costs are divided over different deliveries by a group age factor (Voordijk, 2010).

Logistics heavily depends upon the economy of the mode of transportation. The areas where the alternate modes of transportation prove out to be more economical are to be identified and proper strategic policy changes are to be made effective to the area (Patil, 2007).

### **Inventory Cost Control**

Inventory management is the supervision of non-capitalized assets (inventory) and stock items. Inventory costs are determined by interest costs, based on the value density of the inventory (i.e., the costs of capital tied up), and costs owing to obsolescence and spoilage (Voordijk, 2017). As a component of supply chain management, inventory management supervises the flow of goods from manufacturers to warehouses and from these facilities to point of sale (Rouse, 2017). A fundamental role of inventory management is to keep a detailed record of each new or returned product as it enters or leaves a warehouse or point of sale.

A closer look of supply chain relationships reveals that the heart of these relationships is inventory movement and storage. Much of the activity involved in managing relationships is based on the purchase, transfer, or management of inventory. As such, inventory plays a critical role in supply chains because it is a salient focus of supply chains (Esper & Waller, 2014). Firms hold inventory for two main reasons, to reduce costs and to improve customer service. The motivation for each differs as firms balance the problem of having too much inventory (which can lead to high costs) versus having too little inventory (which can lead to lost sales)(Robinson, 2014). Robinson (2014) further maintained that a common perception and experience indicates that supply chain management leads to cost savings, largely through reductions in inventory.



### **Theoretical Framework**

Theories such as strategic choice theory and transaction cost theory could be used to project the theoretical foundations of this study

### **Strategic Choice Theory**

The strategic choice theory stands in contrast to externally focused approaches such as institutional theory. Strategic choice contends that managers' decisions play a tremendous role in organizational success or failure (Child, 1972). A central issue in strategic choice theory is strategic renewal and repositioning. A foundational assumption is that firms can enact and actively shape their environment as against a common view that organizations were designed along operational requirements based on the external environment. Strategic choice theory provided an alternative that emphasized the agency of individuals and groups within organizations to make choices, sometimes serving their own ends, which dynamically influenced the development of those organizations. Within traditional supply chains, strategic decisions are made with concern for the firm as the primary driver. This approach constrains firms to using a generic strategy such as prospector (Miles and Snow, 1978) or low cost leader (Porter, 1980). Within best value supply chains, however, strategic decisions are made with concern for the chain as the primary driver. This strategic supply chain management opens the door to unique blended strategies that transcend the firm and provide the chain with increased agility and adaptability. Some logical research questions grounded in strategic choice include: to what extent are best value supply chains better at shaping their fates than traditional supply chains?, and are best value supply chains significantly more likely than traditional supply chains to be able to enact their environment. Every organization needs managers who can take strategic decision, as this is paramount to the survival and growth of the in the ever dynamic and competitive business environment and this is no exception of tissue paper manufacturing firms.

Early scholars that contributed to the development of the theory are Chadley (1962) and John Child (1972). Before John Child (1972)'s early research on strategic choice, most theories were characterized by determinism and neglected the elements of powerful managers; in other words the element of agency in decision making (Child, 1972; Jewer& McKay, 2012).Therefore another perspective on strategic management was proposed,



stating that strategic choice can be seen as the critical element of organization theory (Chandler, 1962; Child, 1972)

### **Empirical Reviews**

Li, Ragu-Nathan, Ragu-Nathan & Rao (2006) conducted a study on the impact of supply chain management practices on competitive advantage and organizational performance using data from 196 organizations. Study developed five dimensions of SCM practice (strategic supplier partnership, customer relationship, level of information sharing, quality of information sharing, and postponement, inventory control) as well as tests the relationships between SCM practices, competitive advantage, and organizational performance. The results revealed that higher levels of supply chain management practices can lead to enhanced competitive advantage and improved organizational performance through cost reduction. In an empirical evidence in the Nigerian food and beverage industry between, 2005- 2014, Njoku and Kalu (2015) examined the effectiveness of supply chain management as a strategic tool for profitability enhancement in the competitive marketing environment. The study result findings showed that investment on the supply chain component by firms does not reflect significantly in their profitability.

Pozo, Moretti, Bueno, Torres (2014) in a study examined supply chain management as a competitive strategy for costs reduction using two small manufacturing firms in Campo Limpo Paulista/BR. The instruments used in the research was structured interviews and analysis of firm reports. The study sample is composed of two medium and small business and a firm from the mechanical industrial branch and another from the industrial plastic branch. In each one of these firms, the owners and those responsible for the area of were interviewed regarding the supply chain. The study revealed after the implantation of the new process, the operational costs reduced and they became more competitive with their competitors and partners in the productive chain, since the managers started to acquire improved visibility of their business and a sensible improvement in the time of reply to the demands, leading to the best profit margins. The study further revealed that all the investments in the adequacy and preparation of people and the system of information supply chain management can cause the firm to become most competitive.



## METHODOLOGY

### Research Design

This study makes use of descriptive research design. The type of descriptive research used is “cross sectional descriptive”.

### Sources of Data

Two types of data was collected for the study. They are primary and secondary data. This choice of data is logically dictated by the fact that this study is a descriptive research.

#### *Primary Sources of Data*

Primary data mainly comes from direct observation of events, manipulation of variables, and contrivance of research situations including performances of experiments and responses to questionnaires (Asika, 2001). In collecting primary data for the study, a structured questionnaire was used.

#### *Secondary Sources of Data*

The secondary data for this study was sourced from relevant stock of literature on the subject matter of this study. This stock of literature exists in the form of books, government documents, journals, periodicals, mimeographs, and reports etc. which are available in various public and private libraries.

### Population of the Study

A total of four (3) tissue paper manufacturing firms were selected from the population of six (6) tissue manufacturing firms situated in Aba, Abia State of Nigeria. The choice of the selected tissue papers are based primarily on staff capacity, financial strength and years of operation. The population strength of the e-commerce firms is 158 staff.

**Table 3.1: Distribution of the population size for the study by tissue paper manufacturing Firms in Aba, Abia state of Nigeria**

Companies	Staff Capacity
Star paper mill limited	51
Wimbatine industry limited	47
E.T. Edwin industrial company limited	41
Philyns international company limited	34
Total	173

*Source: Human Resources department of the Organizations, 2018.*



### **Sample Size Determination**

The entire population of 158 was used in the study due to the small nature of the population.

### **Sampling Technique**

Proportionate stratified sampling method was adopted so as to give a proper representation to the e-commerce firms.

### **Instrument for Data Collection**

The major research tool used for this study is structured questionnaire. The questionnaire consist of two sections. Section I comprise the demography of the target respondents, while section II comprise liker scale items derived from the various constructs related to aspects of diversity in the work place and organizational efficiency. The 5-point Likert-type scale was provided for ranking of responses of respondents to items in section II of the questionnaire. The said scale ranges from strongly disagree (SD)-1, disagree (D)-2; undecided (UD)-3; agree (A) – 4; and strongly agree (SA) – 5.

### **Validity of the Instrument**

The questionnaire was properly designed and a conduct of a pre-test on every question contained in the questionnaire was carried to ensure validity. The researcher subjected the instrument to face and content validity by giving it to two experts in the field of supply chain and business management who studied the instrument thoroughly to ensure they are in line with the objectives of the study and properly aligned.

### **Reliability of the Instrument**

In order to obtain the reliability of the research, Cronbach's Alpha coefficient method was adopted in study by pre tested forty (15) copies of the test instrument before the actual survey for the study. The responses obtained from the pre-study survey were subjected to the Cronbach Alpha's internal consistency test via SPSS (statistical package for social sciences) version 23.0. Based on the inter-item correlation of Twelve (12) items on the questionnaire the result of the reliability test is 0.851 which shows that the items on the questionnaire are internally consistent, hence they are reliable.

### **Data Presentation and Analysis**

#### **Descriptive Analysis**

This section deals with the presentation of results obtained from the field study. The results were presented based on the objectives of the study.



**Table 2: Effect of distribution cost control on cost minimization operations of tissue paper manufacturing firms in Aba, South East Nigeria**

Options	SA Freq(%)	A Freq(%)	U Freq (%)	D Freq(%)	SD Freq(%)	Mean	Std
High investment in vehicles reduces cost per unit of products	60(47.2)	57(44.9)	4(3.1)	4(3.1)	2(1.6)	4.3	0.81
Location of the factory closer to the market reduces distribution cost	85(66.9)	34(26.8)	3(2.4)	4(3.1)	1(0.8)	4.5	0.76
Using automobiles that saves fuel for distribution reduces cost	73(57.5)	42(33.1)	4(3.1)	2(1.6)	6(4.7)	4.3	0.98

Source: Field survey, 2017

Table 2 shows the participant's responses towards determining the effect of distribution cost control on cost minimization operations of tissue paper manufacturing firms in Aba, South East Nigeria. The result revealed that 60(47.2%) of the participants strongly agree that high investment in vehicles reduces cost per unit of products, 57(44.9%) agreed while 4(3.1%) are undecided. However, 4(3.1%) disagreed and also 2(1.6%) strongly disagree with a mean and std of 4.3 and 0.81 respectively. Also 85(66.9%) strongly agreed that locating the factory closer to the market reduces the distribution cost, and 34(26.8%) agreed meanwhile 3(2.4%) of the participants are undecided. 4(3.1%) disagreed while 1(0.8%) of the respondents strongly disagreed. This is with a mean of 4.5 and a std of 0.76. Similarly, 73(57.5%) of the participants and 42(33.1%) strongly agreed and agreed respectively that using automobiles that saves fuel for distribution reduces cost, while only 4(3.1%) were undecided. 2(1.6%) and 6(4.7%) of the respondents disagreed and strongly disagreed that using automobiles that saves fuel for distribution reduces cost.

**Table 3: Effect of inventory cost control on cost minimization operations of tissue paper manufacturing firms in Aba, South East Nigeria**

Options	SA Freq(%)	A Freq(%)	U Freq(%)	D Freq(%)	SD Freq(%)	Mean	Std
Minimizing inventory reduces the operational cost of the firm	101(79.5)	17(13.4)	7(5.5)	1(0.8)	1(0.8)	4.7	0.68
Maximizing the ability to provide customers with products in a timely manner	96(75.6)	24(18.9)	2(1.6)	5(3.9)	2(1.6)	4.6	0.70
Using appropriate software for inventory management minimizes cost	82(64.6)	28(22.0)	5(3.9)	4(3.1)	8(6.3)	4.3	1.1

Source: Field survey, 2017



Table 3 above show the respondents' responses towards ascertaining the effect of inventory cost control on cost minimization operations of tissue paper manufacturing firms in Aba, South East Nigeria. Above average 101(79.5%) and 17(13.4%) of the respondents strongly agreed and agreed that minimizing inventory reduces the operations cost of the firm. However, 7(5.5%) are undecided. Meanwhile 1(0.8%) and 1(0.8%) of the respondents disagreed and strongly disagreed. The result of the study shows that reducing inventory minimizes the operational cost of the firm with a mean score of 4.7 and a std of 0.68. The study also shows that 96(75.6%) and 24(18.9%) strongly agreed and agreed that maximizing the ability to provide customers with products in a timely manner minimizes cost operations in the firm. While 2(1.6%) are undecided, 5(3.9%) and 2(1.6%) of the respondents disagreed and strongly disagreed respectively. This result indicates that maximizing the ability to provide customers with products in a timely manner minimizes cost operations in the firm with a mean and Std of 4.6 and 0.70 respectively. In addition, the result of the study identified that 82(64.6%) strongly agreed and 28(22.0%) agree that using appropriate software for inventory management reduces the cost operations of the firm. Only 5(3.9%) of the respondents are undecided meanwhile 4(3.1%) and 8(6.3%) disagreed as well as strongly disagreed. With the mean and Std score of 4.3 and 1.1 respectively, it implies that using appropriate software for inventory management minimizes cost operations of the firm.

#### 4.5 Test of Hypotheses

The three hypotheses postulated in chapter one were tested with various test statistics aided by computer through the application of Statistical Package for Social Sciences (SPSS 23 version) of Microsoft environment. All Hypotheses were tested with linear regression analysis.

##### Hypothesis one

Ho: Distribution cost control does not positively affect cost minimization operations of tissue paper manufacturing firms in Aba, South East Nigeria

##### Results

**Table 5: Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.738 <sup>a</sup>	.545	.543	.65755	.546

a. Predictors: (Constant), Distribution cost control

b. Dependent Variable: cost minimization operations in Aba



**Table 6: ANOVA<sup>a</sup>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	134.454	1	134.454	149.504	.000 <sup>b</sup>
	Residual	112.417	125	0.899336		
	Total	246.870	126			

a. Predictors: (Constant), distribution cost control

b. Dependent Variable: cost minimization operations

**Table 7: Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.002	.109		.015	.988
	cost minimization operations	.531	.030	.738	17.634	.000

a. distribution cost control

b. cost minimization operations

### Result Summary

$R = .738, R^2 = .545, F = 149.504, T = 17.634, DW = .546$

### Interpretation of the Result

A linear regression analysis conducted to determine the effect of distribution cost control on cost minimization operations of tissue paper manufacturing firms in Aba, South East Nigeria (table 5-7) shows that there is strong positive relationship between distribution cost control and cost minimization operations of tissue paper manufacturing firms in Aba, South East Nigeria (R- coefficient = .738). The R square, the coefficient of determination, shows that 54.5% of the variation in cost minimization operations can be explained by distribution cost control with no autocorrelation as Durbin-Watson (.546) is less than 2. With the linear regression model, the error of estimate is low, with a value of about .65755. The regression sum of the square 134.454 is more than the residual sum of the square 112.417 indicating that the variation is due to chance. The F-statistics = 149.504 shows that the model is significant. The extent to which distribution cost control affect cost minimization operations of tissue paper manufacturing firms in Aba, South East Nigeria with .738 value indicates a positive significance between distribution cost control and cost minimization operations of tissue paper manufacturing firms in Aba, South East Nigeria which is statistically significant



(with  $t = 17.634$ ) and  $p = .000 < 0.05$ . Therefore, the null hypothesis is rejected and the alternate hypothesis accepted accordingly.

### Hypothesis Two

Ho: Inventory cost control does not positively affect cost minimization operations

**Table 8: Model Summary<sup>b</sup>**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.899 <sup>a</sup>	.809	.808	.49152	.621

a. Predictors: (Constant): Inventory cost control

b. Dependent Variable: cost minimization operations

**Table 9: ANOVA<sup>a</sup>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	265.661	1	265.661	528.6744	.000 <sup>b</sup>
	Residual	62.813	125	.5025		
	Total	328.473	126			

a. Predictors: Inventory cost control

b. Dependent Variable: cost minimization operations

**Table 10: Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.025	.070		-.349	.727
	cost minimization operations	.999	.030	.899	33.161	.000

a. Predictors: Inventory cost control

b. Dependent Variable: cost minimization operations

### Result Summary

$R = .899$ ,  $R^2 = .809$ ,  $F = 528.6744$ ,  $T = 33.161$ ,  $DW = .621$

### Interpretation of the Result

A linear regression analysis conducted to ascertain the effect of inventory cost control on cost minimization operations of tissue paper manufacturing firms in Aba, South East Nigeria (table 8 - 10) shows that there is strong positive relationship between ethical leadership and organizational efficiency (R- coefficient = .899). The R square, the coefficient of determination, shows that 80.9% of the variation in cost minimization operations can be



explained by inventory cost control with no autocorrelation as Durbin-Watson (.621) is less than 2. With the linear regression model, the error of estimate is low, with a value of about .49152. The regression sum of the square 265.661 is more than the residual sum of the square 62.813 indicating that the variation is due to chance. The F-statistics = 528.6744 shows that the model is significant. The extent to which inventory cost control affect cost minimization operations with .899 value indicates a positive significance between inventory cost control and cost minimization operations which is statistically significant (with  $t = 33.161$ ) and  $p = .000 < 0.05$ . Therefore, the null hypothesis is rejected and the alternate hypothesis accepted accordingly.

## **CONCLUSION**

Supply chain management, remains a cardinal to rapid delivery of goods and services to customers at a lower cost. The study thus concludes that, supply chain management among tissue papers is a vital strategy that influences the cost as such, it leads minimization of cost. The supply chain costing provide an approach for measuring the cost of activities spanning through the entire tissue paper distribution channel. Many of the organizations have begun to see supply chain management as the key to building sustainable competitive edge for their products and/or services in an increasingly crowded market place.

## **RECOMMENDATIONS**

Based on the findings of the study, the followings are recommended

1. That the management of tissue papers within Abia state especially Abba should see the supply chain management as a cardinal to minimizing operating cost and creating customer satisfaction, as such, a need to plan towards its integration into management strategy.
2. That the management should adopt information communication technology in facilitating its supply chain system as such, allowing adequate flow of communication between distributors and the organization to reduce high cost of distribution.

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