



## The Role of Supply Chain Management on Customer Satisfaction

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### Abstract

*This paper titled “The role of Supply Chain Management on Customer Satisfaction, is aimed to examine these various dimensions (commitment, trust, and conformity) that constitute some of the characteristics that create mutual relationships between the supplier(s), organisation, and the end users of the products and services offered by the organisation to satisfy their needs at a profit. The study employed a descriptive survey as its research design. Data required for the study was collected through primary sources (Questionnaires). The sampling technique adopted was probability sampling using a random sampling to select 165 sample size out of 290 population which constitute few selected customers. However, only 143 were duly filled and returned, which were finally used for analysis. The data was analyzed using SPSS where correlation tool and mean were employed. The study found that there was a positive and significant association between buyer-supplier commitment and customer satisfaction ( $r = 0.276$ ;  $p < 0.01$ ). It was also revealed that supplier’s commitment on timely response without delay in material supply would contribute to company maintaining adequate inventory size which would in turn facilitate production and distribution of goods through appropriate channel members to the final consumers. The study concluded among others that for effective and efficient distribution system to take place, there must be a corporate planning of all the departments concerned. Transport, sales, production, marketing and purchasing should all work as a team to plan how customers can be optimally satisfied.*

**Keywords:** Supply Chain Management, Commitment, Trust, Conformity and Customer Satisfaction

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### 1.0 Introduction

Consumer satisfaction is a central concept in modern marketing thought and practice. The marketing concept emphasizes delivering satisfaction to consumers and obtaining profits in return. As a result, overall quality of life is expected to be enhanced. Thus, consumer satisfaction is crucial to meeting various needs of consumers, business, and society.

In almost every industry, Supply Chain Management has become a much more

important strategic and competitive variable. It affects all of the shareholder value levers—cost, customer service, asset productivity, and revenue generation. The leading supply chain performers are applying new technology, innovations, and new process thinking to great. The average performing companies and the laggards have a limited window of opportunities advantage in which to catch up (Michael & Thomas, 2007).

One of the core challenges facing companies in Nigeria is that of attracting, satisfying and



retaining customers in a competitive environment. Hassan (2008) the level of stock to be purchased or carried will depend on a number of issues, such as; level of consumption; bulk purchase discount; unreliable delivery dates; difficulty in matching supply with demand; speculation (availability or scarcity) and; company policy. Organization must take into consideration the costs implication of being stock out; which could result to loss of customer goodwill; idleness, labour frustration, and also the costs implication of carrying large inventories.

Kotler and Keller (2007) assert that customer satisfaction depends on a product or service perceived performance in delivering value relative to the buyer's expectations. A highly satisfied customer generally stays loyal, buys more of the company's products, upgrades existing products, talks favorably about the company and its products, pays less attention to competing brands and is less sensitive to price, offers product or service ideas to the company and costs less to serve than new customers because transactions are routine. Effective logistics management can lower costs, provide better customer satisfaction which translate into competitive advantage and profit for the company (Boone & Kurtz, 2004). Therefore, the customer is satisfied if the expectations coincide with the outcome (or the result exceeds expectations) or dissatisfied if not (Szwarc, 2005).

According to Jochen (2003), customer satisfaction may lead to customer loyalty: customers are more likely to come back to repurchase product or services, and generate customer loyalty as well as they will introduce the product to other people around them. As a consequence, this will lead to an increase on long term profitability of the

company. Customer satisfaction is defined as the skill of making customer joyful, by attending to them and responding to their desires (Zhang, Vonderembse, & Lim, 2003). Attending to the customer's needs is a specific aspect of a business where it leads to satisfying the customer where it will further contribute towards loyalty and long-term strategic relationship with the manufacturer. Customer satisfaction is ensured when a business being operated based on customer's needs instead of organisational needs (Herrmann, Huber & Braunstein, 2000). Organizations may identify customer satisfaction in terms of on time delivery as well as customer specification needs. Variables such as customer needs, having the products immediately and on hand to satisfy the customers' needs, vendor partnerships, that is; sharing of information regarding sales, sales forecast as well as amount of inventory and data integrity which assist in overall inventory management (Lee & Kleiner, 2001).

Consequently, a holistic approach is required to efficiently and effectively manage Supply Chain of firms' products. It is necessary to know the level of importance customers attach to the different elements of customer satisfaction and the performance of key competitor(s) on these elements. This is the major reason this study seeks to ascertain the extent to which Supply Chain affects customers satisfaction.

### **1.1 Objectives of the Study**

The main objective of this study is to examine the role of supply chain on customer satisfaction. Other specific objectives are:

- i. To establish the relationship between supplier's *commitment* of material supply on customer satisfaction.

ii. To assess the supplier's level of *trust* on source of supply and its effect on customer satisfaction.

iii. To highlight the relationship between supplier's *conformity* to the material required to satisfy the customer.

### 1.2 Research Hypothesis

Ho1: There is no significant relationship between supplier's commitment on material supply and customer satisfaction.

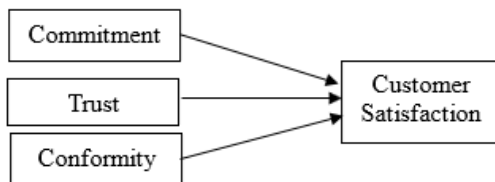
Ho2: There is no significant relationship on level of trust on source of supply and its effect on customer satisfaction.

Ho3: There is no significant relationship between supplier's conformity to the material needed to satisfy customer.

### 1.3 Framework of the Study

The frame work of the study comprises the independent variables and dependent variables used in this work as coined from theoretical framework of the previous researchers. Below is the framework:

Theoretical Frame Work of the study.



Source: Adapted from Fynes, Voss, and Burca (2005)

## 2.0 Literature Review

### Conceptual Issues

One of the main areas focused on by organizations today is how to satisfy customers in order to get more customer loyalty or patronage. Vazifedoost, and Niknezhad-Tehrani (2008) opined that for any organization to satisfy customers such organization must make it as a point of duty to either maintain internal source of supply of raw materials or the external ones (outsourced) who would continually be committed, trusted, and conformed with

material specifications as ordered by the organization in order to satisfy the customers.

### 2.1 Supply Chain and Customer Satisfaction

Supply Chain Management is the integration of business process from end user through original suppliers that provides products, services, and information that add value for customers (Michael & Thomas, 2007). They further asserted that, supply chain includes a variety of firms, ranging from those that process raw materials to make component parts to those engaged in wholesaling. Included also are organizations engaged in transportation, warehousing, information processing, and material handling. Kotler and Armstrong (2008) viewed supply chain management as managing upstream and downstream value-added flows of materials, final goods, and related information among suppliers, the company, resellers, and final consumers.

According to Kotler and Armstrong (2008), customer satisfaction is the extent to which a product's perceived performance matches a buyer's expectation. Customer satisfaction is an abstract concept and the actual manifestation of the state of satisfaction will vary from person to person and products/service to product/service because the state of satisfaction depends on a number of both psychological and physiological variables which correlate with satisfaction behaviors such as customer loyalty and product repurchase (Chu, 2012).

### 2.2 Commitment

Commitment can be defined as a desire to maintain mutually valuable relationships. Therefore, to achieve commitment, the strategy of organization should be customer-oriented, long-term and base on mutual benefits (Vazifedoost, & Niknezhad-Tehrani, 2008). In the view of Fornara and



Colombetti (2002), a commitment is an inter-agent state, reflecting a business relation between two companies that binds an agent (the debtor), relative to another agent (the creditor) to the fact that it will take some actions within a determined time interval. Trust and commitment can be achieved through the use of vendor managed inventory, consignment inventory and just in time inventory management (Centikaya & Lee, 2000). These enable channel partners to satisfy their customers' needs through providing on time deliveries which result into repeat purchases, positive word of mouth and reduced inventory carrying costs on the customers' side (Wang, 2000).

### **2.3 Trust**

Trust is a key factor for the development of partnerships among the different agents of a supply chain, distinguished between interpersonal and inter-firm trust (Johnston, Mccutcheon, Stuart, & Kerwood, 2004). Trust may also reduce the need for buyers to monitor supplier deliveries and quality of inputs as well as reduce the need to enforce penalties in the case of lower quality inputs (Dyer & Chu, 2003). They further opined that, supplier involvement in quality may become a first step for commitment in a relationship and contribute to an improving cycle of trust: increasing quality may lead to reduction in transaction costs, which in turn improves trust, reinforcing the relationship and rewarding supplier involvement in quality. Hoffman, Czinkota, Dickson, Dunne, and Griffin (2000) defined trust as a person or group's firm belief in the honesty, integrity and the reliability of the other party. Lynn (2011) established that to achieve the effective management of supply chain relationships, supplier and customers have to work together in a coordinated, integrated way and observing of partnership principles, communication, information and

dialogue. They should have the same goals, and attract mutual trust on each other. Reza, Fazel, Naeimi, and Abdolvahab (2014) viewed that trust and commitment of both suppliers and customers must be cordial to ensure a connection between the implant facilities to enhance the establishment of productive partnerships.

### **2.4 Conformity**

Hassan (2008) defined conformity as "the degree to which delivered products meets pre-determined standards set by the user or a constituted authority". Kotler and Keller (2013) simply put conformity as seller's ability to deliver quality product or service that meets or exceeds customers' expectations. Lai, Cheng, and Yeung (2005) viewed conformance as an act of mutually agreeing upon requirements among the partner firms with the aim of improving the performance of the transactions taking place in the chain. From their point of view, both supplier and buyer have to agree on specifications, exchanges of information, coordination and control at the inter-organizational level to ensure product quality is not affected and the quality in the supply chain is achieved. Krause, Handfield and Taylor (2007) commitment between the two firms is an important complementary condition to establishing performance goals, and provides value to buying firms that seek social capital accumulation with suppliers to achieve the performance gained from the outsourcing.

### **2.5 Theoretical Issues**

This study was built upon the Expectation theory (also commonly known as Expectancy-Disconfirmation Theory), which is the most popular theory regarding customer satisfaction processes. The theory was propounded by John F. Muth in 1961, as cited by Oliver (1996). The theory entails that satisfaction/dissatisfaction is a function



of a customer's comparison of performance (of a product or service) with predetermined standards of performance. According to the view, the predetermined standards are the customer's predictive expectations. Three possible outcomes of the comparison are possible. Positive disconfirmation occurs when performance is perceived to be better than the predetermined expectations. In this scenario, customer is delighted. Zero disconfirmation occurs when performance is perceived to be exactly equal to expectations-customers are likely to be satisfied. Finally, negative disconfirmation occurs when performance is lower than expectations. Of course, negative disconfirmation leads to dissatisfied or unhappy customers. The need to achieve

positive disconfirmation has been popularized...

**3.0 Methodology**

This research is planned to give an analysis to examine the role or relationship between supply chain and customer satisfaction. The research design adopted for this study is survey, using cross sectional survey design. Close ended self-structured questionnaires were used to collect relevant data for the study. The data was analysed through correlation with the aid of SPSS 20.

**4.0 Data Presentation, Analysis and Interpretation**

This presents the data which have been collected and analyzed using 5-point Likert's Scale.

**Table 1: Analysis of Questionnaires Distributed**

| Variable                             | Responses | Percentage (%) |
|--------------------------------------|-----------|----------------|
| Number of Administered Questionnaire | 165       | 100            |
| Number of Questionnaire Returned     | 143       | 86.7           |
| Number of Questionnaire not Returned | 22        | 13.3           |

Source: Field Survey, 2020

From the Table 1, 165 questionnaires were issued for the data collection on which, 165 representing 100%. However, not all were

**Table 2: Descriptive Analysis of the Study Variables**

| Variable              | Min. | Max. | Mean | Std. Dev. |
|-----------------------|------|------|------|-----------|
| Commitment            | 1    | 5    | 3.69 | 0.828     |
| Trust                 | 1    | 5    | 3.64 | 0.719     |
| Conformity            | 2    | 5    | 3.65 | 0.695     |
| Customer Satisfaction | 1    | 5    | 3.81 | 0.870     |

Source: IBM SPSS (Version 20) output, 2020

From the Table 2 is it observed that Commitment has an average of 3.69 and standard deviation of 0.828 with a minimum of 1 and maximum of 5 respectively. The standard deviation shows that the data

filled and returned. Therefore the analysis is based on the 143 returned questionnaires.

obtained from commitment are closely spread across the mean. Based on this, it is confirmed that there is timely response of the existing supplier(s) on material supplied without delay, which on the other hand contribute to the adequate maintenance of inventory size by company.

Trust has a mean of 3.64 and standard deviation of 0.719 showing the level of dispersion with a minimum of 1 and maximum of 5 respectively. This implies that company has strong trust on the source(s) of supply couple with their positive attitude in responding to any order made by the company without disappointment.





Conformity has a mean of 3.65 and standard deviation of 0.695 showing the level of dispersion with a minimum of 2 and maximum of 5 respectively. This also shows that supplier(s) do conform to whatever specification given by the company in terms of quality material supply at moderate prices compared to what other competitors can offer.

Customer Satisfaction has a mean of 3.81 and a standard deviation of 0.870 showing

the level of dispersion from the mean with a minimum of 1 and maximum of 5 respectively. This shows that most customers are satisfied with the distribution strategy of the company by making the product(s) available as at when needed with high quality and at affordable prices.

**Correlation Analysis:** The correlation matrix seeks to determine the relationships that exist between variables used in the research.

**Table 3a: Correlation Matrix**

|                              |                     | <b>Commitment</b> | <b>Trust</b> | <b>Conformity</b> | <b>Customer Satisfaction</b> |
|------------------------------|---------------------|-------------------|--------------|-------------------|------------------------------|
| <b>Commitment</b>            | Pearson Correlation |                   |              |                   |                              |
|                              | Sig. (2-tailed)     |                   |              |                   |                              |
|                              | N                   | 143               |              |                   |                              |
| <b>Trust</b>                 | Pearson Correlation | .276**            |              |                   |                              |
|                              | Sig. (2-tailed)     | .001              |              |                   |                              |
|                              | N                   | 143               | 143          |                   |                              |
| <b>Conformity</b>            | Pearson Correlation | .205*             | .411**       |                   |                              |
|                              | Sig. (2-tailed)     | .014              | .000         |                   |                              |
|                              | N                   | 143               | 143          | 143               |                              |
| <b>Customer Satisfaction</b> | Pearson Correlation | .295**            | .441**       | .365**            |                              |
|                              | Sig. (2-tailed)     | .000              | .000         | .000              |                              |
|                              | N                   | 143               | 143          | 143               | 143                          |

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

**\*.** Correlation is significant at the 0.05 level (2-tailed).

Table 3a shows the relationships that exist between both the independent and dependent variables and their various outcomes analyzed in Table 3b below.

| <b>Variable</b>       |       |       |       |       |
|-----------------------|-------|-------|-------|-------|
| Commitment            | 1.000 |       |       |       |
| Trust                 | 0.276 | 1.000 |       |       |
| Conformity            | 0.205 | 0.411 | 1.000 |       |
| Customer Satisfaction | 0.295 | 0.441 | 0.365 | 1.000 |

Source: IBM SPSS (Version 20) outputs, 2020

The relationship between commitment and trust is positive at 0.276, this means that the relationship between both is positive, but showing a weak correlation. That is, supplier(s) commitment in supplying required products by the organization without delay would create more level of trust such organization would have on such supplier(s). Also, commitment is positively correlated to conformity at 0.205 and customer satisfaction at 0.295 respectively. This implies that more effort in commitment



leads to a corresponding effort in conformity and customer satisfaction, where the target of the organization is to ensure customers are satisfied.

Trust has positive relationship of 0.205 with commitment, conformity and customer satisfaction with coefficient of 0.276, and more increments with 0.441 and 0.365 respectively. This indicates that the more the level of trust given by the organization to the supplier(s) and other channel members the more corresponding commitment and conformity which would translate to customer satisfaction.

Conformity has a positive relationship of 0.441 with commitment, trust and customer satisfaction with a coefficient of 0.276, 0.411, and 0.365 respectively. This indicates that the more the level of conformity exhibited by the supplier(s) in meeting up with the specification, the more corresponding all other variables would lead to achieving organization objectives.

Customer satisfaction has positive relationship at 0.365 with commitment of 0.296, trust of 0.205, and conformity of 0.441 respectively. All these indicate that, supplier(s) commitment in supplying products without delay would allow organization to develop more trust in him or them if the organization is using more sources, as they conform with quality required, products would be made available as at when due to customers or potential customers that would satisfy their needs.

### **5.0 Discussion of Results**

The major aim of this study is to investigate the role of Supply Chain Management on Customer Satisfaction. From the various analyses carried out in the course of this research work, all the variables or supply chain dimensions (commitment, trust and commitment) used has one way or the other contributed to the achievement of the

organization objectives. It was discovered that the more committed the source(s) of supply used in meeting up with expectation of the organization in terms of timely provision of material required, the more organization develop trust in relating or continuing business with such supplier. Because production activity of the organization would not be interrupted or brings to a halt, rather continues. This decision was premised on the observation that there was a positive and significant association between buyer-supplier commitment and customer satisfaction ( $r = 0.276$ ;  $p < 0.01$ ). This was supported by the study carried out by; Pinho, Rodrigues and Sally (2014) has concluded that supply chain partners who exhibit sound commitment attitudes towards achieving common objectives are usually able to meet their performance targets, unlike those who show the lack of commitment. There was a positive and significant association between buyer-supplier trust and customer satisfaction ( $r = 0.205$ ;  $p < 0.01$ ). This is corroborated by the study of Krause, Handfield and Tyler (2007), the preparedness of buyers and suppliers to commit in long-term relationships, as characterized by mutual and joint investment strategies designed at improving productivity, contributes to overall business performance. In addition, mutual trust is a vital factor in reducing business cycle times, which is necessary for meeting customer demands and also contributes to improving flexibility in organisations (Panayides & Lun, 2009). Besides, the disposition by supply chain partners to engage in relationships which are characterised by a high level of trust enhances their Just-in-time (JIT) performance, which is key in ensuring customers satisfaction (Teeravarapug, Kitiwanwong & SaeTong,



2011). There was also a positive relationship between buyer-supplier conformity and customer satisfaction ( $r= 0.295$ ;  $p<0.01$ ). Lo and Yeung (2004) asserted in their statement that there is a relationship between continuous quality improvements and conformance which impact positively upon inventory levels, product and process variation, cycle times, responsiveness, flexibility, and ultimately final customer satisfaction. It was discovered that the level of conformity exhibited by the supplying in meeting up with quality specification has made the producing organization to meet up with customers expectation which would lead to satisfaction, and in turn allow organization to realize its set objectives.

From the computed result, the correlation coefficient between the variables were found to be significant at 1% level, showing that there were positive relationships between the variables, although not too strong or too weak. However, Null Hypotheses were rejected ( $H_0$ ), and Alternate Hypotheses were accepted based on the analyses shown.

In view of this study, for effective and efficient distribution system to take place, there must be a corporate planning of all the departments concerned. Transport, sales, production, marketing and purchasing should all work as a team to plan how customers can be optimally satisfied.

Despite the useful findings of this study, this empirical study has several limitations that need to be acknowledged. The limitations of this study are mainly embodied in the representativeness of samples, where the administered number of 165 questionnaires were not duly filled, rather 143 respondents filled and returned the questionnaires given to them. As a result of this, data analysed was based on the fully filled questionnaires of 143.

Future studies should attempt to overcome the above limitations as possible to allow a better based on overall sample size.

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