

AN INVESTIGATION OF ELECTRONIC PROCUREMENT PRACTICES BY THE MULTI-NATIONAL GAS AND OIL COMPANIES IN NIGERIA

BY

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ABSTRACT

The main objective of the study was to determine the e-procurement practices of Crude Oil and Gas Producing Company. The subsidiary objectives were: To determine if they used e-marketing method; To determine how effective materials management had been on profitability; To determine how profitability was operationalized in their company; To determine attitudes of the staff towards materials management; and, To determine the attitudes of the staff towards profitability. In the Review of the Related Literature, the following headings were handled: Electronic Procurement and its capabilities; Purchasing Role in Business; Purchasing Environment and the Importance of Purchasing; The Purchasing Function; Profit Making Potentials. The research design was a combination of a survey and a case study. It was found that all the 100 respondents said that their company had e-procurement practices. It was recommended that the company should continue to use electronic procurement because of the advantages over the traditional methods and this should be backed by policy.

INTRODUCTION

THE HISTORY OF CRUDE OIL AND GAS PRODUCING COMPANY

The Crude Oil and Gas Producing Company was granted an oil exploration license on 4th November, 1938, for 40, 000 square miles of the Niger Delta Basin. World War II caused

activity to be suspended for 5 years from 1914. The Company first drilled a well at Ihuo, ten miles North East of Owerri, to a depth of 11, 228 feet but failed to find oil. Then Akata – A well was drilled in 1953 and suspended in 1954 [1].

February 1958 saw production at 6000 barrels per day and the first cargo of crude oil delivered. 1959 heralded the discovery of the Ebubu and Bomu fields in Rivers State and the Ughelli field, the first find west of the Niger, in Delta State.

Port Harcourt then became the choice for a new Company location because as well as having commercial quantities of oil in the vicinity, it possessed an adequate harbor, airport and telecommunications link with Lagos. Offices, workshops materials handling facilities a water transport base, Residential Area and Training Centre were all built to support the company's operations. At the same time there was still a need to reduce transportation costs to make Nigerian crude more economic. The obvious solution of introducing larger tankers was unavailable because the Bonny Bar, which could only be passed by vessels of less than 18,000 tons, loaded. The answer was to build storage facilities at Bonny and dredge the Bonny Bar. The resulting Terminal, originally with four storage tanks and a 330,000 barrels capacity, was connected to Bornu and Afam by pipeline [1].

In 1967, the Biafran crisis brought operations in the East to a halt. However, in Warri, Delta State, operations were restarted at the end of that year. Being coordinated via the Hague. The Trans Niger pipeline gathering system was started in 1963 and finished two years later. With all the activity in the Eastern States and Delta State the Company was reorganized into two operating divisions, East and West, based in Port Harcourt and Warri respectively. Lagos, meanwhile, continues to provide corporate support [1].

REVIEW OF THE RELATED LITERATURE

PURCHASING ENVIRONMENT AND THE IMPORTANCE OF PURCHASING

In any firm, business or organization the environment determines the constraints with regards to what is possible and that which is not. In like manner, the purchasing environment defines the purchasing constraints. The environment could be based on contractual or legal obligation in which the purchasing firm and the supplier enter into some agreement enforceable by law. This is typical of industrial or organizational buyers where the purchasing officer in keeping with his or her corporate objectives attempts to create or influence a purchasing environment in a behavioral pattern consistent with the corporate goal and objective [2].

Talking about the importance of purchasing, it would be viewed as representing a stage in the evolutionary process of civilized human relationship as a substitute of trading for conquest, plunder, and confiscation for the procurement of desired goods and services. These paints vivid pictures of the displacement of slave trade by trade in goods and services, that is, legitimate trade. Purchasing could also be visualized as an aspect in the evolutionary process of division of labor which is in itself a reflection of the amount of sophistication in human development [2].

At the initial stage of industrial revolution, purchasing was regarded as a clerical job and hence the purchasing officer was the designated as a purchasing clerk. With the rise in the volume of transactions and the amount of money being handled, a division had to be carved out within the accounting department known as the purchasing department. The importance of purchasing became a major organization focus when the department was integrated into stores department all still within the accounting department [2].

Purchasing Function versus Purchasing Department

From the proceeding panoramic view of the purchasing, it is clear that purchasing is an integral and essential part of business management. All the functions of business must merge into a unified whole if management is to fulfill its basic responsibilities of optimizing company's profits. Each function of business must share in this responsibility [2].

There is fundamental distinction, however, between the purchasing department and the purchasing function, there are not necessarily the same. The purchasing function is a basic business function which is common to all type of business enterprise. The purchasing department is an organizational unit of the firm whose duties include some part or all of the purchasing functions. These distinctions between function and department is not always appreciated or understood by top management. The purchasing function is usually performed most economically and efficiently by a specialized, centralized purchasing department, directed by a skilled purchasing manager. However, the purchasing function does not have to be performed in such a manner. In theory it can be performed, and in practical it sometimes is performed, by any number of different company executive or departments [2].

PURCHASING AS THE MANAGER FOR OUTSIDE MANUFACTURING

The materials that go into a typical company product originate from two sources. The company's manufacturing department is the first source. This department converts raw materials into fabricated parts. The company's purchasing department is the second source. This department not only purchases raw materials, which the production department converts into fabricated parts, but it also purchases finished fabricated parts. The parts made by the production department are combined in assembly with the parts bought by the purchasing department to form the company's final products. [3].

The percentage of components and parts being purchased externally is constantly increasing compared with the percentage being manufactured internally. The trend towards specialization within the system inherited brings about such a situation. The increasing specialization of labor, the increasing complexity of new materials, and the increased cost of high-volume products especially machines all tends to cause more buying and less making [3].

A typical situation illustrates the profit making potentials of purchasing. The ABC Manufacturing Company has a sales volume of approximately \$80 million. Material cost for ease of illustration will be calculated at 50% (\$40 million). At a 10% (before taxes) profit margin, a 25% increase in sales, (\$20 million) could be equated profit wise by a 25% increase in sales, (\$20 million) could be equated profit wise by a 5% saving in purchasing. Either of these two actions result in a \$2 million increase profit ($\$20 \text{ million} \times 0.10 = \$40 \text{ million} \times 0.05 = \2

million). The firms' profit and loss statement reflects profit dollars resulting from reduced cost as well as those resulting from increase in sales. Profit is the difference between income and outgo. Progressive managers strive to increase profit both by increasing the income and reducing the outgo. At lower profit margins, to produce the \$2 million increase in profits, increases in sales volume must be even higher than a \$200 million figure of the preceding example [3].

PROCEDURES

In spite of the accelerated number of criticisms of the utilization of a few set of research methods in organizational sciences, a few studies have tried to empirically ascertain the degree of these constraints or the potential reasons why some methods are resorted to so exclusively. For their review, Podsakoff and Dalton content analyzed all the published papers from the 1985 editions of five international journals. The journals are as follows:

- i. Academy of Management Journal;
- ii. Administrative Science Quarterly;
- iii. Journal of Applied Psychology;
- iv. Journal of Management; and
- v. Organizational Behavior and Human Decision Processes [4].

The review of the journals has been aimed at determining the range of methods used in organizational research. The analyses of the literature reveals that the set of research methods are analytical procedures that represent the methods of choice are few. A survey has been conducted that among other things solicited the opinions selected members of the American Division of Industrial and Organizational Psychology and the American Academy of Management on the state of research in their disciplines. Campbell, Daft and Hulin based their conclusions on the response and comments generated. The author of the survey concluded in part the overriding impression is that people well know what is published and are dissatisfied with it. A very negativistic theme spans across the respondent comments [5].

DESCRIPTION OF RESEARCH INSTRUMENT

The instrument for the primary data collection is the questionnaire. In the questionnaire approach to primary data collection, a heavy reliance is placed on the verbal reports from the respondents. The questionnaire method of primary data collection has the advantage that:

- i. by its very nature, the questionnaire is likely to be a less expensive than an interview;
- ii. it requires much less skill to administer;
- iii. it can often be administered to large numbers of individuals simultaneously;
- iv. with a given amount of funds, it is usually possible to cover a wide area and to get information from more people;
- v. the impersonal nature of a questionnaire, its standardized wording and order of questions, might lead one to conclude that it offers some uniformity from one measurement situation to another; and
- vi. the respondents may have a greater confidence in their anonymity and thus

feel freer to express views they fear might be disapproved of on might get them into trouble [6].

The disadvantages of the questionnaire include that:

- a. It depends on verbal reports which in certain circumstances cannot be trusted;
- b. Not only may people be reluctant to report openly their beliefs, feelings motivations, plans, and so on, they are unable to do so;
- c. It has the drawback that it is appropriate only for subjects with a considerable amount of education;
- d. It does not usually elicit a high completion rate;
- e. If a subject misinterprets a question or gives the answers in a battling manner, there is not much that can be done;
- f. There is a problem of memory and beyond it in recording past facts [7].

Table 1: The analysis of the materials management practices of their company.

s/n	Practices	Frequency	Relative Frequency
1	Use of an integrated approach	28	0.28
2	Use of centralized stores	24	0.24
3	Use of both local and overseas purchase orders	20	0.20
4	Proper division between material and production department	16	0.18
5	Use of a separated distribution department	12	0.12
		100	1.0

Source: From the questionnaire administered.

From Table 1 above, it is shown that the materials management practices are:

1. Use of an integrated approach;
2. Use of centralized stores;
3. Use of both local and overseas purchasing orders;
4. Proper liaison between materials and production department and
5. Use of separate distribution department. They have frequencies of 28, 24, 20, 16 and 12 out of 100 giving relative frequencies of 0.28, 0.24, 0.20, 0.16, and 0.12 respectively.

Table 2: The analysis of how profitability is operationalized in their company.

S/n	Responses	Frequency	Relative Frequency
a.	Net profit margin	52	0.52
b.	Gross profit margin	48	0.48
	Total	100	1.00

Sources: From the questionnaire administered.

From Table 2 above, it is shown that profitability is operational by net profit margin and gross profit margin. They have frequencies of 52 and 48 out of 100 respectively giving relative frequencies of 0.52 and 0.48 respectively.

FINDINGS, CONCLUSION AND RECOMMENDATIONS

The main objective of the study was to determine the e-procurement practices of the Crude Oil and Gas Producing Company. The subsidiary objectives were:

1. To determine if they used e-marketing method;
2. To determine how effective materials management had been on profitability;
3. To determine how profitability was operational in their company;
4. To determine attitudes of the staff towards materials management; and
5. To determine the attitudes of the staff towards profitability.

In the review of the Related Literature, the following headings were handled:

Electronic Procurement and its capabilities;
 Purchasing Role in Business;
 Purchasing Environment and the Importance of Purchasing;
 The Purchasing Function;
 Profit-making potential.

The research design was a combination of a survey and a case study. It was found that all the 100 respondents say that their company had e-procurement practices. It was recommended that the company should continue to use electronic procurement because of the advantages over the traditional methods and this should be backed by policy.

FINDINGS AND RECOMMENDATIONS

It was found that:

Profitability was operationalized by the use of net profit margin and gross profit margin at the rate of 52 is to 48;

The staff of the company had had positive attitudes towards materials management; and

The staff of the company had positive attitudes towards profitability.

It was recommended that the company should continue to use electronic procurement because of the advantages over the traditional methods and this should be backed by policy. It was also recommended that the managers of the Crude Oil and Gas Producing Company should benefit from the method of e-marketing in terms of speed, security, indefatigability, mass storage and information technology capabilities and this should be backed by policy. It was recommended that the staff of the company should continue to support materials management in general and e-procurement in particular to maximize the benefits and minimize the limitations and this should be backed by policy.

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